Healthcare Management:
The Global Perspective

Jens-Uwe Niehoff
Zhang Liang
Jochen Breinlinger-O' Reilly

Editors in cheif

科学出版社
北京

Editorial Board

About the Authors

Jens-Uwe Niehoff, Humboldt University Berlin, Germany, MD, Prof. emeritus for Social Medicine and Epidemiology, lecturer at the Berlin School of Economics and Law, researcher and teacher in the major fields of prevention and public health sciences utilization research, the epidemiologic transition, inequity and health, international healthcare and its management, author of about 300 articles and several teaching books regarding the subjects of social medicine and public health.

Zhang Liang, Dean of School of Health and Medicine Management , Tongji Medical College of HUST, Wuhan, China, Professor and Doctorial Supervisor, expert who was granted the special subsidy of the State Council, Chairman of review committee of national planning textbook for higher education in health management, specialized in teaching and researching in health management for 30 years with over 40 national and provincial projects as the principal director, over 200 papers and 23 academic books and planning textbook published, 7 provincial science and technology awards including the Chinese Medical Science and Technology Award.

Jochen Breinlinger-O'Reilly, PhD, Berlin School of Economics and Law, Germany, Professor of Management in Health and Social Care, Academic Director of the MBA Health Care Management Program. More than 15 years of professional experience as Head of Human Resource Management, Director of Administration and CEO in the hospital sector. Project leader of the government financed project: International Leadership Training Hospital Management Asia. Consultancy projects in China, Vietnam and Indonesia. Expert in Quality Management and Strategy Development.

Preface

Since healthcare is going to cross national borders far beyond recent or traditional experiences, the global management of health related services will become a matter of growing importance. This compendium intends to offer knowledge, experiences, views and comments on a sample of subjects related to International Healthcare Management and its practice.

A new understanding of this fast developing profession is necessary and needs a shared and commonly understood standard of the profession's competencies. Nobody can really foresee to what extent the management of healthcare will gain importance as a global issue within the next decades. But we are convinced that globalization will also guide the provision and the utilization of healthcare. If this comes true, this development will be or should be of impact for research on and teaching of related subjects as it will become a matter of the practice of healthcare. It also will challenge legal regulations and intercultural competencies.

The following compilation aims to foster these issues and wants to encourage discussions and exchanges on many more aspects than the authors can cover in this compendium.

At the same time, both national health policies and healthcare are undergoing important transformations globally. The reasons are manifold but rooted both in comprehensive global political transformations and in the developing of health and life sciences. It is not really clear how these trends will affect international healthcare. But these changes strike all the financing systems, the management of healthcare coverage and the mechanisms of utilization fundamen-

tally. Here we cannot foresee the future but we can hypothesize the growing need for healthcare managers to look behind edges.

The editing authors, a medical doctor, a public health expert and a healthcare manager, profoundly experienced in research, teaching and in practice, see this fast developing environment a good reason to compile some selected arguments around the related issues.

We aim to bring this sample not only to readers just starting a career in managing healthcare and/or managing its facilities but also to those already in business. The compendium's perspective is internationally focused, which will make it the readers' task to adopt the content to national conditions, experiences and discussions.

"*Knowledge is a social product dependent on the social activity of real world actors. It is not just intellectual discourse.*"①

This is what the authors want to encourage: the formation of healthcare managers as a professional identity. We realize the consequence of a change in the "real world". The authors are not only very familiar with conflicts around the issues and related hopes but also with disappointed illusions, with fears and controversial discussions.

The tremendous concentration of capital in the healthcare sector, especially in the healthcare industry as defined by the *International Standard Industry Classification*, has been brought both managerial and organizational innovations into the delivery of care and has made healthcare management a discrete profession. This development signals changes, for example the change from organizing healthcare as a matter of public administration towards healthcare management as an entrepreneurial activity. But this change also signals conflicts around social goal setting and providers' competing market interests.

But change is not only about creating something new. It also puts some current reality under question. This alone is an enormous conflict. But one thing is clear: If globalization is going to include healthcare, the process will need the inclusion of the people to be covered and today's healthcare providers. This change should not become left solely to the investing party and its shareholders.

The compendium wants to be part of the ongoing evolution that shifts the traditional responsibilities from administering healthcare to managing it. Admi-

---

① Salmon J W. Alternative Medicines. New York, London: Tavistock Publications, 1984: 277

nistrators are directing facilities and entities. But we see the managers' responsibilities in the organization of care delivery, in supporting the work of the professional staff interacting with the patients, which await the managers' support in order to meet the mission of best healthcare.

In making our intention a reality, we find some support and want to thank all of the supporters.

First of all, we want to acknowledge the publisher for supporting this English-Chinese book, written by a group of Chinese and German scientists. We feel extremely affiliated to the publisher and his staff for bringing the manuscript to the readers.

We also wish to thank Mrs. Beate Niehoff. She had been head of the Dept. of Human Resource Development at the Charité - Universitätsmedizin Berlin (university medical centre Charité Berlin, Germany) for almost 20 years and contributed a lot through critical discussions and giving hints, and she especially contributed to the chapter on Management of Healthcare.

We also wish to thank Dr. Ursula Descamps (Strasbourg, France) for helping us with the healthcare system of France and its recent evolution.

Prof. Steve Iliffe (London) has given substantial support in improving our understanding of the British National Health Service.

Prof. Dr. med. Jens-Uwe Niehoff
Prof. Dr. Zhang Liang
Prof. Dr. Jochen Breinlinger-O'Reilly
Berlin, 2013

Introduction

People who want to drive healthcare to its ultimate goals need a comprehensive understanding of specific nature of these particular services to individuals.

Healthcare management is to fulfill the requirements of the healthcare practice. Healthcare practice itself is determinate by demands, offers, infrastructures of supply and many legal, financial and contractual regulations. The particularity of demand's and offer's nature makes healthcare management a specific and unique profession.

The rapidly developing profession needs more than sampling management tools in order to improve a provider organization's profitability. The healthcare manager of tomorrow needs to be committed to the very fundamentals of the subject to be managed seriously. Its nature is indeed very different from managing the production of consumer goods even if its tools and experience are used in the process. But if healthcare manager intends to run healthcare like any other market business, "risk selection" and "wallet biopsy" of the paying party would have to be accepted the same way as it is accepted for any other consumption. To understand and to accept the differences makes healthcare management the center of an autonomous profession.

Healthcare management works under many and varying mechanisms and regulations. In many countries, many of them are explicitly installed to exclude both "risk selection" and "wallet biopsy" procedures from providing healthcare. Nearly nothing else is more contrasting than the very ethics of healthcare against the ethics of other businesses. Healthcare management must make necessary and

appropriate healthcare available for everybody in need, but the shortage of resources is the ultimate problem that most countries round the world will face. Complex regulations for access, coverage and reimbursements are facing healthcare management and contrast any other business.

Both the understanding of health and of healthcare is deeply rooted in culture and will only meet requirements if accepted by people, caregivers included. But medicine is also undergoing important changes. It is gaining new opportunities in prevention, scopes of treatment and rehabilitation and learns permanently from its limits, deficits and failures—hopefully. But the ongoing change in healthcare has to be managed. To bring new opportunities to people and to avoid any discrimination regarding gender, age, social status, ethnic, religion, legal status etc. is the very challenge for healthcare managers.

To incorporate management into medicine and healthcare, we see a certain responsibility to give a statement on what we adhere to *modern medicine and healthcare*. We see it a permanent challenge to use best scientific knowledge and skills both for making decisions shared by patients and for the best practice in delivering care. This in particular puts "permanent change" a top priority for managers and identifies any healthcare or applied medicine a *nowadays healthcare*.

Nowadays healthcare is the reality of today's healthcare but varies tremendously round the world. This variance is not primarily due to caregivers' education. It is primarily a matter of unequally distributed resources and access to them. Therefore, it is more than using individual experiences and skills in diagnostics and therapies.

Nowadays healthcare is moving from providers' individual attitudes towards evidence based practices both in treatment and in managing healthcare and in its organizational frames. The practice of healthcare is not an art but definitely a science combining both natural and social sciences to human sciences or life sciences.

The ultimate challenge for healthcare managers is to bring together

• the necessity of making healthcare part of social progress and economic development

• the socio-economic-demographic transition with its changing needs for care but with a shortage of resources

• the extending labor division in medicine regarding the delivery of healthcare and the challenges regarding cooperation and integration

• the globalization of requirements and offers

• the provision of necessary and appropriate healthcare and the specific limits of service accessibility for many people

Nowadays healthcare increasingly uses the most advanced scientific evidence and best assessed technologies. Healthcare becomes the interaction of advanced health and life sciences with applied techniques and technologies seeking for effective and efficient organizational infrastructures in its particular social-economic environment.

Nowadays healthcare is driven by results and by their transparent evaluation using standardized outcome measures against goals and permanently wants to improve through rapid changes.

Nowadays healthcare is the cooperation of a wired infrastructure of professionals but necessarily includes the patients, all of whom bound together through the exchange of information (more and more based on advanced technology).

Nowadays healthcare needs

• data exchange

• sophisticated pharmaceuticals, technologies supplies and devices

• safeguarding access to healthcare for everybody, everywhere and at any time

Management is to guarantee the provision, the renewal and the permanent improvement of all the basics of healthcare but includes its financial fundament.

Most healthcare deliveries are still managed through the caregivers and the owners of doctors' offices and small clinics themselves. But the authors are deeply convinced healthcare management will become an alone-standing profession, far beyond simply administering staff and equipment or drawing up and signing the balance sheets.

We often hear the question what basic profession would fit best to educate and to train healthcare managers. According to our experience, the answer will not depend on the prime academic education but on the capability to cross the border of all the different professions involved in healthcare. Healthcare management will be absolutely necessary as a subject of a supplemental study and can be successfully run by many different professions. The key to success is not primarily the original kind of education but the ability of cross-border thinking, communicating and acting for and with people, managing different qualifications and enormous financial resources and assets. To some extent, management is

also to organize different competencies and experiences towards a set of defined strategic targets under a single umbrella. And of course, a successful manager permanently needs to develop his personality through learning from best practices and communicating with staff.

Also the vast field of managing healthcare will certainly run towards specialization, for example in order to manage

- the provision and utilization of what is necessary and appropriate to meet the demands, wishes and attitudes of patients and consumers
- the teams providing healthcare and more specifically prevention, medical care and rehabilitation or nursing
- the administration of care facilities and the facilities' human, financial and technical resources
- the financing and refinancing of investments in care facilities through reimbursements
- the formation, the advertising and the purchasing of healthcare insurance plans and services

Some argue healthcare management would only and simply be used to gain profits from a vast industry. But one may also discuss healthcare management as avoiding the simplicity of making money but contributing to a nation's social coherence and prosperity.

What healthcare management finally is depends certainly not on the particular subject to be managed but on goals and intentions beyond the specifically required skills of a professionalized management.

Or in other words: Whether healthcare management has increased the benefits of treatment and care or wherther it is a nightmare for patients, doctors and nurses will not depend on managing care but on the managers, on notions and on goals.

What is *International Healthcare Management* in particular?

The prior and ultimate goal of managing healthcare in an international perspective is to manage the access to and the utilization of healthcare for any individual round the globe. This vision includes the offer of best international expertise to the national healthcare system if wanted and if asked.

International healthcare management is nothing new. But its context and responsibilities are changing due to the rapidly expanding complexity.

The history of medicine is certainly not the compendium's focus. But history

gives evidence for many of the objectives of a *Compendium on International Healthcare Management*.

The authors see at least four characteristics of "internationality" worth mentioning:

1. Helping each other has always been conditioning a group's or a population's existence and survival and has been developed as a common cultural value. On a rational ground, caring for sick people is part of the civilizing culture of groups' integration and cooperation and an accepted public value. All people and their cultures have had and still have their culture to manage healthcare roo-ted in traditions and experience. Healthcare is always tidily beholden with asking for reasons for falling ill and with creating intellectual systems to explain the etiology and the pathogenesis. Giving help to sick people can only use gathered experiences and resources which in the past are far beyond current understandings of sciences. But these qualitative experiences of the past are part of mankind's treasures.

2. The global exchange of goods, experiences and knowledge has always had impacts on healthcare practice. Thus we can see that healthcare practice has been global for a long time. Only to mention some examples, the Arabs, the Chinese, the Egypt, the Greek, the Romans, as well as the Europeans and the Native Americans have all contributed to the evolution of mankind's current understanding of diseases and illness in the process of global goods exchange. We are still underway to improve our understanding of the contribution of any part of mankind to current knowledge and standards. The inclusion of global knowledge into recent healthcare practice is reaching new summits. The future of medicine integrates knowledge from researchers and developers operating globally.

Healthcare is growingly based on quantitatively proven evidence, but challenging medicine through using data from around the globe for individual decision support. Knowledge is internationally available and makes healthcare a global expertise. While in the past patients traveled to see the doctors, or doctors came to see the patients, today they are often simply connected by a data connection. In the future, the distance between patients and doctors will regularly become measured not in miles but in time and bytes. It will also happen that technologies will replace much of the care currently delivered by people.

3. The barbarity and cruelness of fighting against each other, of subduing peoples and of stealing their treasures are also part of mankind's history and still part of the present, too. But healthcare has always considered developing huma-

nitarianism into the nucleus for international basic-culture of healthcare delivery. Both these aspects of spreading dangers to health internationally and of exchanging actions of humanitarian help and assistance are part of international healthcare and its management.

4. Even international or cross-border or overseas utilization of healthcare and related services' also being called medical tourism is nothing new.

International healthcare gives evidence for mainstreaming the underlying health sciences, ethics and cultures as something bringing experts and patients together and spreading universal knowledge round the globe. In addition, the anticipations of what appropriate healthcare is are going more and more towards a common international culture.

One should distinguish this from some certain practices of medical tourism industries simply making money beyond the standards of ethics and science. Finally, these developments are also fostering international healthcare by reflecting both the pros and cons. But here we need transparent mechanisms and accountable global accreditation policies and regulations.

Last but not least, the existence of the World Health Organization (WHO) proves the importance of International Healthcare Management. In this light, WHO is the most comprehensive expression of its internationality regarding the standards of ethics and professionalism.

In fact, the view on Healthcare Management is like anything else not free from conflicts. While some intend to develop, implement and meet the goals of the future through cooperation and exchange of experiences, others may see healthcare delivery simply a business of competing providers. Under the generic term "international healthcare" we find many intentions. Each of the intentions will compete for the best solutions and will stay part of international public concerns and discussions as the following examples show:

"*A sizable constituency argues for a single-payer system in which government provides universal insurance and has the power to control costs, doing away with private health insurance altogether. Some advocate a move to large, integrated health systems combining a health plan with a captive provider network as the only way to improve quality and rein in the amount of care delivered. Others see the solution as empowering consumers and giving them a big personal stake in the cost of their care. Still others promote advances in information.*"(Porter and Teisberg, 2006)

Each of the nationally discussed solution will become reflected and assessed round the globe. This alone makes healthcare delivery an international issue. Additionally, to be aware of the manifoldness and to learn from each other by both assessing outcomes and failures has also been seen part of what International Healthcare Management is.

There cannot be a single view or solution categorized as being the right or the wrong one without asking for whom, for what prime goal and for whatever interest. But the varying criteria are making international healthcare a subject on its own for research, for teaching and for practice.

If healthcare management wants to operate internationally, it will clearly have to analyze and understand what the national frame of concern and performance really is. There cannot be any successful international management of healthcare without a profound understanding of national practice.

While preparing this manuscript, the European Union has made a very important decision—to give all European citizens the free choice to ask for healthcare within Europe. This indeed could turn out to become a very challenge and the starting point for a "cross-border" transformation changing any of the national health services within the Union but finally also beyond its borders. That is certainly a long way to go. But we are all permanently on the road.

Content

1

Terms of Common Understanding

Growing numbers of managers in the field of providing health related services do not share professional experiences in providing such services or treatment. This chapter wants to introduce some selected terms supposed to be universally important for healthcare managers. It aims to provide basic language, background theorems or discussions beyond daily routine requirements of managers.

Barriers in language are often the grounding reasons for misunderstandings between those professionals who are providing healthcare and those managing related infrastructures and facilities. This chapter hopefully helps healthcare managers to build bridges to professional caregivers and their particular language.

That, indeed, is an aspect of relevance: Any manager being active in healthcare is of no relevance without the caregiving staff. But the other way round, healthcare providers and all their teams are badly and to a growing extent depending on experienced managers. This interdependence of two different professions is seriously in need of some common ground enabling cross-border thinking that finally makes healthcare successful.

The offering of such a selected and only briefly outlined sample of issues must follow some very few guiding beliefs:

1. Both managers and medical staff are to share not only some common terms but also their backgrounds.

2. Making management more than administration needs a deeper identification with the very complex nature of what healthcare is, socially, ethically, culturally, psychologically, physically on an individual level and on its social, macro-and micro-economic, legal or political background as well.

3. There are sometimes naive speculations about what healthcare management is both on the doctors' and nurses' side. But vice versa, we have the same experience with managers not familiar with caregivers' views and concerns.

4. Effective healthcare needs management on many levels: the individual case level, the staff involvement level, the processing treatments and care level, the profiling and contracting services level or on the level of running a facility. Any of these aspects has to be integrated into a shared but unique concept by all those involved.

The more complex healthcare becomes, the more it depends on the integration of knowledge and skills, but integration needs shared views on mission and identification①.

Health

"*Health is a complete state of physical, mental and social well-being, and not merely the absence of disease or infirmity.*" (WHO, 1948) There are many other interpretations of what health is such as the reported understanding of the Australian aborigines, "…*Health does not just mean the physical well-being of the individual but refers to the social, emotional, spiritual and cultural well-being of the whole community.*"②

It is recognized, however, that the interpretation of health is largely culturally determined and differs according to age, gender, social group or cultural traditions. Young people may share a different concept of what health is from older people even if they are of the same gender, profession or cultural background.

More basically, one may ask if health is an issue of medicine. Medicine is to help people with their diseases. This view may change under some recent developments around predictive medicine and medical prevention, but it is obviously not the medicine's prime part to exemplify what health is. We see that the public understanding is based on psycho-social and cultural developments. But indeed,

---

① Lundberg O, Yngwe M A, Stjärne M K, et al. The role of welfare state principles and generosity in social policy programs for public health: an international comparative study. The Lancet, 2008, 372(9650): 1633～1640.

② National Health and Medical Research Council. Promoting the Health of Indigenous Australians. Canberra: National Health and Medical Research Council, 1996: 4.

medicine is part of those developments and should make a contribution.

Also practical approaches do not really solve the problem of determining what health is. The perception of health may consider very different aspects like

- the effective adoption and regulation of body function and the coping with stress
- the ability to fulfill some specified but even extreme challenges (at some kinds of work, sports etc.)
- the capability of autonomously participating in social life
- the ability to develop its own individual potentials and capabilities or
- simply to enjoy life

To some extent, health is related to preferences set in advance by people and their circumstances. This view respects the individual and cultural interpretations of what a satisfying life is.

A particularly critical point relates to the question if the status of accepted good health would be some kind of a social norm that has to be reached in order to become socially accepted (for example regarding physical and mental disablement). The given point also earmarks responsibilities regarding prevention as a social requirement or an individual attitude. If this becomes an argument, the interpretation of bad health might raise questions of guiltiness if someone falls ill and thus interpreting disease as a punishment for bad behaviors. If so, the conclusion could be diminishing the right to ask for help or to get help. The view, also if only shared by a minority, is doubtlessly most influential on debates around the health services systems of tomorrow and their financial regulation.

For healthcare managers and especially for those working internationally, it is an issue of major concern to accept socially and culturally varying concepts of what health is. To do so might be difficult especially if the providers are offering exclusively evidence based and standardized or guideline driven medicine, which does not meet the particular cultural demands of patients and consumers. To avoid that problem, even evidence based medicine includes the respect for and acceptance of different cultural interpretations of medical interventions. Here scientific evidence and beliefs are easy to come into conflict. We see it easier to compromise on norms describing what a disease is and what not than setting norms to decide on "health". Somebody identified as not suffering from diabetes is not identified as being healthy. And there might be some very good reasons why people with some conditions or disability are to be seen healthy. Thus it should be

easy to find a common agreement to also include the individuals' understanding of what health is.

Managing healthcare we propose simply to ask if individuals are in need of medical treatment or support in the case of disability. The profession's challenge is helping people regain the mastership over daily life. On this premise, we do not need an International Classification of Health but an International Classification of Diseases. This classification comprises the given but always further developing fundamental for differentiating between "not being diseased" and "being diseased". Together with the International Classification of Functioning (ICF), professionals are given the standards that legitimize offers of intervention and support.

It is particularly difficult to find a global agreement of what disability is. If it is, as we assume, the ICF is the professional standard, which determines disability as the relationship between individuals and their specific environment. The recent classification of disability is rooted in the concept of the Sense of Coherence (SoC) as it was developed by Aaron Antonovsky (1923～1994). The concept interprets health as the ability to balance stressing factors for health and the individual's physical, mental and social resources. A person's resources and experiences are seen as the individual's Sense of Coherence. Three factors are describing this SoC empirically, namely

- the *comprehensibility* regarding the reality of an individual's living conditions
- the *manageability* regarding skills and experiences to master daily life under given conditions and
- the *meaningfulness* or motivation to master daily life

The concept has promoted the theorem that health, especially SoC, can become influenced by education, which is also called Salutogenesis. SoC has been deeply influential in the WHO's health promotion strategies, in prevention, in health education's concepts and in rehabilitation. But there are also critiques. Those stress the view that the concept would repudiate the importance of the social and the environmental or working conditions for health and would make prevention an issue of individuals' education and responsibility only.

This concern is one of the many aspects discussed in regard to health. It again focuses on the question whether health mostly depends on the individual's behavior, on the conditions of life or simply on the genes. Such discussion may

result in important consequences for management missions and strategies if focusing on influencing or changing or even correcting the individual's behaviors if aiming at the improvement of health. That would make health a matter of individual attitudes and life preferences rather than of public health concerns, such as on improving social rights and conditions, safeguarding the environment (air, water supply, protection and rebuilding natural conditions) or designing healthy working conditions.

The discussion around individuals' health behaviors and life style approaches is somewhat central on the given background. It may provoke the question whether we should control individuals' life through norms and sanctions or control and improve the conditions of life for the general public. In reality considering both is best, but only effective if their interdependence is considered.

More theoretically, it may be asked if there exists a particular and independent health behavior. Most experts share the view that nearly any behavior of individuals will have an impact on health but not exclusively on a person's own health. In this situation, health related behaviors are regularly rooted in complex bio-psychic-social conditions. Depending on particular analysis, it will be seen as the way to solve the problem whether to change and to control the behavior of an individual or to intervene into living conditions is a policy priority.

Some believe everybody would be totally free to decide his or her life and his or her behavior pro-actively. Others stress much more the responsibility of individuals for their families, and the community's or actually for the country's well-being. This definitely makes the interpretation of health a political matter. In the practice of decision-making in health politics, such controversies are highly influential, especially in the legislation on health protection, health promotion programs and health insurance policies.

The concept of health behavior that assumes this behavior alone an standing part of people's relationship to themselves and to the social surrounding is closely connected to the Health Belief Model (HBM), developed by Hochbaum, Kegels and Rosenstock in 1952. The target was to understand and to predict the preventive behavior and attitudes of individuals. The background was the policy of the US Public Health Service after World War II. According to law, the Public Health Service was only allowed to be targeted at prevention. Due to the assumption, diseases would be primarily caused by misbehaviors, the correction of behavior became primarily targeted by prevention as a kind of a correction policy.

The HBM follows the assumption that any individual's health behavior would be the result of physical and emotional experiences with its own health. The social situation and position or cultural beliefs became not accepted as influencing an individual's behavior. Consequently, the conclusion was that it will be somebody's guiltiness if falling ill. This assumption has been affecting nearly any discussion on reforming healthcare services in the U.S. since the early 1950s by accepting the postulate that community does not have to be in charge for healthcare if bad health is the result of individuals' own guilt.

Among others, in consequence it became outlined that successful prevention would first of all need positive and negative incentives to correct and penalize bad behaviors in order to improve the nation's health. Another consequence was the assumption that public guaranties to get access to medical services would act as a disincentive for a healthy behavior. For that reason, universal access to healthcare should not be given. But concepts of individuals' guiltiness for falling ill should provide the social norm for the right preventive behaviors. Those who do not follows these norms have to be corrected. With the help of the HBM it is supposed to enable policies to discriminate between what the "right" and what the "wrong" way of living is. Therefore, some people should become promoted and others sanctioned or penalized by making them self-responsible for billing any healthcare.

The argumentation plays still a central role around currently running health policy reforms in the U.S. It is not by accident that most powerful U.S. strategic think tanks like the RAND Cooperation, Ford Foundation or the U.S. Bureau of Economic Research are worldwide active in advising international agencies, nations or national groups how to develop health services and health insurances in the right way as they do pro-actively worldwide.

see Evidence based Medicine
see Guidelines
see Moral Hazard
see RAND Health Insurance Experiment
see Sense of Coherence

Health Politics

Health politics is any implicitly and explicitly outlined law or regulation as

set by a nation's legislative body that aims at mostly three goals:

• the management of risks for health and public safety for current and future generations (prevention)

• the management of necessary, appropriate and efficient medical care and services (medical treatments)

• the management of the social consequences of diseases, injuries and disabilities in order to lower handicaps and to provide individuals with the chances of an independent and participating life (rehabilitation, social support and, if necessary, permanent care)

Health politics is an important issue for society and is even important for other politics.

From an international point of view, health politics is crossing the borders of a growing number of nations. Health politics is going global both regarding matters of product safety, environmental politics, exchange of knowledge and personnel and regarding the provision of access to cross-border healthcare services and treatment①.

Priorities in Health Politics

Whatever people, organizations or governments do, they have to decide on the ranking of objectives, on desired outcomes and the allocation of scarce resources. If political decisions are made on setting some targets on top of others, one may speak of priorities through which production results are distributed. That always strikes interests and makes priority-setting both challenging and a matter of potential controversies.

Internationally, priority setting by health politics is a matter of sharp discussions. While WHO supports priorities and health targets, some groups, such as for-profit healthcare providers in some countries are voting against priority setting by politics and want to leave that to providers' and markets' decisions. In this situation, setting priorities may become an issue of fundamental views at developing health assurance and providing infrastructures. The topic focuses on the relationship between politics and markets.

---

① Bambra C, Debbie F, Scott-Samuel A, et al. Towards a politics of health. Health Promotion International, 2005, 20(2): 187～193.

Priorities will select health problems, interventions and goals, investments and R&D programs prior to others by deciding on a list of preferences regarding prevention, primary and specialized healthcare, rehabilitation, nursing, research, facilitating, education etc. Public health sciences may provide data, analyses or programs on developing a nation's healthcare system for setting priorities and concepts.

Under conditions, whereby

- a healthcare system is still developing or
- certain health problems are assessed being catastrophic for the affected population and its future beyond individual concerns or
- resources are strictly limited or
- it is calculated to limit the resources for healthcare even if available for other reasons or
- a certain branch of the healthcare industries is set prior to others

health political decision-makers or health plan insurance developers will regularly have to decide on health political priorities. The question is always what regulations are used and which role science and evaluation mechanisms for readjustments play. This varies widely internationally. Some countries are making that a top matter of government, others of the communities, while others only focus on frame setting for self-administration by providers and insurers. But particularly countries still developing health services and tacking responsibilities for financing need mechanisms of priority setting and of balancing interests against the players' desires.

Such decisions select missions like prevention as being prior to treatment or treatment prior to rehabilitation or social care for disabled people prior to medical care. The decisions may prioritize out-patients services to in-patient care or hospital care prior to out-patient services. Of particular importance is to regularly decide priorities regarding risks and diseases potentially affecting the entire nation (for example disasters or infectious diseases) or on disadvantaged people.

Any selection of priorities defines preferences for a certain region, social class, other groups of people or stakeholders or some broader social-economic considerations. But anyway, priorities set by political decision are of tremendous impacts on social development, infrastructures, healthcare industries and a vast field for lobbying.

In any case, if health policy defines priorities, it needs

- true quantitative information about the health status of the population
- the power to decide on resources and their distribution
- methods and institutions that develop plans and evaluate outcomes
- political strength and mechanisms that set health policies into action and
- mechanisms that are affected and involved

The fundamental problem is that priorities decide on the allocation of resources and intervene into complex interests. Therefore, it is a challenge both for evidence based and for democratic decision making in health policy.

Health Policy

Health policy can be seen as the sum of all missions as set by legislation or government aiming at the management of risks for health, at providing healthcare and at managing disablement. Health policy is a matter of implicit and explicit activities regarding the socio-economic development of a nation.

"*Health policy was once thought to be little more than the provision and funding of medical care: the social determinants of health were discussed only amongst academics. This is now changing. While medical care can prolong survival and improve prognosis after some serious diseases, more important for the health of the population as a whole are the social and economic conditions that make people ill and in need of medical care at the first place. Nevertheless, universal access to medical care is clearly one of the social determinants of health.*"①

Determinants of Health

These are any of the biological, social, economic or environmental determinants of health and their distribution among the population. These determinants affect the health status of individuals and have different impacts on different groups of people as well. The WHO concludes that "*This unequal distribution of health-damaging experiences is not in any sense a 'natural' phenomenon but is the result of a toxic combination of poor social policies, unfair economic arrangements [where the already well-off and healthy become even richer and the*

① Wilkinson R G, Marmot M G. Social Determinants of Health: The Solid Facts. Geneva: WHO, 2003.

poor who are already more likely to be ill become even poorer], and bad politics." … *"The poor health of the poor, the social gradient in health within countries, and the marked health inequities between countries are caused by the unequal distribution of power, income, goods, and services, globally and nationally, the consequent unfairness in the immediate, visible circumstances of peoples lives—their access to health care, schools, and education, their conditions of work and leisure, their homes, communities, towns, or cities—and their chances of leading a flourishing life. This unequal distribution of health-damaging experiences is not in any sense a 'natural' phenomenon but is the result of a toxic combination of poor social policies and programmes, unfair economic arrangements, and bad politics."*①

The particular interest of professionalized healthcare is to assess if and what kind of intervention will help individuals with complaints and groups of population to improve health status. This assessment is first of all identifying the kind of intervention required. This needs to know not only determinants of health and their results for health but particularly its distribution and the ranking of importance.

The variance of health is something that life sciences and health sciences are challenged to research on. Looking at health in general, the understanding of what health is varies as individuals do. But this recognition not only varies among people but also in an individual's course of life.

First of all, it needs criteria to describe and to measure the variance. Such criteria are taken on very different levels but can generally become summarized as follows:

- biological determinants and pre-existing health conditions
- life style determinants
- social determinants (such as education, work, social resources, disposability of life's essentials, access to healthcare, social security and support etc.)
- environmental determinants

This having been accomplished, the determinants have to be measured, reported and summarized for assessment and conclusions.

---

① Marmot M, Friel S, Bell R, et al. Closing the gap in a generation: health equity through action on the social determinants of health. The Lancet, 2008, 372(9650): 1661～1669.

The particular indicators for all the determinants will include mental, physical, physiological or functional status' measures and measures of what individually is assessed as "well-being". All the measures taken are documented in the measures' quantitative distributions. These distributions are the fundaments for researching on the reasons for variability and change. Results may be used for many purposes and among others for profiling the understanding of what a norm for applying medical intervention is.

Some of the used fundamental methods are comparisons between groups of people. Numberless, researches have asked, are asking and will ask the question what specifically the difference in human's health makes and how to qualify the variance and its changes over time as something being "normal" or "abnormal".

It has always to be kept in mind that "health" is determined by either

- the different sets of the individuals' biological information (genes) or
- the different conditions for life made or influenced by humans which are (intended or not) produced by people themselves to an ever increasing and accelerating extent, the "production" of environmental conditions included; therefore health is also decided by *man-made determinants*, which are the *social determinants of health*.

In other words, the variance of health among individuals is both determined by the biological variance and by the influences of external modifiers of the biological individuality. It is of fundamental importance to assume genetic causes for change as (in regular) taking generations. On the contrary, most observable changes will be caused by changing conditions of life within a generation. Therefore, changes in health in the following generations first of all indicate a change in all of those living conditions affecting health to the worse or to the better.

There are many empirically well proven determinants of health either positively or negatively affecting health. Positive effects can be for instances measured by increasing life expectancy or quality of life measures. Negative effects can be, for instance, measured by epidemics or worsening individual health. Identifying such determinants will help to make evidence based decisions on prevention and health promotion. This makes health a public or social concern or matter.

But there is also an ongoing discussion respectively denying social and man-made influences on health. These discussants consequently deny any practical and scientifically proven evidence which notes that the health of people will be improved if its determinants are changed. While some discussions focus on

biological determinants, others focus on non-biological characteristics, namely the social determinants.

In the following, some of the many and well-investigated aspects are briefly outlined and discussed.

Age

Individuals at different ages experience health differently as studies have shown. Young people in Germany (between 18 and 35 years old) associate health with good and successful social relations, acceptance and appreciation by others, with trust in others and in future, with experienced honesty, openness and fairness, as well as with practiced freedom to probe capabilities and with a wanted group's acceptance.

In contrast, persons in the working age (here 25 to 60) relate health to achieved social security for their families, to success and to acceptance at work, to positive experienced sexuality, to assertiveness, to enjoyment, to consumption, to fitness, and to being integrated into decision-making for their and their communities' life.

Older people and pensioners (here 60+) see health as something allowing them to stay active and mobile, to enjoy children and grandchildren, to be free from pain, to participate in decision-making on their own life, to be asked for experience, to have contact with others etc.

Social Inequalities

This refers to the well-proven evidence that individuals are socially unequal in many respects. It may reflect not only different personalities and preferences but also different chances and opportunities or particular socially transmitted risks which affect health. Not the existence of such inequalities but, if so, the wide spread of them is to be seen as a serious matter of reality in nearly any country. But social inequality is not simply to be measured in terms of poverty or deprivation. It most of all describes the exclusion of individuals from chances to develop given potentials, which may not only be a loss for the individual but also a loss for all the family, the community or actually a nation.

Social inequalities in health, as Social Epidemiology has extensively shown, are, for example, regularly and repeatedly to be measured by

- the occurrence of diseases and disabilities
- the life expectancy
- the structure of causes of death
- the long-term stress (resulting from insecurity, low self-esteem, social isolation, low competences and from the lacking of motivation to manage life etc.)
- some negative dynamics in physical development in aging
- lacking access to prevention, healthcare and rehabilitation
- limited chance to cope with disabilities

Bad and underprivileged social circumstances can be tolerated by humans' nature to a certain extent, but if they constantly affect people in early life and afterwards the effects will accumulate during life-time.

Therefore, it is proposed that addressing people's social equity in living conditions and social integration is a leading matter for health politics regarding access to prevention and healthcare and providing the chance for social integration and for an independent life①.

Poverty

This is the social reality for a varying proportion of people in any country and an increasing problem in a number of countries independent from the nations' GDP. Not only the definition of poverty varies between countries but the characteristics particularly issued for measures are different as well. Poverty is of major concern for healthcare management for three main reasons:

1. Poor people take more health related risks on average on account of having less or no access to medical care resources and are severely disadvantaged by tackling the social consequences of chronic conditions and disabilities.

2. Available resources have to be allocated particularly to poor people in a manner that is pro-actively adapting support to their specific life situation.

3. Bad health can result from poverty as poverty can result from bad health.

---

① Navarro V. The Political and Social Contexts of Health. Amityville NY: Baywood Press, 2004; Evans R G, Barer M L, Marmor T R. Why Are Some People Healthy and Others Not? The Determinants of Health of Populations. New York: Aldine de Gruyter, 1994; Marmot R G, Wilkinson R G. Social Determinants of Health(2nd ed.). Oxford: Oxford University Press, 2005: 224～237; Graham H. Social determinants and their unequal distribution: clarifying policy understandings. Milbank Quarterly, 2004, 82(1): 101～124.

Limiting or overcoming the burdens of poverty will not only change the life of the poor but the life of the entire nation.

Poverty of any kind affects health from birth to old age, shortens the average life expectancy and increases the speed of biological aging.

Poor people are not able to buy insurances and have to be covered by charity or states' coverage or by solidary public funds offering services which meet the needs①.

Early Life

The early period of childhood has an important influence on later health status both regarding the physical and the mental status and the developing of individuals' sense of coherence.

Problems in this respect generally include the lack of emotional support and communication, over-, under-and malnutrition, or the sense of frustration and not being accepted during childhood. In the meantime, the absence of specific prevention and social support, early but not sufficiently treated diseases, the missing awareness for disabled and disadvantaged children, inappropriate medical and social rehabilitation will also affect later health permanently.

In some regions child labor, drugs and exclusion from school visits or from playing with other children are of particular importance②.

Food

Food is clearly a fundamental for health in many ways and directions. While for many social groups and countries under-nutrition is the focus of action, in others mal-and over-nutrition raise severe healthcare concerns. Additionally, some diseases need a special or at least an adequate kind of diet and food supply preconditioning not only a healthy physical and mental development but also

---

① Haan M, George A K, Camacho T, et al. Poverty and health prospective evidence from the Alameda county study. American Journal of Epidemiology, 1987, 125 (6): 989 ~ 998; Rowson M. Poverty and health. Student BMJ, 2001, 9: 171~216.

② Almond D, Chay K. The long-run and intergenerational impact of poor infant health: evidence from cohorts born during the civil rights era. National Poverty Center, 2006; Case A A, Fertig A, Paxson C. The lasting impact of childhood health and circumstance. Journal of Health Economics, 2005, (2): 365~389; Leeda J, Copley L, Williams K. The effects of childhood disadvantage on later-life health and well-being. Annual Meeting of the American Sociological Association, 2006.

healthy aging.

Considering different national and social conditions, food has to be seen as a major concern for prevention. This is especially true for both the children and for the elderly with special demands for adequate food.

Globally, we find two different trends: While under class children and adults show a high prevalence of under-nutrition, the middle classes are facing the problem of obesity in developing countries, and in economically developed countries under classes are facing a high prevalence of adipose individuals but a high prevalence of malnutrition among middle and upper class individuals.

There are remarkable and increasing numbers of children and youngsters suffering from obesity in emerging countries and there are large numbers of children suffering from severe malnutrition due to bulimia in the so-called developed ones. At the same time, there is a proven evidence that the prevalence of obese children is closely related to social strata: the lower the social strata the lower the prevalence of adipose children in poor countries, but it is increasing dramatically in emerging countries and declines again in well-developed countries, whereby particularly under classes remain faced with high prevalence rates among children.

Both over-and malnutrition are obviously pushed by some food and life style industries ruling nutrition behaviors globally. This "globalization" is most dangerous to health and ultimately challenges health politics' interventions much more than currently undertaken.

Exercises

Any physical and even mental exercise will determine health in a very complex way. It may bring health conditions and is also an enormous source for prevention and rehabilitation. At least two groups, the children and the older ones, should regularly be exposed to some challenging exercises including both physical and mental challenges.

For purposes of healthcare and particularly regarding the positive evidence of early mobilization of inpatients, exercises are of special importance and are a fundamental treatment in rehabilitation.

Most of the healthcare providers have learnt to provide coaches for both these frames. Physical exercises are part of healthcare according to the state of art in many therapies.

Drugs

Drugs given for defined treatment purposes and under strict control of medical staff are of advantage in curing many of the diseases people suffer from. But doubtlessly the uncontrolled use of legal drugs, especially if taken for preventive purposes, is often as dangerous as consuming illegal drugs and chemical substances. Both uses can cause psychic or physical dependency and related health conditions like other substances (alcohol, tobacco or narcotics, and stimulants) do. Drugs are not only potentially destructing individuals' health but also social networks like families, communities and even a country's future.

Many drugs, especially the addictive drugs, while destroying the drug takers' health, may damage other people's health if they cause violence or accidents.

Especially regarding youngsters and children, drugs are of major importance as determinants of permanent bad health and therefore on top of prevention policies.

Drug prescribing healthcare providers are particularly responsible for preventing people from the risks of misuse of and addiction to drugs.

Sense of Coherence

see Health

Inequality, horizontal

This phenomenon goes back to the fact that individuals (also if socially equal) are different in individuality, life concepts, life style and preferences. The horizontal inequality might reduce respect and tolerance for life styles, culturally seen as being socially no-conforming and it may also affect the community's willingness to stay in solidarity when health problems occur.

Inequality, vertical

This phenomenon goes back to inequality regarding risks, the occurrence of diseases, chances to find access to medical services and to find social support in case of disability. The concepts refer to the consistent and repeatable observation that the burdens of health are strongly related to social classes in the way that burdens are higher the lower the individuals' social position is.

This evidence has been fundamental for developing socially effective and macro-economically efficient health insurance systems, like single-payer systems, social and national health insurances as well as solidary and mandatory sick funds.

Social Exclusion

Poverty and deprivation are regularly followed by social exclusion (including self-exclusion) and often have a larger impact on health than poverty alone. A minimum standard of guaranteed support and protection is not only of immense support for the poor but also helps the society to hold a status of integration and thus making social coherence a base-line for progress. This will also help the economy to gain progress and will help the society to keep peaceful. Not only healthcare but also labor market policies, education, family welfare and access to social chances are empirically proven serious matters for the problem of social exclusion, which are followed by a series of health problems.

Of particular concern are exclusions of mentally and physically disabled or chronically sick people.

Social Support

There is a wide range of evidence identifying social support as of major importance for health.

Not only prevention, medical care, rehabilitation and nursing, but also social policies are very influential in keeping social support. It will result in social cohesion, both among family and community or at school and work and it is also a empirically proven fundamental measure for coping with the impacts and handicaps due to disability.

Social support is not to be mixed up with aid and charity. It is the cultural mechanism of integrating people into a community or of integrating so-called minorities into a nation. Despite of the arguments by some "deregulators" that individuality and self-responsibility are the very roots of freedom, it is still simply true that there cannot be success in prevention and healthcare without making social support a fundamental ethic value and concern as well as a practical resource

of healthcare[①].

Unemployment

The problem shows two faces: Unemployment might be the cause of poor health and earlier death and is seen as resulting in severe health risks at the same time. But it is also true that poor health causes unemployment and social destruction. Doubtlessly, unemployment, at least in a longer run, is a major problem for the health status of both the individuals and the population.

The general health status of a population deeply affects the social and economic progression of a nation.

Work

Not to mention the kind of a job, whether a job exists or not is important for health. Despite the problems with work-related diseases and urgent necessities to prevent against such problems, having a job is protecting health, especially when the job is satisfying and challenges the capabilities and skills. Work alone will provide essentials like food, clean water, housing or clothing. Getting self-responsibility, acceptance and respect as well as the cooperation with others are major factors in health promotion. These advantages will regularly result from work and employment if employers realize the chances of promoting them.

Healthcare and hospital management are not only important for the staff's health but a major aspect for reaching the goals of the providers' organization.

Disease

A disease is a bodily, functionally, mentally or psychic condition that deviates from what is accepted as a norm by scientific convention. Symptoms indicate the affected functions, especially dysfunctions, and are classified by the *International Classification of Diseases and Health Related Problems*, regularly revised and published by the WHO.

To conclude from symptoms, a health condition or disease status is the

---

① Schwarzer R. Social support and health: a theoretical and empirical overview. Journal of Social and Personal Relationships, 1991, 8(1): 99～127.

process of diagnosis. Such symptoms are, for instance, pain, dysfunctions, bleedings, weakness, depression, lethargy, anorexia, sleepiness, anxiety, disorientation, unconsciousness, etc., but are not the disease itself.

A disease is the result of an ongoing pathogenic process, which changes signs and severity with time and can result naturally in self-healing, healing as result of therapy, chronic conditions, impairments and disabilities and, in the worst case, death.

The identification of a particular disease is regularly, but with exceptions, legitimizing the performing of a treatment to be accepted by the patient. Exceptions are typically emergencies of unknown or not identifiable conditions under the existence from vital conditions.

The concept of disease is often controversially discussed, especially if symptoms and clinical parameters are only slightly crossing the borders of what is accepted as normal by scientific convention and haven't made people suffer. Especially regarding mental health, it might be very difficult to distinguish what normal and what abnormal is as it depends on cultural conventions rather than on scientifically provable facts.

The problem of identifying what a disease is, especially when a functional change can be diagnosed as a disease influences not only the patients but also for the providers, because it regulates the volume of people to be treated and (at least indirectly) the proportion of unwanted and side-effects of treatments. Therefore, any incentive to increase the number of patients treated by changing the assessment of diagnostic parameters or by the inappropriate use of diagnostics should be critically examined.

see International Classification of Diseases and Health Related Problems
see Pathogeneses

Disability

As defined by the World Health Organization, a disability (resulting from impairment) is a "*restriction or lack of ability to perform an activity in the manner or within the range considered normal for a human being at the same age and gender*"①.

① http://hcdg.org/definition.htm, 2011-01-01.

see International Classification of Impairments, Disabilities and Handicaps

Impairment

Impairment is defined by the WHO as deviation from the person's usual state. Any loss or abnormality of psychological, physiological, or anatomical structure or function by injury or disease is seen as an impairment.

It has to be clarified that impairments are neither diseases nor illness to be healed. They are a kind of living state in need of support in order to lower handicaps or to compensate for deficits or functional limits, but may be individually experienced as an illness. Impairment will lead to disabilities. Under this definition, disabilities are caused by impairments and will cause handicaps, if not prevented through an appropriate environment that meets the individual's particular requirements. This follows the International Classification of Impairments, Disabilities and Handicaps by the WHO which has been replaced by the International Classification of Functioning.

see International Classification of Functioning

Disorder

The term is to describe a functional abnormality but it is not really defined or definable by given conventions about what a disease is. Patients regularly come to see the doctor because they are experiencing a disorder and want to identify the underlying diseases and meanwhile ask for help and treatment.

In practice the problems often occur that

- not any disorder can be clarified
- not any disorder has to be clarified
- not any disorder being clarified has to be treated
- clarifying a disorder might be much more problematic, even risky than doing nothing

Some analysts argue to investigate the disorder a mechanism causes as it is merely a waste of resources, contributing nothing other than pursuing profits. This attitude seems to be spreading particularly within facilities or departments organized and managed as profit centers and being under pressure to refinance wrong decisions regarding some investments taken by management. They also ar-

gue that this behavior endangers many people by making them ill with the underlying concepts of simple and defensive medicine.

see Disease
see Diagnosis
see Defensive Medicine
see Preventive Medicine
see Simple Medicine

Illness

Illness can be defined as individually experienced poor health. While a disease can be objectified by categorizing it according to the terminology of diseases, illness is a subjective perception of the status of health or a subjectively experienced burden due to disease and disablement. Illness is a kind of individual experience but not just another word for disease and has to be seriously considered by any healthcare provider.

It is a matter of daily and everyone's experience that the perception of health can differ between individuals widely even if they have the same objective health status or if they suffer from the same disease or the same severity of a disease. This is certainly true both for physical, emotional, mental and social aspects of perceiving health. A person suffering from an illness might not have an identified disease, while a diseased person will not necessarily have a feeling of illness.

The difference may be of consequences for healthcare because it will make a clear difference if treatments are adopted to a disease and also (additionally or exclusively) to the individual's illness.

More generally, the differentiation is based on the sense of coherence theorem and it has been very influential in rehabilitation and wellness provision. But medical care becomes increasingly restricted to predefined diseases and treatments, especially under the management practice influenced by cost-containment strategies or the raising of the product medicine.

Some suppose this could result in splitting off medicine into two trunks: The first one could go towards a medicine industry which is primarily applying predefined products supervised by third-party-payers. Thus medicine would become simply like an industrial production where some few decide what has to be done. The second trunk could initiate that doctors and provider organizations primarily

focus on activities that are not based on evidence based decisions but on meeting the self-paying individuals' concerns about unclear simple health conditions and subjective well-being as a kind of life-style medicine.

One may understand most today's inpatient care as a case-focused care determined by the standards of disease' related procedures. But outpatient care may also become considered as a patient-focused service related to the individual's perception of illness. Such an off-splitting of the utilization of healthcare is not really new under the Diagnosis Related Group experience but it could challenge future developments.

Some experts stress, illness would be, at least partly and additionally, an issue for psychology and sociology, while others argue illness could primarily be a matter of beliefs, religion and philosophy or alternative medicine. In this regard, the switch in words from "medical treatments" to "medical services" and to "health services" as supported by some experts is not only to widen the view. It is also coined by the hope to extend the business to a second health market through taking illness from the traditional understanding of medicine and its requirements for accreditation policies.

Two experiences have pushed this trend: The experience that there are no treatments against the biological borders of life span and the irrationality of hopes to outflank aging. But there is also the experience that the dynamic of aging can be slowed down by an appropriate life style. In this situation, illness rather than disease is the focus of the new rehabilitation and wellness industry which offers diet, physical exercises and some luxury to consumers having enough financial resources.

Tendencies of perceiving illness as a business for the wellness industry foster an already running process. The offers of this industry do not depend on comprehensive legal requirements and indications or specified norms regarding necessity and appropriateness. They are simply appealing for health beliefs, body-styling, wellness and anti-aging procedures offered by both professionals and laymen.

It has always been a concern of medicine to focus not on disease but on illness, while sometimes the situation is reversed. But some current developments are problematic because the second health market missing any regulation tries to cover everything with "illness".

see Case-Classification Schemes

see Product Medicine

Medical Condition

The term is respectively used by concepts such as disorders, diseases or disabilities but is widely undefined.

Sometimes any reason that seeks support from medical services, such as pregnancy, is also called a medical condition.

see Disorder

see Disease

see Disability

Disease Mongering

This is a recently upcoming term for naming some tendencies of making normal characteristics of biological variance a treatable disease. Some experts see this practice forced by interested groups of providers and industries in order to get access to additional sources of income.

The phenomenon also plays a role in some segments of the wellness industries and medical tourism.

Health Promotion

WHO defines health promotion as

"*the process of enabling people to increase control over their health and its determinants, and thereby improve their health*".

The quoted definition intends to develop health public policies by addressing the determinants of health and the empowerment and enablement of citizens to take control over their interests mainly regarding problems with autonomy, housing, food, security, employment and safe working conditions etc.

The strategy of promoting health instead of fighting individuals' risk factors via screening and defensive medicine was primarily fostered by the Ottawa Charter for Health Promotion in 1986 after (especially in the 1970s) critical discussions against the ruling health belief model and against a concept that was ac-

cused to be a policy "of victim blaming"①.

According to the WHO Charter, health promotion

• aims at making health targeted actions part of a nation's agenda for its comprehensive development

• focuses on achieving equity in being healthy, in order to access medical help, resources of tackling disabilities

• demands coordinated action by all those involved such as governments, health and other social and economic sectors, non-governmental and voluntary organization, local authorities, industries, the media etc.

• should take into account different social, cultural and economic conditions, and meet the possible needs of different countries and regions on the basis of local conditions.

Since Ottawa, health promotion has been followed by a series of WHO conferences in *Adelaide* 1988, *Sundsvall* 1991, *Jakarta* 1997, *Mexico City* 2000, *Bangkok* 2005 *and Nairobi* 2009.

Iatrogenic

The term identifies physical and mental health problems as being caused by professional healthcare providers. Factors causing iatrogenic problems are

• failures in communication

• misleading diagnostics and diagnoses because of insufficient sensitivity, specificity and predictive values of tests and screenings

• failing clinical governance

• absence of team coordination and supervision

• over-or under-utilization of service because of ignorance or wrong competitive incentives

• misusing drug prescription

• errors and more

① Crawford R. You are dangerous to your health. The ideology and politics of victim blaming. International Journal of Health Services, 1997, 7(4): 663～680.

Indication

The term is coined to explicitly and transparently define the reason for a planned intervention into an individual's integrity. An intervention may be planned for the purpose of prevention, of healing, of rehabilitation or of nursing.

It is one of the fundamentals and ethics of healthcare to carefully document the indication for medical interventions. The documentation also follows legal reasons and is part of the professionalism of physicians and nurses. Deciding on indication and following treatments together with the patient is the key to professionalism. Failing to follow these standards would set medicine outside scientific and legal requirements.

The defining of an indication has to answer one fundamental question:

Why and what has to be done to help the patient with standards of necessity and appropriateness?

A medical intervention can only become justified by accepting this rule. It will make providers' behaviors violate fundamental professional norms if we do not follow rules of deciding on indication.

In general, setting an indication can legitimize a medical intervention but it can only become performed if accepted by the patient. The more severe the health status of a person is, the lower the barrier is. But the better the individual's health status is, the higher the standard demanded to legitimize interventions is. In other words, barriers to medical intervention are highest in the case of medical prevention.

Innovation

The term describes the process of keeping pace with the scientific and technological progress in medical and health sciences and applying this progress to practice. Therefore, it is a matter of central concern for healthcare managers to assess and to accept new offers and to practice them. This evaluation will be of major importance and can be of striking medical, financial and organizational consequences.

The handling of innovations and their putting into practice are internationally closely related to a country's legal policies. There are countries

with nearly no regulation while other countries have developed a strongly designed and compulsory procedure to control the use of an innovation. The usual way is to seek specific and independent expertise from legally supervised agencies which are responsible for assessing innovations with the tools of evidence based medicine and health technology assessment.

The term "innovation" is clearly related to progress. But this assessment gives the term more comprehensiveness than only introducing new pharmaceuticals and medical devices does. By any means, it reflects all the debates on what progress in medicine is or should be. These are, for example,

- the strict assessment of new diagnostics and therapies before they are implemented
- the termination of healthcare practices not meeting the standards of knowledge
- the improvement of the educational standards of all the professions concerned
- the increase of access to medical services for all of those in need according to proven indications
- the adoption of health services structures that adapt to social-demographic and epidemiological changes including the structures that meet the national ethical standards
- the guarantee of the country's legal standards

Each of these requirements can become identified as innovations. It is a matter of ongoing discussion if innovation includes considerations on additionally gained effectiveness and efficiency, on avoiding both over-and underutilization of service or on how to react to individual variations under the frame of the making of pathways, procedures and nursing.

It is often much easier to answer the question of what an innovation is than to answer the question of how we can use it properly. There is no doubt that antibiotics have been a most remarkable innovation. But there is also no doubt that the inappropriate use of antibiotics is one of the unsolved massive dilemmas of misuse both in medicine and in the agricultural industries. The inappropriate use is causing much harm to patients and is wasting huge amounts of resources needed for better purposes. And there is a broad range of similar examples regarding not only therapy but much more prevention, inappropriate simple medicine, screenings, and also the use of certain auxiliary means for rehabilitation and

nursing.

Healthcare managers are highly recommended to always keep in mind three arguments on innovations:

1. Any innovation holds the potential to change the volume and the structure of medical services to be offered. It is a decision of general concern if managers take medical or economic effectiveness as the guiding rule for decision-making on innovation.

2. For decades, the most developed health services systems round the world have been showing one lecture: It is not innovations that are limiting or even endangering the financial future of healthcare systems but the improper and unnecessarily extended use of them is.

3. Some severe problems with handling innovation have something to do with lacks in qualification, with the pressure of amortization and sometimes also with unethical and actually criminal practices (particularly in cases of so-called experimental therapies).

Medical Tourism

This focuses on the practice of traveling across national borders to obtain healthcare through whatever rational goal.

For such medical travels some reasons can be identified:

1. searching for necessary specialized care not available in an individual's own country and seeking higher experiences and advanced techniques

2. the intention to lower costs and the seeking for cheaper providers of treatments, rehabilitation or nursing fostered both by individuals, provider chains, governments and other third-party payers.

3. the offer of treatments not allowed to apply in countries with higher standards of patients' safety and the intention of by-passing national ethical barriers (like in the case of some experimental medicine)

4. the individual's preference for some particular kind of alternative medicine and combining the seeking for them with the pleasures of traveling

5. the wish to buy advertised cosmetic surgery, body styling or wellness industry

The first reason often occurs in sparsely populated countries not able to provide the full range of medical specialties at a sufficient quality standard, but it al-

so occurs in economically less developed countries with a certain proportion of wealthy people or families. In this regard, there are many reports on very problematic practices of pro-active over-utilization of service, fraud, or illegal billing and rewarding of such offers.

The second reason can be found in situations where individuals or insurers and governments wish to lower costs by seeking for low-cost (low-salary) countries which is due to the under payment of professionals, typically including elective procedures as well as complex specialized surgeries such as joint replacements (knee, hip), cardiac surgery or dental surgery. Some regard this the advantage of globalizing free markets, others a burden for the development of the destination countries' own health services.

The third one is simply dealing with hopes and application of uncontrolled medical experiments, which do not meet the standards of research but can successfully be advertised by the providers. These offers of "hope-sellers" may stand at the borders of the ethics of professionalized medicine and actually cross these borders. Providers seeking for markets here are usually not really controllable by law, hold some dubious international accreditations and do not accept any liability. There are reports about tremendous corruption and severe crimes.

The fourth reason does not primarily or necessarily intend to treat diseases but might reflect disappointments with the current opportunities of bio-medicine. It also indicates the complexity of medical and psychological or cultural beliefs. Here indications are mostly weak and precise diagnoses are often missing. As practice shows, results can be convincing even if mechanisms are speculations or are unknown. It is usually not covered by insurance contracts or health plans and has to be paid out of pocket.

The fifth one is part of the so-called second health market, but is usually not part of established and regulated medical services. The market seems to be uncontrollable and holds regularly low levels of accreditation.

There is an estimated of at least 50 countries currently competing for medical tourists. The extension of this business is often an important part of a country's national industry and foreign trade.

Recent trends are forced by a number of different aspects but all of them relate to "globalization", such as

- humanitarian goals and social peace keeping
- national and global capital investments seeking for profits

• research, development, education and specialized professional and vocational training

• multi-center clinical studies

• brain drain of any form and pursuit of professionals

• global trade and exchange of medical products

The trend forces some new problems which are challenging international compromises such as

• accreditation procedures

• liability rights

• patients and data security rights

• transparency regarding universally accepted measures of quality, cultural respect and ethical issues

Also, some destinations may be hazardous for medical tourists thus making this tourism eventually an adventure. Additionally, there is a growing concern about some practices around transplantation and stem cell therapies because of some reported criminal practices.

For examples of trials to regulate parts of the extending markets at least within the European Union see also Legido-Quiley et al. (2008)

Readers are also asked to study on the expected new regulations for the European Union expected in 2013. These regulations are explicitly intended to make healthcare destinations a free choice within Europe for all the European citizens.

Medical tourism is also called medical travel, health tourism, global healthcare and health service outsourcing.

Ottawa-Charter

see Health Promotion

Healthcare and Professionalism of Hospital Managers

The growing importance of both internationalizing health services and of professionalizing its management raises the question that what universal characteristics healthcare management must have or at least should have.

The followings are the authors' recommendation and the summarization of the standard of knowledge expected of healthcare managers:

- public health basics
- basics on global healthcare financing and rewarding systems
- the organizational structure of service provision and types of facilities
- epidemiologic transition's consequences for healthcare
- fundamentals of health economics
- financing and accounting of healthcare organizations and facilities
- hospital controlling
- communication, team building, project management, negotiation skills, staff appraisal
- making business plans
- management of medical devices and pharmaceutical management
- quality and process management
- strategic and investment management
- human resource management
- knowledge about related national laws and international standards
- ethics of management
- managing professional caregivers
- information technology management
- facility management
- product management, marketing and promotion

II

Concepts of Healthcare and Service Products

General Considerations

Healthcare needs to bring together patients and providers. This is the ultimate and top priority of healthcare management. For healthcare managers, it is fundamental to know what patients need and what kind of health services system meets their needs.

The concepts in doing so mirror the visions, the norms and the standards of a country's social and health policy. The traditional way is either to go and see the doctors or to go and see the patients. Nowadays healthcare opens the opportunity to bridge patients and service providers by additionally using technical means. But the increasing specialization of medicine and the concentration of providers in huge corporations and associations may create further distances between patients and specialized doctors. Thus it becomes more and more difficult to manage access to healthcare. But the ways to utilize and to provide healthcare are also influenced by scientific standards of medicine, by needs of teaching and research.

Any social-economic progress and any innovation in public health sciences, medicine, rehabilitation and nursing will finally result in the necessity to change or to further develop the concepts of healthcare and its provision. These ongoing changes make the continuing modernization of healthcare and its concepts a prior challenge for healthcare management. That always includes to monitor and to as-

sess existing ways to organize healthcare and to change if necessary.

The provision of healthcare raises some fundamental questions on public health concerns and individual demands regarding

- mission and social responsibilities
- equity and justice regarding access
- insurance functions and mechanisms
- resource adjustment and allocation
- priority setting
- professional responsibilities
- settings for prevention, healthcare, rehabilitation and permanent care
- cooperation between healthcare and providers of supply
- quality guidance and assessment
- education, research and development
- legal relationship between patients, providers, third-party-payers, regulatory bodies etc.

It is controversially discussed whether healthcare can become described in terms of "product provision" or not. While some argue it would be impossible or at least unnecessary to describe the performance of healthcare in terms of pre-defined and pre-classified products, others stress it the precondition for managing tomorrow's healthcare.

But the world of "healthcare products" has been a reality since we do not discuss medical interventions as an art but the application of the given evidence-based standard of sciences. Evidence-based guidelines, pathways, standards, specialized care procedures, specificity and sensitivity of diagnostics, approved drugs, disease-specific management protocols, recommendations on how to behave in the case of chronic illness or even health economic considerations are nothing new. All of these aspects are further developing and demand new competence in order to manage healthcare to the benefit of patients. And they are finally products, if we consider a product something with a very limited variance.

But healthcare managers should also know why there are concerns around such a "product medicine". It clearly lowers the individuality of the patient-doctor-nurse interrelationship. The doctors' interpretation of what a "product" is and the economic interpretation might differ widely. In addition, the use of such definition frightens many patients and doctors. And there are many reasons for this situation. But the argument against risk selection, incentives for over-and

underutilization practices, for denying necessary and appropriate help, for senseless diagnostics and treatments is not fighting standardization. The answer is to improve knowledge and norms, to include patients into decision making whenever possible, to evaluate the social and the medical outcome of interventions, of care and of nursing.

There are convincing arguments assuming advanced life sciences the major driving force towards offering and applying well-defined and classified products by today's and tomorrow's healthcare. Its deployment demands to spend a permanent advertence on the concepts and on the specific content of such healthcare products. That is far more than extending access to care or improving treatments. It expands the demands for more and revised education and research. It also calls for developing and implementing new or reformed infrastructures for an effective application of modern medicine. More than that and often unwanted, it also needs to overcome and to terminate obsolete practices. Innovations will also potentially have an impact on traditional understandings of what out-and in-patient care are responsible for. All these advances have increased the opportunities of modern healthcare. They will additionally influence traditional experiences and concepts, and will unavoidably influence the interests of many stakeholders. That, indeed, makes healthcare and its permanent force toward future one of the major challenges of a qualified healthcare management. Managers of healthcare are managers of change.

The main road of doing so is applying evidence based medicine through developing standardized guidelines for well-defined health problems and with outcomes being consented with the patients. The way to success is always the close interrelationship with the patients. Acting this way, it is possible to pre-estimate the resources required and to minimize the variance of any of the used product descriptions.

The inclusion of the "resources required" into the consideration of how to manage healthcare will also need to describe the product's consumption of education and professionalism. This is a vast field which needs gathering all the conflicting arguments around the economics of professional education, of labor-division and of cooperation between differently educated teams (general vs. specialized doctors vs. physician assistants vs. primary healthcare nurses vs. professionalized nursing of any kind) and challenge managers to bring in highest performance competencies. Managers are part of the process by using evidence based

concept of provision and utilization in decision-making. As in any other management, it is absolutely necessary to include staff and teams into decision-making on change of the organizational frames and conditions.

Many professionals argue it would violate their self-understanding if one speaks of "products" in the case of healthcare. The usual argument is healthcare provision to patients would be something very personal and individual. And this is certainly true, but does not necessarily make it impossible to standardize and categorize diagnostics, treatments and rehabilitation or nursing.

Regarding the involved conflicts, it is much more important for managers to understand the underlying ethical and methodological requirements, the implications and exclusions, the differences in product standardization both for hospital and out-patient services, for treating diseases or illness, for risk selection policies, for rationing etc.

Standardization needs primarily a fundamental understanding of the true nature of variance in practicing healthcare and the needed range of different products. It makes a difference if the variance is caused by the patients' individuality or by patients' social and economic resources or by the healthcare system's nature or simply by the skills and interests of the providers. It is clearly the healthcare managers' task to analyze and to assess all such arguments and to handle them. But anyway, to describe healthcare's offers precisely and to care for a repeatedly performed quality is the ultimate road to tomorrow's healthcare. The often emerging problems between caregivers and managers are—according to the authors' experience—not really conflicts between care and management. They are mostly conflicts between individuals not able to cross borders of language, professionalism or responsibilities and interests. But they are also conflicts of interests and very often of financial interests. The handling of these conflicts makes cooperative and behavior skills the true challenge for tomorrow's healthcare managers.

It might be reasonable for managers to recognize not only the diverseness of the many concepts of healthcare but also the particular origin of them. At least most of the concepts grow up in the surrounding of the complex settings of specific healthcare philosophies. These traditions are part of their particular functions and are often the obstacle for modernization.

It has to be entirely understood that products will always occur in a classification scheme. This fact raises the question of how to compromise and accredit

such product classification as part of the universal language of international healthcare management. The Diagnosis Related Groups is the most prominent example but not the only one. Similar classifications already exist or will occur in future. But if healthcare management is going international or global, then we need an open culture to develop, discuss, to approve, to implement and to assess such product classifications on an internationally accredited level.

The following sampled terms around healthcare concepts and related products are to help with a better understanding of the different concepts. These selected terms are widely used in practice and should be well-known by healthcare managers.

Complementary and Alternative Medicine (CAM)

CAM is coined into healing procedures born in different cultural and regional backgrouds and personal experience of treatments and their acceptance. The U.S. Institute of Medicine gives the following definition:

"*Complementary and Alternative Medicine (CAM) is a broad domain of resources that encompasses health systems, modalities, and practices and their accompanying theories and beliefs, other than those intrinsic to the dominant health system of a particular society or culture in a given historical period. CAM includes such resources perceived by their users as associated with positive health outcomes. Boundaries within CAM and between the CAM domain and the domain of the dominant system are not always sharp or fixed.*"①

In practice, alternative medicine embraces therapies with a historical or cultural rather than an enlightened scientific basis. Commonly cited examples include naturopathy, chiropractic, herbalism, Traditional Chinese Medicine (TCM), Unani, Ayurveda, Meditation, Yoga, Biofeedback, Hypnosis, Homeopathy, Acupuncture, Dieting and many others. Alternative medicine is an important part of medicine due to its widespread acceptance also among professionally and scientifically skilled doctors using CAM additionally or exclusively.

If something is called being complementary or alternative, one should ask in

---

① Institute of Medicine(US)Committee on the Use of Complementary and Alternative Medicine by the American Public. Complementary and Alternative Medicine in the United Stated. Washington D C: National Academies Press, 2005.

relation to what it is an alternative. Many CAM procedures are under ongoing scientific investigation in order to measure and compare effectiveness, efficiency and to find the mechanisms of working. Both the results and the mechanisms are not quantified or investigated despite being effectively given.

Especially for health and medical tourism, CAM is the key for many of the products particularly offered for international customers.

Alternative medicine practices are diverse in their explanatory statements and in their methodologies. Practices of CAM use not only traditional medicine and their natural resources, but also folk knowledge and spiritual attitudes. A permanent question of concern is the accreditation, supervision and legal practice around such offers, including the liability regarding side-effects, particularly if being reimbursed by third-party payers. Some countries have developed explicit guidelines for offering CAM.

Evidence based medicine typically stands in contradiction to CAM if not based accordingly. The conflict may have consequences for health plans and insurances coverage as well as liability rights.

But any of the providers should realize that CAM internationally plays a very important role. Especially chronically sick people with disappointing healing experiences as well as those participating in wellness care pro-actively tend to use CAM. In this situation CAM will certainly be of importance for recent and future health service industries.

It should be noticed what the *Cochrane Collaboration Complementary Medicine Field* argues:

"*What are considered complementary or alternative practices in one country may be considered conventional medical practices in another. Therefore, our definition is broad and general: complementary medicine includes all such practices and ideas which are outside the domain of conventional medicine in several countries and defined by its users as preventing or treating illness, or promoting health and well-being. These practices complement mainstream medicine by* 1) *contributing to a common whole*, 2) *satisfying a demand not met by conventional practices, and* 3) *diversifying the conceptual framework of medicine.*"①

---

① Manheimer E, Berman B. Cochrane complementary medicine field: scope and topics. http://www.onlinelibrary.wiley.com/o/cochrane/clabout/articles/CE000052/frame.html, 2007.

Behavior oriented prevention

The term refers to a strategy of prevention that tries to change behavioral patterns. The strategy focuses on an individual's life style by assessing the person's risk profile in the light of health concerns. The most efficient way to do so is to provide education and to change social conditions that would make risky behaviors socially successful.

Using behavior oriented prevention in prime prevention in order to keep healthy people healthy is different from using it in secondary prevention in order to prevent chronically ill people from new episodes or worsening current health status.

Behavioral oriented prevention is a matter of complex controversies. This is not because of doubtlessly existing close correlations between behavior and health for a wide range of health conditions. This is because of different concepts to explain an individual's or a specific group of individuals' behavior. While some argue it would be mostly due to living and working conditions, others claim for the assumption that any individual would be totally free to choose the "right" way of living out of a number of given opportunities to do "right" or "wrong". If an individual chooses the "wrong" alternative, society should not requite this bad behavior by uniform payment and free access to healthcare. In contrast, the argument is that it would be necessary to control and to sanction unhealthy behaviors. This issue is extensively discussed particularly in the light of social epidemiological facts, the experiences of occupational and environmental hazards to health.

It also has to be taken into account that behavior does not exclusively focus on the person's own style of living. Any behavior is also a behavior to others and therefore includes any relationship to the person's environment, including humans, professional duties and environment.

see Prevention
see Social Epidemiology

Chronic Care or Chronic Case

Both terms are used for long term or permanent care for individuals with long standing, persistent diseases or impairments and disabilities. But what

"chronic" really means is not precisely defined.

It can include acute medical care resulting from acute incidences where necessary permanent medications or supervision is needed. It is regularly done both by family members and by professional nurses assisting the patients and doctors as well.

It includes care that is specifically adapted to the individual's health problem or other actions to encourage self-care, to promote functioning in the meaning of the International Classification of Functioning, and to prevent from further loss of autonomy. It may also include social functions like advocating for patients' legal rights.

Managing chronic care is one of the very true challenges for the offering of healthcare services. If done by family members, it not only needs help and assistance, but also needs support and supervision.

Chronic care is strongly supported by the WHO and its program—"Innovative Care for Chronic Conditions"①.

The concept focuses on

- pro-active self-management for individuals suffering from chronic conditions
- the design of guidelines for all involved in care and case management
- support through distant information technologies
- and family, especially community assistance

Chronic care should also be seen as a permanent challenge for rehabilitation.

Providers should accept and seek pro-actively for networking with medical services, public services and the entire social infrastructure around the patient's residential area.

If, as in many countries, chronic conditions are accompanied with access to specific benefits of healthcare, both chronic conditions and chronic care are to be defined by law. That may conflict not only the professionals' view but also some providers' interests.

Chronic care has obviously become a matter of international healthcare and services. A remarkable number of disabled and older people in European countries and North America decide to permanently leave their life-long residential area and to seek for places meeting their needs for the rest of life.

---

① http://www.who.int/chp/knowledge/publications/icccreport/en/.

These new "care businesses" include actively offering and seeking for individual permanent care, for example in the case of dementia. Disparities in costs and the transition of demographic patterns obviously seem to force such trends.

see Disease Management Program

see International Classification of Functioning

see Medical Tourism

see Rehabilitation

Concurrent Review

Through this method a provider of healthcare or a third-party-payer reviews all the or selected hospital admissions or intended medical procedures.

In this way, the paying party wants to pre-authorize providers to conduct (costly) treatments by experts but (hopefully) being independent from the providers or the paying party's interests. It is a procedure safeguarding the payers from unnecessary and inappropriate treatments, sometimes using standardized protocols. It may also prevent patients from unnecessary offers.

Concurrent reviews are regularly a matter of controversies between providers and reviewers. Both the standards for review and the selected experts for these reviews are the focus of such conflicts. Conflicts will particularly occur if reviews are assumed to be taken as instruments of competition.

The term can also refer to the management or the review of providers to assess the necessity, appropriateness and effectiveness of care utilization under a health plan's rules. Some of such review procedures use sophisticated and standardized techniques and should be well-known by healthcare givers and managers as well, such as the Appropriateness Evaluation Protocol.

Concurrent review practices are also a common management tool inside a provider organization to assess resource consumption for benchmark purposes.

see Appropriateness

see Benchmark

see Effectiveness

see Necessity

Defensive Medicine

The term indicates diversity of motives and of strategies to reduce utilization of treatment and healthcare services. Defensive medicine might be (1) a way of evidence based decision making against unnecessary and inappropriate offers and utilization may reduce the risks for patients due to overtreatment. It (2) also might be used to reduce the providers' economic risks in the case of prospective payment rules. Here it seems to be a common strategy in order to reduce costs under capitation and managed care contracts. But (3) defensive medicine also describes a provider behavior that aims at avoiding what is necessary and appropriate, for example by referring patients to others. It might (4) also be performed not to endanger providers to become involved in malpractice liability. Under some countries' legislation, defensive medicine is mostly reported to be used to safeguard providers from malpractice claims and costly patients. Readers, therefore, should understand that the diversity of interpretations can only become clarified if the practice of defensive medicine is set into its particular background.

Common techniques are, for example, the compulsory triage of patients by telephone health help lines and the application of unnecessary diagnostic tests by stressing preventive medicine.

The tremendous increase of diagnostic testing, referrals of patients to specialists, the use of inappropriate and unnecessary biopsies or maximizing the preventive prescription of pharmaceuticals are part of that behavior. Here defensive medicine is also discussed to be a method of medical prevention by testing and treating healthy people. This concept extends the "market", reduces the risks of unwanted outcomes, and positively advertises out-of-pocket payment beyond any regulation. Defensive medicine is a "money-printing-machine" that prevents providers from litigations particularly under the frame of prospective and capitated payment and can additionally increase income.

The practice is assumed to be widespread and very common in some healthcare systems and is supposed as being used regularly by most providers in

relating countries①.

The term is also used to describe educational programs designed to teach patients about their medical conditions that are to result in patients' self-management and are to lower the utilization of healthcare resources at the provider organization if the provider works along the rules of prospective capitation. In this case, defensive medicine is to save costs and increase profits for the provider.

But defensive medicine may also occur if health plans particularly cover defensive medicine as a strategy of preventive medicine. Such health insurance plans contract for extended preventive testing as preconditioning for coverage of costs in the case of high severity. This especially attracts Managed Care Organization advertising for younger and healthy insurants and contracts under the rule of capitation.

"*In recent years doctors have admitted to and have been accused of prescribing additional tests or procedures to justify their care, strengthen support for their decisions or simply to corroborate their diagnosis. This defensiveness is a result of lawsuits, malpractice claims and the onslaught of external utility research questioning care decisions and benchmarking doctors by costs. It is often not complying with the rules of an appropriate evidence based medicine.*"②

In some countries, defensive medicine is assumed to play a major role in causing spiraling total cost of healthcare. Many physicians fight for reforms to reduce the need for defensive medicine. However, patients' power groups, patients' advocates and also the mass media are pushing defensive medicine as an alternative to the traditional practice to see the doctors in the case of healthy conditions only.

Malpractice liability is a valid method of making physicians, provider organizations and some third-party-payers accountable for unwanted outcomes. It has to be understood that malpractice, for example in the case of not following diagnostic guidelines, is one of the most profitable subject for advocates in some countries, for example the U.S. takes an estimated of 30% and more of the financial compensations as honorary.

---

① Paul A, Manner M D. Practicing defensive medicine-not good for patients or physicians. http://www.aaos.org/news/bulletin/janfeb07/clinical2.asp, 2013-02-21; Studdard D M, Mello M M, Sage W M. Defensive medicine among high risk specialist physicians in a volatile malpractice environment. Journal of the American Medical Association, 2005, 293(21): 2609～2617.

② http://www.pohly.com/terms_d.html.

Defensive Medicine also describes a behavior, which is to fight the consequences of the Pareto principle. Here defensive medicine is used to shift the available budgets for healthcare from serving ill, elder and often underprivileged people to younger, healthier and better earning people in order to attract them by offering "defensive" measures such as preventive testing and preventive medications.

Defensive medicine attracts third-party-payers, doctors and patients round the world. One consequence is the push of diagnostics regardless of whether there is a need or a therapeutic consequence or not. Another problem is the possible dangerous outcome of such a development, for example in some practices of preventive treatments, for example, followed by the misuse of antibiotics.

Among most scientific observers, there is an agreement that defensive medicine would strike healthcare internationally. Some observers see defensive medicine also dangerous to people's health because of the particular risks due to permanent preventive medical interventions into healthy people. If any risk has to be detected and to be treated, medical interventions would not become an exception in the life of people but a normality and finally a norm.

Big players in the health markets are often interested in pushing defensive medicine due to its easy adoption by middle and upper class consumers. Here the concept is to attract people to contact a medical diagnostic center directly and without any referral, but exclusively for defensive medicine goals.

see Paradox of Prevention

Delay of Treatment

It refers to the time interval between

- first symptoms of a disease and the first consultation
- the first consultation and the ensuing diagnosis
- diagnosis and the initiation of the corresponding treatment

Delay of treatment may not be necessary, especially not in cases that concern the outcomes of treatment. But they are important indicators for

- the population's cultural attitude towards utilizing services
- the cooperation within the healthcare system
- the possibly pro-actively established waiting list policy of an insurance

and for

- the selection policies of access to healthcare by some providers.

Delay is always an indicator for access to necessary and appropriate healthcare and for the functioning of a system between doctors and facilities.

see Referral

Diagnostic Investigations

Diagnostic investigation is also called medical diagnosis. These are the procedures used to identify a health condition or an illness as a disease according to the International Classification of Diseases. They will result in diagnostic findings.

The diagnostic procedures need a model of pathology, especial of a disease. The parameters being measured become compared against the model. This comparison can produce cases identifying a disease "right" or "false" and can be measured in terms of sensitivity and specificity or predictive values. A diagnostic procedure may be performed by laymen, nurses, physician assistants, doctors or particular diagnosticians as well. The allowances to proceed diagnostic procedures in terms of medicine has to be licensed by state agencies in most countries. Decision support systems and interactive linking between doctors and staff members might be used in distant medicine arrangements, allowing both the delegation and the substitution of doctors' tasks.

The more severe an illness is, the better is the likelihood of a fitting congruence of the model and a patient's measured parameters. On the contrary, the prediction of a disease will be more uncertain if it is less severe, like in the early stage of a disease. This can raise difficulties if a decision has to be made for very early treatments. This way is of fundamental importance to assess results of diagnostics as being relevant or not by the patient's doctor. This has to be done by using norms and reaching agreement within the scientific community and by making the parts of a puzzle a picture.

Nowadays, the function of diagnosis goes far beyond the traditional purposes, which are to legitimize treatments. The extension of the diagnostics' objectives meets, for example,

- the detection of risks for falling ill prospectively
- the prediction of the likelihood of a specific disease's occurrence
- the detection of early stages of a disease which could irreversibly move into a severe disease
- proving good health for a job application

• the permanent control of therapy

• giving evidence in liability cases regarding work related diseases, doctors or nurses malpractice, accidents or violence

• monitoring peoples' work under hazardous conditions and many more.

Even if using the same procedures for each of the different goals, the fundamental measures of sensitivity and specificity or predictive values will be different or have to be differently assessed.

Diagnostic investigations are the entrance to medicine and therefore somewhat fundamental to any utilization of healthcare in terms of quantity and structure. But a diagnosis that has dearly been made is consuming resources whether it confirms the necessity of care or not. It is a fundamental decision how wide to open the door of this entrance. This decision will be done through the selection of the parameters taken and the norms adjusted. The wider the entrance is, the smaller the number of positive results among all of the tests is, but at the same time the higher the number of people detected as false-positive cases is.

It is also true that a growing proportion of healthcare expenditures are taken not for the purpose of treatment but for stating an individual as not being ill. But it makes a big difference to diagnosing good health or bad health. The used strategies are some kind of permanent supervision of an individual's health. Utilizing resources for these purposes will regularly endanger a high percentage of individuals facing so-called false-positive results and will be followed by dramatically spiraling costs.

In regard to health economics, the problem of containing demands and the following costs is not so much affected by treatment or considerations on treatment's rationing. The key problem is that the number of diagnoses aiming at clarifying an existing health condition of suffering individuals or diagnosing unselected populations for new findings is increasing.

Any strategy of diagnostics is of tremendous economic consequence for providers and for third-party-payers but mostly in a reciprocal view. Widespread arguments assume the diagnostics of risks or of diseases at very early stages a chance to contain the following costs. Unfortunately, the scientific evidence for such a belief is not clear and well investigated. The practice of permanent mass-testing for risks as a method of defensive medicine is, for example, seen as one of the main reasons for the uncontrollable cost in many countries. There is no evidence that these investments would signal some public health return but they

might be profitable for providers.

Performing tests only will regularly not meet the requirements of a diagnostic investigation. But there are tremendous economic providers' interests to lower legal requirements and to extend unregulated access to diagnostic procedures, particularly in the circumstances of screening and monitoring people's health by restricting medical diagnosis to performing tests. The separation of individuals and doctors in performing diagnostic procedures is one of the most striking developments in current healthcare management internationally. The logic is simple: People who rules the medical diagnosis rules the market.

see Marginal Utilization of Medical Progress

see Defensive Medicine

see Product Medicine

see Sensitivity

see Specificity

Disease Management (DM) and Disease Management Program (DMP)

DM is an integrated system of disease (case) preventive, diagnostic, therapeutic and/or rehabilitative activities. Such systems are established to perform cost-effective, quality-adjusted and guideline linked healthcare for a group of patients who suffer from a specific chronic disease, illness or medical condition or who are at risk to develop such a disease. Some countries also call that"dispensaries".

It is a strategic decision to make disease management a responsibility of established family or primary care doctors as well as professional nurses. Sometimes the alternative is to settle a specific and discrete organizational infrastructure for any of the diseases concerned, including its own professional staff and organizational infrastructure.

But the term does not only cover different models of management. It also signals different intensions and interests. Some of the related aspects are most relevant to managers.

Key elements and strategies are

• the design of pre-defined case-products and specific healthcare schemes, as well as a systematic and standardized management of utilization and services for

chronically ill individuals (DM is driven by standardized guidelines and pathways of utilization)

- the permanent evaluation of services and results (DM is driven by results)
- the implementation of mechanisms to control and to benchmark effectiveness and efficiency (DM is supervised by established evaluation procedures)

DM is projected to minimize the variance of care and services through implementing and using evidence based standards. Since the variance depends not only on the specific disease but also on severity, age, gender, social, mental and intellectual conditions, some analysts prefer to adopt a management scheme not so much in reference to the specific disease but by grouping the individuals according to their specific social and individual characteristics and attitudes. Here, for the same medical cases, different systems of DM would have to be established.

Many of the patients needing such programs will also be in need of permanent care, for example patients suffering from diabetes. Therefore, it would be reasonable to integrate permanent care utilization into such programs or the other way round—DM into permanent care. The example is to show that it is of fundamental importance to adapt DM to the best standards on how to treat and to care for a particular disease or to adapt it to the social and psychological features of a group of individuals in need of care. But if doing so, the number of different management programs would rise tremendously and develop a tendency of multiplying disease-specific health services systems. Each of them could easily be assessed as most cost-effective, but the total costs will certainly increase tremendously. That is why DM should regularly be seen as a primary care doctor's tool of managing comprehensive and permanent care.

Some experts identify the increasing total costs a key-problem if managing all the different programs separately. Another concern refers to the possibility that such programs would only be deployed for high prevalent diseases. That would foster the trend to focus resources on some few health conditions. This selection could neglect the manifoldness of the remaining health problems simply because of economic interests. Finally, patients in under-populated regions could not come into the advantage of joining such programs. For that reason, DM should be integrated into a system of primary care doctors supported by a particularly trained staff and advanced information technology. Both the delegation and the substitution of the doctors' competencies and the development of expert systems would support such programs.

Whatever the concern is, studies show that disease management programs are of advantage if well designed and adapted to the characteristics of a group, a region, a social neighborhood or a country.

DM needs continuous evaluation by so-called Diseases Management Measures.

It might be seen problematic that some insurance companies try to develop their own DMPs as part of the insurance marketing and advertising strategies. The prime concept is to gain advantage in competition. Under some countries, legal regulation might only be possible when going beyond the universal standards of evidence based medicine or by risk selection.

The development of disease specific management arrangements has long existed in history and is therefore well-investigated. Some of its results can be summarized as follows:

- the average quality of care and treatment might gain profit through standardizing the processes and the mechanisms of recruiting patients (both through self-recruiting and active selection policies)
- the acceptance of such programs differs according to age, gender, region and social class, therefore building up groups for DMP might result in some social selection
- recruiting patients for programs through putting them under pressure endangers positive outcomes
- the effectiveness depends not so much on the best evidence of treatments but much more on social management and overall acceptance
- the efficiency is often lower than expected but actually DMP will increase costs, because the additional costs for management and facilitating the program can exceed the cost for traditionally managed healthcare

The large number of reports on effectiveness show mixed results. See, for example, *Clark AM et al* (2009).

Some special objectives have to be considered seriously if a well-designed program is to be put into processing, such as

- identifying and selecting people for the program
- establishing the team for processing the program's guidelines
- doing the documentation and the protocols
- managing permanent compliance
- supporting motivation and communication among the participants (if the

program focuses on group appointments) and the team

• recording and exchanging data for assessments and evaluation

DM is also considered as a method of Pharmaceutical Benefit Management (PBM) Industries and the economic power groups behind. That is why the upcoming movement also raises many critiques. There are often obviously hidden developers and owners behind such programs. The hidden power groups are assumed to be a new kind of advertisement companies of the pharmaceutical industry. The discussion is that the forcing of DMP could also be a method of pushing drug selling according to a company's market interests.

In the U.S., one speaks of the "Disease Management Industry", particularly forced by health plans, health insurance and Integrated Delivery Systems as a method of covering healthcare for corporatized healthcare industries.

Such critiques have made the U.S. Centre for Medicare and Medicaid Services (CMS) develop its own models for DMPs for individuals suffering from diabetes and heart diseases and propose the following definition:

"*Disease Management is a strategy of delivering health services using interdisciplinary clinical teams, continuous analysis of relevant data, and cost-effective technology to improve the health outcomes of patients with specific diseases.*"①

Early Detection Strategies

The WHO promotes this strategy particularly for the detection of cancer. It is to increase the probability for successful treatment. There are two major ways to be considered:

• the detection of risks to fall ill and

• the diagnosis of very early stages of an already existing and growing cancer.

To do so, two major ways are discussed and proposed. This is (a) educating people in recognizing early warnings and signs which should be clarified by diagnosis and (b) by systematically offered and conducted screening.

---

① http://www.ahrq.gov/populations/chroniccaremodel/chronic3ldl.p,2012-10-11; Nair V, Salmon J W, Kaul E F. Iatrogenic disease management: moderating medication errors and risks in a pharmacy benefit management environment. Disease Management, 2007, 10(6): 337～346.

Under the ruling concept of evidence based medicine, it is seen essential to prove the results of both ways by assessing the additional benefit of screening against the self-recognition of early warning signs.

Much more complicated is the concept to detect not early stages of cancer but risks to get cancer or any other disease. According to current knowledge and experience, every human being will fall ill and finally die because of illness. That means 100% of people are at risk with a 100% probability. In other words, any individual would have to be under "preventive" observation during all her or his life. This is somewhat impossible both due to ethical and economic reasons.

see Diagnostic Investigation
see Screening

Elective Operations

The term refers to treatments (mostly surgical ones) which can be planned and potentially be set on a waiting list. These are typically non-emergency operations.

Elective operations will unavoidably produce a waiting list which may result in complaints and disadvantages in competition, and will set such potentially elective operations on top of some strategies of competition and risk selection.

Elective operations are most important for healthcare management. They can easily be performed by cost-effective standardized clinical pathways. Hospitals and clinics become encouraged to develop highly profiled and selected portfolios and to run the hospital like an industry production. Regarding the discussion on the failures of competition, elective operations give arguments against one of the so-called failures of competition in health care. One of the most important particularities of medicine is the fact that measurements of health and medical care are only possible if done for and with the patient together as long as the patient is a participant. "Production" and "consumption" of services occur at the same time. Consequently patients cannot act as customers as they can do as in the case of shopping for clothes. Economists also call that the uno-actu.

Some discuss the necessity to overcome that particular principle in order to overcome this "failure of competition". The making of competition as the ruling mechanism for providing healthcare provokes the splitting off the statement of need (medical diagnosis) and the action of service (treatment) into two indepen-

dent activities. The one regarding the diagnosis of patients' needs could—that is part of discussion—be done by insurance facilities. The second part, namely applying the treatment, could be performed by traditional medical facilities which are possibly owned by insurance facilities or giant alliances of provider organizations and insurance facilities. Such concepts are also seen as the way to make users "real" customers by selecting providers pro-actively on the market. That is why specifically elective procedures are of some remarkable concern for managers and health economists both in practice and in the analytical scenery because such concepts could not really function in the case of emergency.

Some third-part-payers might also feel encouraged to use elective operations especially for waiting lists for purposes of reducing demand.

see Delay of Treatment
see Failures of Competition
see Risk Selection

Experimental Therapies

Experimental therapies refer to a treatment practice used if

- an evidence based and accepted standard of therapy is not available
- a research result has to be proven in practice
- an unproven therapy is seen as a "final" chance
- providers simply try to maximize profits by offering treatments having not been proven or allowed under regular conditions (selling hopes).

The topic clearly deals with public discussions involving insurers, providers, researches, industries, policymakers rather than the mass media. The discussion on experimental therapies is extremely conflicting.

The matter is striking healthcare management's responsibilities in an international perspective dramatically. Some nations regulate experimental therapies strongly while others do not. But any provider should feel challenged in formulating its clinical governance on experimental therapies.

Such therapies are of special concern if they become a regular product but not an exception for strongly selected cases, as is often reported in medical tourism practices. Some providers offer not evidence based and approved therapies but try to attract people's hopes and call the offer an experimental therapy. The phenomenon will be especially important, if internationally acting

providers are crossing ethical barriers by advertising unproven therapies. Providers offering such therapies seek for countries with low legal standards for their settlements. There is usually no legal safeguard for the patients based on a particular liability policy.

see Medical Tourism

Healthcare and Health Services

The terms are not really well defined but in the common understanding they include

- health promotion
- medical and behavioral prevention
- medical services (diagnostics and treatments)
- intermediate care and rehabilitation
- nursing and care

It sometimes also includes pharmacists' services, healthcare devices' delivery, technology provision and research. Some also see the wellness industry part of healthcare.

It is just an internationally used and understood name for a comprehensive branch, which might be differently interpreted and regulated (both financially and legally) by nations. The dilemma of different understandings about what healthcare and what medical care particularly contains can lead to misunderstandings of professional training and further graduation, for example regarding Healthcare Management.

see Consumer

see Medical Care

see Patient

Health Services Systems

These refer to any system providing and delivering prevention, medical services (most of all diagnostics and treatment), rehabilitation, nursing and care or offering additional social and technical services, devices and supports.

In order to operate as a "system", it needs more than sampling, adding and contracting providers. The term "system" refers to the existence of a universally

compromised goal and the materialized conditions for the coordinated interaction of any of the providers necessary to fulfill the goals and to meet accepted standards. This includes considering services as depending on infrastructures, their processing and performance.

Characteristics being essential for a health services system are

- the regulations on accessibility
- the national accreditation policy for healthcare professions
- the norm-setting practice and their supervision
- the utilization of specialized healthcare after passing gate-keeping organizations like triage centers, family doctors or general practitioners
- the interaction of out-patient and in-patient facilities by the implemented system of referrals
- the cooperation between prevention, medicine, rehabilitation, nursing and care delivery
- the rules of reimbursing provided services etc.

Some also include the financial regulations and the health insurance into the understanding of how the health service system is designed.

see Health Insurance System

see Triage Centre

Independent Case Management

In systems where healthcare is primarily regulated by market competition, the offer of a comprehensive professional coordination of necessary healthcare by an independent case management might be a safeguard for patients and third-party-payers.

It is to support patients suffering from chronic conditions or disabilities with decision-making independent of advertisements, marketing concepts and ruling provider interests. It can include assessing and counseling necessary diagnostic tests, regular treatments, rehabilitation, permanent care, managing any activities improving the ability of the patient to stay or to gain independence and autonomy through the managed integration of physical, psychological, social, functional, and personal services.

The independent case manager is to organize services that are more effective and appropriate to the needs of the patient or to the interests of the provider and

that would not otherwise be covered under insurance policy. While this management is traditionally seen as the family doctors' tasks, there are many trials to replace them by other providers including the insurances themselves and to offer that under the frame of independency. Experiences show this independency problematic if not strictly legally-regulated and supervised.

see Case Management
see Disease Management
see Rehabilitation

Integrated Care

Integrated care is a dazzling term focusing on many of the very conflicts concepts of healthcare and its management.

Looking at some of the national concepts of managing healthcare and medical care, out-patient doctors are seen to be the primary serving doctors of all the families and residents of a defined rural or urban area. These doctors are responsible for primary care and particularly for looking after the comprehensive health-related problems of the whole family. Besides helping people falling ill, family doctors are accepted to provide preventive advices or to help with disabilities or even to be social advocates. With growing labor-division in medicine and healthcare, family doctors are also seen as the solution to coordinated care. This task includes sampling related data about individuals and families, for organizing specialized diagnosis, treatment and care in close cooperation with the related specialized providers and facilities. We also find trials to make those doctors fund-holders for all the patients' tax-paid needs and charge their bills for hospital care and other needs such as in the United Kingdom in the 1990s.

These "integrators" function is grounded in "referrals" and established information chains between the different professionals and providers involved. The concept focuses on primary care as, for example, described by the Alma-Ata Declaration (12.09.1978) which is still supported by the WHO at present①.

In this light, primary care is seen as the concept

- to cover all the citizens of a nation,
- to deliver all the services that are necessary and appropriate,

① http://www.who.int/topics/primary_health_care/en/.

• to integrate all the related services, providers and responsibilities,

• to develop collaboration on making healthy policies around the individual's residential area and the inclusion of all the stakeholders around healthcare and prevention.

This concept still finds support in most of the countries on the globe and is the basis of provision in the United Kingdom, the Scandinavian countries, in North and South America and so on. The key is always to give defined responsibilities into the hands of a prime institution such as a family doctor or professional nurse, a community health center or a policlinic and to make them an "institution" in the broader social medical sense.

But this concept is under attack mainly by two major developments:

• The first one relates to the growing specialization and the interests of single specialized doctors to settle for ambulant care and to compete for profit against primary care and hospitals.

• The second one relates to the economic interests both of some third-party-payers and of investors to integrate into chains and huge corporate provider associations.

This in particular has changed the meaning of "integration" from a medical necessity into an economic approach for shareholders. These new types of "integrators" compete for value creation by integrating market offers, particularly those profitable offers and leave the rest for the public. This development will become some more powerful when certain types of third-party payers or healthcare industries decides to overcome the traditional purchaser-provider-split. These new chains want to act either directly as providers or as sellers of the economic risks of provision by using prospective payment concepts and subcontractors. These stakeholders of "Integrated Care" argue that integration cannot be done by political goal-setting and public administration but exclusively by integrating financial interests into one entrepreneurial hand. On this background, integrated care became the symbolic term for the ongoing controversy if social policy making or market competition can perform better in covering the needs for health services of a country's citizens.

Particularly under the influence of Managed Care and the corporatization of medicine, integrated care became a totally new development changing the provision of medicine like nothing else(Salmon,1990,1994).

Under this ongoing change, Integrated Care becomes the term for

integrating healthcare primarily not by social medical concepts but by financial incentives, by the funding of care, by administering and managing care as a bundle of products covered under the frame of an Integrated Delivery System, either constructed as non-for-profit or for-profit offers.

This new type of integration into huge corporations and associations has many aspects to be considered. Some particularly important aspects are

- risk pooling
- prospectively capitated funding
- the share of public and shareholders' administrative responsibilities (such as planning, portfolio profiling, sub-contracting, allocation)
- the setting for the organization of offers
- the utilization
- the authorization
- the management of care,
- data exchange or
- internal regulation and governance.

Of particular concern are the consequences for setting the provider organization's clinical standards by management, such as monitoring medical staff and patients' needs, medical practice guidelines and pathways, authorization procedures, the delegation and substitution policy for medical services, evaluation and reporting results etc.

The discussion around integrated care focuses mostly on autonomous decision making by the medical staff versus prior authorization by economic incentives or internal integration versus internal competition. Of particular importance is the discussion around the rules of horizontal and vertical integration[①].

See Failures of Competition
See Healthcare Systems United Kingdom
See Integrated Delivery System
See Managed Care
See Managed Competition
See Primary Care

---

① Lawrence D. Building a Better Delivery System: A New Engineering Health Care Partnership-Bridging the Quality Chasm. Washington D C: National Academy of Sciences, 2005; Kodner D L, Spreeuwenberg C. Integrated care: meaning, logic, applications, and implications—a discussion paper. International Journal of Integrated Care, 2002, 2(14): 1～6.

See Prospective Payment Systems

Medical Necessity and Medical Necessary Services

One of the fundamentals in healthcare is to define what kinds of services are necessary and what are not. Because any intervention intervenes into an individual's integrity and intervention needs to be legitimized. There are only two ways to do so. One is patients' agreement. The other is the setting of norms for "necessity" and "appropriateness". To do more than necessary will violate law in many countries. But, of course, it is a principal challenge to define and to compromise on what medical necessity is. Patients, doctors, providers and third-party-payers may have a very different opinion.

Tax-funded services usually will define it by law or equivalent guidelines, privately contracted insurance will define it by contracted plan and social health insurance may develop particular agencies representing both the members of the social health insurance plan and the medical competence. In any case, it is of principal importance to distinguish interventions that are proven, allowed and licensed from those that are necessary and appropriate.

According to internationally accepted positions, services or treatments may be seen necessary, if they follow these guidelines:

- being grounded in an accepted diagnosis by at least one professional
- using a specific and proven treatment
- meeting the average standards of medical practice and being accepted within the medical community
- meeting the standards of evidence based medicine and decision making (if available)
- exclusively applied to treat but not for the financial concerns of a provider or other interests
- performing the most appropriate level of service for individual patients
- avoiding over-utilization, under-utilization or mal-practice
- safeguarding the patient's values and rights
- practicing guidelines of quality

Most health plans and third-party-payers demand "necessity" the guiding norm for coverage and performance. Health plans typically include the right and obligation to control the necessity of healthcare by independent reviewers. This

can be done by prior authorization or approval and by checking documentation and billing.

see Appropriateness
see Concurrent Review
see Medical Review
see Necessity

Medical Review and Medical Review Criteria

Both terms refer to the examination of healthcare utilization and to the criteria used for examination. Medical reviews are usually conducted by insurance companies, third-party payers, particular independent review organizations and case managers but they might also be conducted for giving evidence in medical malpractice liability litigations. Even providers management might accidentally or systematically screen medical staff for decision making and pre-paid resource consumption.

Such reviews are the underlying basis for checking the quality, necessity, appropriateness and billing of care performed. Insurance companies rely heavily on medical reviews and try to use their own criteria for cost control. Through medical reviews, payers try to limit or reduce the utilization of healthcare services. Medical reviews can put patients at difficult arguments with their insurance companies under fee-for-service rules or hospitals and doctors in conflict with the paying party.

One may see it very important to compromise on criteria for medical reviews as part of the universal standards of contracts.

see Appropriateness
see Concurrent Review
see Necessity

Nursing

"*Nursing encompasses autonomous and collaborative care of individuals of all ages, families, groups and communities, sick or well and in all settings. Nursing includes the promotion of health, prevention of illness, and the care of ill, disabled and dying people. Advocacy, promotion of a safe*

environment, research, participation in shaping health policy and in patient and health systems management, and education are also key nursing roles." (*International Council of Nurses*)

"*The use of clinical judgment in the provision of care to enable people to improve, maintain, or recover health, to cope with health problems, and to achieve the best possible quality of life, whatever their disease or disability, until death.*" (*Royal Collage of Nursing, UK*)

"*Nursing is the protection, promotion, and optimization of health and abilities; prevention of illness and injury; alleviation of suffering through the diagnosis and treatment of human responses; and advocacy in healthcare for individuals, families, communities, and populations.*" (*American Nurses Association*)

Nurses are caring for individuals. These individuals may be healthy or ill, of all ages and experiences and educated in different cultural backgrounds. People depending on nursing for a limited time or permanently may have different physical, psychic and social needs. For these reasons, nurses are expected to be able to integrate medical knowledge, social competence, nursing skills, and practice in handling technology and supply designed to care individuals depending on nursing.

The role of nurses varies from being members of a multi-professional team to independent service providers who assess, plan, practice and evaluate care. They may also be team leaders of caregivers who graduated after having received examined and approved professional training. They may also work under terms of particular delegation rule or to substitute other professionals.

The ways to become a professional nurse vary globally. But the ways usually involve study, practice and training in nursing and additional clinical skills. The variance among international health services systems or within single provider organizations appears with the educational requirements. That is the reason why nursing, as a complicated process of specialization in its profiles, has made the management of cooperation between them a fast expanding matter of concern.

It has to be noticed that nurses are working internationally in very different settings, for example doctors or nurses run hospitals, clinics in physicians' offices, nurse-run-facilities, long-term care homes, home care practices, social institutions, at schools and occupational healthcare settings or also in pharmaceutical benefit management organizations and public offices. Nurses may also work as

researchers in laboratories, universities and research institutions.

In the process of making healthcare services operate more efficiently, there are many, sometimes very conflicting, concerns on labor-division among all the professionals and the rules of hierarchy.

see Delegation

see Substitution

Rehabilitation or Intermediate Care

One of the very fundamentals of modern health services is to develop capabilities and skills to regain or to hold the level of autonomy or to prevent from further losses or to regain the capability of an autonomous life. Participation in social life is the prior vision and goal for rehabilitation.

In an international view, it is particularly important to consider that health

- offers the chance to participate in social life and
- to limit dependency on others and to attain self-determination

Round the globe, there is an estimated 15% of people being disabled because of

- genetic abnormalities,
- malnutrition and diseases in childhood
- hazardous working conditions
- wars, violence and poverty or of
- chronic conditions or
- aging

Part of the problem is daily discrimination, active social exclusion and even violence against physically and mentally disabled people. Poverty and disablement are strongly correlated and both cause and result in a vicious circle.

Programs for rehabilitation need comprehensive achievements including medical help, education, professional training and most of all a chance for socially accepted employment. Community-based social inclusion is on top of the agenda for rehabilitation.

According to the articles 25 and 26 of the "Convention on the Rights of Persons with Disabilities", countries are to guarantee that people with disabilities have access to rehabilitation and sufficient health and social services. Nowadays, the overall concept of rehabilitation is given by the International Classification of

Functioning as published by the WHO and is accepted by national legislation of signing governments. It is fundamental to classify the functions to be regained or compensated.

In order to improve medical care and rehabilitation services, WHO

• develops practical concepts for rehabilitation services

• supports actions to integrate primary health care and rehabilitation ser-vices

• takes action for developing Community-Based Rehabilitation Programs or

• wants to encourage health promotion strategies to help disabled people know their rights and chances of participation as well as their capacities for development.

As a result of the demographic transition, rehabilitation is a particular challenge for healthcare management.

Rehabilitation can be provided by out-patient and in-patient services as well and will be offered by a multidisciplinary team of doctors, psychologists, nurses, physiotherapists, logopaedics and many more. The team will include specialists for technical rehabilitative devices if appropriate.

To educate, motivate and train the disabled is most important for effective rehabilitation. The target is to develop any competence necessary in order to overcome or to limit handicaps.

Rehabilitation services after hospital care, injury or congenital disablements may be additionally reasonable in order to substitute the costly hospital stay, and to shorten the length of hospitalization. This economic approach receives a growing awareness under the ruling concepts of product medicine and concepts of economically integrated care.

see Diagnosis Related Groups

see Integrated Care

see International Classification of Functioning

see Product Medicine

Permanent Care

Permanent care is to compensate for the loss of the ability to do activities of daily living autonomously.

The need for permanent care can be caused by consequences of

- a disease
- an accident or
- congenital conditions.

Individuals' dependency on permanent care is just another word for dependency on other individuals, family members, friends, neighbors or professional caregivers.

Permanent care is mostly given at the depending persons' homes but it is also given in professionally performing care homes. In any case the external supervision is one of the most crucial points for managing permanent care, particularly if the permanent care is provided by private families. Therefore, care, professionalized and supervised, can be an advantage, even if culturally not accepted in some countries.

There are tendencies to make permanent care a business and subject for healthcare tourism. This development unavoidably needs standards of supervision and accreditation.

see Activity of Daily Living
see Chronic Care

Predictive Medicine

This is the promise to prevent from particular diseases and disabilities through predicting defined health conditions and using medical interventions. The prediction might be done both qualitatively and quantitatively in terms of quantified risks or likelihoods.

While predictive medicine is discussed as something new, it has been forcing health related sciences and medicine since the beginning of research on diseases' etiology. The concept has made interventions in people's living conditions, hygiene, occupational and environmental medicine successfully but needs comprehensive epidemiological, socio epidemiological and other statistical data. Interventions in people's living and working conditions have been tremendously effective in increasing life expectancy and lowering the burdens or disability.

The upcoming discussion on predictive medicine postpones the notion from interventions into the conditions of living towards the intervention into individuals by using the means of medicine

- screening for individual risks and

- intervention into behaviors,
- applying pharmaceuticals or using surgery.

Particularly the growing ability to predict health by genetic screening of unborn and newborn children is a matter of controversial discussion. But this is not really new and has been successful in some specific cases such as phenylketonuria or cystic fibrosis.

Just nowadays there are remarkable trials to convert the understanding of predictive public health concerns into the prediction of a single individual's future health through looking at the genetic information that an individual carries. The problem is how to interpret such information.

These rapidly emerging offers seem to be a promising business using genomics, proteomics, and cytomics but the scientific basis often lacks behind the advertised outcomes. Comprehensive testing by using DNA arrays or total genome sequencing usually does provide neither the total promise of total and neverending health nor the information of strongly determinant diseases developing in later life. The business is the testing while the interpretation of results remains a problem of uncertainty, at least in most cases.

Permanent testing for change in health conditions and the trial to detect the possibility of illness or early stages of diseases, the verification of the tests' results, the exclusion of false-positive results, the pre-conception testing of the parents, prenatal testing of fetuses, newborn testing or the testing for specified carriers' health risks tolerance could become a regular offer of predictive medicine.

Predictive medicine is testing healthy people for the opportunity and likelihood of getting a specific disease. For the simple reason that at least in late age most people will suffer from some kind of health conditions, permanent testing and predicting can easily become a regular thing with tremendous market expansions for the testing industries. This could result in numberless predictive treatments, in the selection of pregnancies, tremendous data files on individuals' bioconditions, or strong selections on the labor markets seeking for prospectively healthy workers.

Regarding the developing new business, many scientists share very serious ethical concerns and see it too early to draw practical conclusion and also demand a profound legal regulation.

Some also argue some medical tourism will be based on the new predictive

medicine and on the goal to avoid some nations' existing legal regulations.

see Compression of Morbidity

see Etiology

see Personalized Medicine

see Prevention

Prevention

Prevention is the science of predicting health conditions and diseases and the practice of intervening into the humans' life aiming to reduce risks for health. It is fundamentally based on the scientific standards and experiences of the public health sciences and of life sciences.

Prevention basically raises the question of whether to intervene into single individuals or into their conditions for life. The first strategy sets norms for the individual's functioning and life style. The second one sets norms for the individual's social and physical environment and living conditions. The first strategy tends to blame people for risky life; the second one may blame the conditions for life. The consequence of the first strategy is to set norms for the humans' biology and behavior, especially for changing biology and behavior of individuals, while the second one sets norms for the living conditions and on how they can be changed. That, of course, might put prevention and related sciences into arguments with major concepts about mankind's future and how today's realities are to be changed. So far, prevention does not only deal with the current but also with the health of future generations.

But any norm-setting activity needs prediction and some kind of plan for future. Prevention asks for the relationship between individuals and between individuals and their social and physical environment. That has made prevention a source of conflicts since the early beginning of mankind's social history: What is the way to go and who is in power to decide the way? Consequently, prevention needs a much broader basis of arguments and legitimation rather than any medical individual intervention, even if intended to be preventive.

The scientific basis relates to quantitative research, such as epidemiology and uses of arguments of "probability". But "probability" is not defined for single individuals, cases or occurrence. It is exclusively based on quantities. It cannot forecast a single incident but a number of incidents in a group. That is why public

health based on prevention is necessarily dealing with a group's living. This can be a nation's or a region's population, or a group defined by any other feature like age, gender, work, social strata, ethnic and many more.

The outcome of preventive measures will depend on the motivations of individuals, groups or populations to accept and to follow predictions in the public, at work or in personal behavior. Motivation is an analytical subject in its own. It may reflect an individual's or a group's sense of coherence according to the concept of Antonovsky.

Prevention strategies usually try to intervene into the ruling of cultural and social norms, into the preferences for one's personal life or into a nation's environmental and economic policies, for example regarding the production of goods and the protection of environment (mostly water, air and ground).

More specifically, prevention aims at

- preventing diseases, illness, impairments, disablements and handicaps
- decelerating the occurrence of illness, if unavoidable
- lowering the severity or avoiding the recurrence of disease's episodes

For public health and healthcare managers, it is of concern to issue differently

- prevention using means of medicine (testing and preventive treatments, predictive medicine),
- prevention intervening into groups' health behaviors and life style attitudes
- prevention changing the conditions of life(health promotion, hygiene, risk monitoring at work places, environmental protection, control of products, especially of food and the safety of consumer goods)

The outcome of preventive programs is often limited by factors like

- cultural and social acceptance of targets and methods
- natural and economic circumstances and alternatives
- conflicting interests
- individual preferences for its own life
- the resources used to manage personal life

Prevention is typically distinguished into

- primary prevention
- secondary prevention and
- tertiary prevention

and also into

- structural prevention, aiming at improving living conditions
- behavior oriented prevention and
- preventive medicine

see Behavior oriented Prevention
see Diseases
see Health
see Health Promotion
see Structural Prevention
see Preventive Medicine
see Sense of Coherence

Preventive Medicine

Preventive medicine is the practice of medical interventions for preventive goals. There are both many pros and cons regarding preventive medicine and each of them can be proven true by examples. Particularly screening and vaccination are examples of success.

Using medicine for prevention not only has to be legitimized by principles of evidence based prevention and shared decision-making but also has to be regularly evaluated for its effectiveness, efficiency and ethical issues.

The overall concern is to intervene into healthy people and to give medicine some control over individuals' life. This control might use social control and give predictions on future life that are possibly much more risky than the predicted risks for health itself.

Given this background, it is recommended to heed seriously

- ethical and cultural issues
- social acceptance and frame-conditions
- effectiveness and efficiency
- the risks of preventive testing and intervention

see Prevention
see Predictive Medicine

Preventive Testing

This is the favored method of preventive medicine which offers regular

testing of Individuals for the risks of falling ill.

The testing will result in the findings of

• nothing

• factors (risk factors) indicating that to fall ill at a defined disease is more likely for one group of people than another not carrying such a factor

• very early stages of a disease or borderlines of a disease which possibly could generate a severe disease or self-healing

• health conditions and dispositions against specified physical, biological, chemical or mental exposures

• measuring pre-existing (genetic) risks of a developing fetus

Respecting the basics of evidence for its effectiveness and efficiency, preventive testing is often overestimated and it is also one of the most remarkable reasons for spiraling costs and limiting the ethical borders for medical interventions.

Preventive testing raises many ethical concerns because of the low predictive values of many of the tests used in practice.

see Diagnostic

see Risk Factors

see Defensive Medicine

see Predictive Medicine

see Screening

Primary Health Care (PHC)

"*Primary care brings promotion and prevention, cure and care together in a safe, effective and socially productive way at the interface between the population and the health system. The features of health care that are essential in ensuring improved health and social outcomes are person-centeredness, comprehensiveness and integration, and continuity care, with a regular entry into the health system, so that it becomes possible to build an enduring relationship of trust between people and their health care providers.*"①

The US Institute of Medicine has discussed PHC from four aspects in 1996 (*Primary Care: America's Health in a New Era*). In the light of this review, PHC is

① World Health Organization. Primary health care-now more than ever. WHO Annual Report, 2008.

• the task of especially educated, trained and skilled health professionals

• a particularly defined and regulated set of responsibilities and activities within a nation's healthcare system

• the compulsory entry to other types of care provision

• a specifically attributed kind of healthcare, featured by accessibility, comprehensiveness, coordination, permanent assistance, including prevention and education to improve life style.

Primary care is a comprehensive concept about how to meet the patients' needs best. It is not a particular concept of medicine. It is a particular concept of provision. Primary care also means managing individuals' needs in the case of chronic illness and disablements and giving support for caring family members. Like any medicine, it is a kind of providing care being strongly committed to the principles of a scientifically based medicine and its social surroundings. It is to give easy and universal access to basic care. While being open for everybody, primary healthcare pre-selects the necessities of further specialized treatments and also gives treatments depending on what is specified as primary healthcare (PHC) and the profession by which it is provided (or triaged).

Primary care is also a type of service that acts as a gate-keeper and is to avoid unnecessary and costly specialized medicine. That means

• helping all those being in need actively

• documenting people's health related problems and providing basic data for the design of health related programs and allocating scared recourses

• using recourses according to need and priority by integrating (sophisticated) triage methodologies

• integrating all of the appropriate services into one organizational infrastructure, such as prevention, medical treatment, intermediate care, rehabilitation and nursing or even social advocacy

• supporting people with finding access to necessary care

• organizing the collaboration with specialized medicine by handling the referral mechanisms and by staying in personal contact with distant facilities

• ensuring permanent care if necessary

Primary care is given a particular tool to standardize tasks and achieve self-understanding by the reason of the patient visit. This is the International Classification of Primary Care (ICPC).

Modern technologies and high qualification make PHC in a new way impor-

tant at least by two trends, firstly the design of sophisticated triage concepts and secondly by developing telemedicine. Both these progressions can include PHC also in tomorrow's most advanced concepts of healthcare provision.

In countries with a multi-level-healthcare system, the primary care is usually responsible for referral, for asking for specialists' consultancy and for keeping information safe and bringing information together.

It often depends on a governmental decision or on provider organizations that contain primary care in particular. But there are numbers of national and international organizations supporting primary care by developing concepts and programs.

The Alma Ata Conference and its declaration on primary care in 1979 encouraged all the nations' governments, the health care professionals and the WHO to promote the PHC approach in practice, research and teaching by showing the fundamental importance of PHC. It becomes a practical issue to allocate resources in a way that maximizes effectiveness and efficiency for the benefit of people.

Many countries with advanced health services systems such as The United Kingdom or the Scandinavian countries have organized their services systems to primary care, while others, like France, want to implement primary care. Others again discuss PHC as a chance for solving problems with universal access and poor effectiveness and efficiency. Some try to implement the concepts of PHC under the government's umbrella and direction, others try to leave it to the responsibility of the communities and residents, others again try to do so by leaving it to the markets and its shareholders in the Managed Care Industry.

Primary care will be provided by licensed medical staff, typically by medical doctors with a staff of well-educated and trained nurses being near to people, families and their social surroundings. These doctors might be called General Practitioners (particularly in the United Kingdom), Primary Care Doctors or Family Doctors. These doctors will usually be part of a primary care network including pharmacists, physician's assistants, nurse practitioners or paramedics and social workers. Primary care may also partner with self-help organizations or occupational medicine. Usually, primary care is seen as a service offered by family doctors as well as by dentists, approved nurses, midwives, pharmacists, optometrists, physiotherapists, language therapists and occupational therapists.

But primary care is to reduce unnecessarily referrals to specialized facilities.

Primary care also means managing cases and individuals' needs in the case of chronic illness and disablements and giving support to caring family members.

PHC may face conflicts with competing interests of traditional healers, specialized doctors or facilities like clinics and hospitals. These conflicts occur for reasons of market sharing in a for-profit environment of healthcare systems. Primary care stands for cooperation in healthcare rather than for competition.

see Gatekeeper
see Integrated Care
see International Classification of Primary Care (ICPC)
see Managed Care
see Managed Care Industry
see Secondary Care
see Self-Care
see Triage
see Tertiary Care

Screening

Screening is a procedure that puts groups of individuals or total populations on screen for systematical testing for the occurrence of risks, of unknown diseases or disabilities.

Screening has to be understood and implemented as a program with a particularly designed and standardized organizational frame. Due to this precondition, early detection procedures on single individuals and accidentally performed by single doctors' offices or other healthcare providers should not be named screening for the simple reason that a screening's quality and rationality can be assessed in terms of "sensitivity" and "specificity" or in terms of effectiveness, efficiency or rationality, while unsystematic early detection procedures cannot. Screening has to be done for goals, while unsystematic early detection measures in daily medical practice is nothing else than gambling.

The difference is fundamental: We would call an activity a screening exclusively if it is evaluated for effectiveness and efficiency. Randomly made early detection trails on single individuals can never be tested and assessed in this way.

The basic concepts of screening are quantitative calculations on a population level using likelihoods. For single cases and individuals and without matched

groups for comparisons, there is no chance to assess a program. Unsystematically performed early detection on single individuals is simply the use of diagnostics with no particular indication or approved necessity. Therefore, this practice is mostly inappropriate. It is just a healthcare trial of blind seeking for other rationales.

The history of screenings goes far back to history. It can be used for soldiers' recruitments or for pre-selecting workers, and even for selling and buying slaves.

But screening also came into action to investigate the burdens for workers' health, especially to improve their living conditions. In this regard, the French physician Villermé (1782-1863) is worth mentioning. He had screened about 760.000 workers in France and Switzerland in the early 19th century. That raised the question of how to analyze such amounts of data. His friend, the famous mathematician and astronomer A. Quetelet (1796-1874), was one of the very first "epidemiologists" dealing with such amounts of data. Therefore, his analytical tools became most important for later developments. (By the way, Quetelet was the developer of the body mass index, probably based on data collected by Villermé. He has also contributed to the development of the life table method.) The example is mentioned to show the necessity of combining medicine and mathematics in many of the concerns of healthcare based on scientific evidence.

Today's understanding of screening is coined by the U.S. Commission on Chronic Illness (1951) setting the point that regular testing of any American citizen should become the fundamental method of prevention helping to avoid at least most of the chronic diseases and disablements and to make the U.S. nation healthier. The belief can also be seen as the origin of defensive medicine, which is widely spread in many countries. Taking part regularly in such simple medicine procedures is one of the fundamentals of the fighting against a public responsibility for promoting and caring for health. It is, on the whole, the basic of the ideology that everybody should be self-responsible for his own health, particularly in the U.S.

Screenings are performed by diagnostic tests, questionnaires or physical examinations.

The objectives of a screening are usually

- early detection of an already existing disease or disability
- detecting carriers of risks for purposes like preventive treatments, further monitoring, excluding them from certain conditions at work, classifying them for

selective health insurance etc.

• detecting risks for developing certain genetically determined conditions

• selecting people promising extraordinary capabilities and genetic conditions

• identifying persons who could endanger sick funds for losses

Early detection strategies by screening focus not only on detecting early stages of a disease. They are also used to detect risks or predictors of possibly occurring diseases in future for whatever purpose. There are also many examples showing the effectiveness of screening in prevention. But there are some problems that need to be considered carefully. These problems have to be understood and discussed by managers for issues of decision-making.

If screening is to predict future events, the handling of prediction becomes obviously the central problem for both ethical and scientific reasons.

The involved ethical problems give reasons for paying attention to the possible individual, social and legal consequences of illness prediction. Prediction of diseases also predicts the course of life. It will potentially group and classify individuals according to their prospects in health and health related chances. There is no doubt that knowledge like that can show effects on individuals in many directions, like the interests of health and life insurances, and even employers are included.

The scientific problems are comparably fundamental:

1. It is not only the case that any individual carrying only unavoidable risks from a wide range of diseases falls ill. Being at risk is not an exception but quite a normality. Or, the probability to fall ill is 100% and only the kind of disease one may suffer from varies between individuals.

2. The problem of concern is not really to predict the likelihood of falling ill. The problem is that assessing such a risk makes only sense if relating it to something. This relation will be regularly a measure of time or more precisely the individual's future life time or a population's life expectancy. Therefore, conducting a screening includes the necessity of calculating and assessing risks. In other words, it is often easier to quantify numberless risks both for a single disease or any health condition at any age or for the future life time considered, than to assess these risks together with the individuals.

3. What makes screening difficult is not only identifying specific characteristics of a disease; it is also a matter of the sensitivity, of the specificity

and of the predictive values of the used diagnostic tests. Each of the measures will not only vary by method. It will regularly also vary according to individuals' characteristics such as age, gender, pre-existing health conditions and more. It is simple to do the testing repeatedly, but it is definitely not easy to assess the quantitative outcomes for individual decision making.

4. The dilemma is often to decide on the priority to discover any of the sick especially of the persons at risk and to balance the outcomes with the number of occurring false-positive detections. To handle these problems, it is often the strategy to change the norms distinguishing between diseased, endangered and not endangered individuals. There is evidence that the norms adjusted for screening will also become the norms for deciding on pro-active medical interventions. Indeed, this will extend the "markets" and will change any of the consideration about risks due to medical interventions.

Related to the range of aims, the assessment method varies widely. Consequently, the concepts and intentions to predict and to intervene into the life of individuals can raise many concerns.

But as history has shown, the health of individuals as well as of a population can benefit from screening a lot if some fundamental principles are kept seriously in mind:

1. It has to be avoided that screening is only or merely done to expand markets for providers or to exclude individuals from insurances. People must trust in the screening's targets.

2. Depending on the diagnostic procedure, there must be an acceptable but quantified and critically appraised risks-benefit-ratio.

3. The target must be clearly outlined, understandable and acceptable to any motivated target group and free of discriminating consequences.

4. There must be a socially compromised concept for selecting diseases for screening because of its consequences for allocation on a macro level.

5. It has entirely to be ensured that any of the data will be secure and safe as private property with no access for knowledge-brokers to patients' data.

6. The participation has to be an option. Exceptions have to be defined by law.

7. The effectiveness and the efficiency of screening have to be tested against the current practice and possibilities of medicine. The effectiveness has to be expressed in terms of an additional effect.

8. The criteria of sensitivity, specificity and predictive values have to be measured and assessed.

9. The acceptance of the results of testing (especially of the false-positive or false-negative results) has to be clarified.

10. The rationality of the interval between the average time point of detection and the gain of positive outcomes has to be assessed.

11. The age interval for acceptable testing has to be defined.

12. The so-called "allocate efficiency" of screening has to be measured.

13. Any screening must be constantly evaluated for outcome and occurring problems.

Under the philosophy of managed care and some strategies of risk selection in healthcare services, screening also becomes a method through which managed care organizations limit access to healthcare or at least the direct access to doctors. Under this trend, screening provides the opportunity to perform as a gate-keeping procedure being done under triage concepts by call centers or some technical assistance and advice.

Screening has also to be seen as the fundamental method of defensive medicine strategies and risk selection.

see Defensive Medicine
see Early Detection Strategies
see Managed Care
see Preventive Medicine
see Risk
see Risk Selection
see Sensitivity
see Simple Medicine
see Specificity
see Triage

Simple Medicine

The term refers to comprehensive discussions on the practice of

• cost cutting for profit reasons in the surroundings of prospective payment systems and

• limiting the chances of providing patients with what they need in reference

to evidence based medicine or accepted guidelines.

Simple medicine may also be understood as a complementary and alternative medicine supporting self-healing instead of endangering patients with unnecessarily side-effects by using "hard" treatments.

But any intervention needs to indicate its treatments as being necessary and appropriate.

Simple medicine or even doing nothing can be the best kind of evidence based treatment, but it can also be a dangerous strategy of underutilization simply to avoid profit losses. For that reason, simple medicine is seen as a problem under prospective payment systems

see Alternative and Complementary Medicine

see Defensive Medicine

see Evidence Based Medicine

see Prospective Payment Systems

Social Work

The term refers to pro-active health services provision to individuals not having the strength and the power for self-help and self-management. Social work can also be efficient because of avoiding costs for medical care and solving underlying social problems.

The content of social work depends on factors like social group, health problem, cultural surrounding, education or a nation's legal frame-work etc.

A special field of concern for social work is regularly the work with

- discriminated groups
- disabled and chronically ill individuals
- mentally ill people
- migrants
- older people
- poor families
- prisoners
- single mothers

Social work will usually include providing a remarkable potential of preventive work adapted to the settings of people's daily live. It is essential for rehabilitation services and primary care.

A particular aspect may occur if patients have to leave hospital (for whatever reason) and there is no social net to help those people with the activities of daily living.

see Activities of Daily Living

see Integrated Care

see Rehabilitation

see Social Epidemiology

Therapy Plan or Treatment Plan

Such a plan refers to the necessity to define provable and rational targets for treatments. While there is a broad discussions on rationing access to medicine and on standardizing case performance, there is only some few discussion on principles of target-setting for therapies or setting individual priorities for decision-making regarding therapeutic interventions. The therapy plan is the necessary beginning of an intervention conducted by following up a clinical pathway. According to some countries' legislation, the therapy plan results from shared decision making as the fundamental principle of evidence based medicine. That can bring difficulties to"product medicine" as described.

If such a target setting is seen necessary, healthcare managers are to share some of the following principles:

1. Any target setting has to move towards seeking for the chances but not seeking for the limitations.

2. Any target setting has to answer the question whether the medical intervention is individually necessary and whether the measures are individually appropriate.

3. Under certain circumstances of conflicting goals, there must be a priority decision related to the individual's given or assumed preferences.

4. Concepts of therapy must have a likelihood of positive outcomes, which can be measured by the number needed to be treated (some experts support the argument that the cut-of-point could be set around a likelihood of about 2.5% up to 5%).

5. Therapy should improve the survival rate to about 2.5%～5% within at least half a year.

6. Any target setting must be shared and compromised with patients' prefe-

rences and values. If this is not possible, no doctor should make final decisions on patients' life solely.

7. The calendar age of a patient can never be seen as an argument for limiting therapy but the biological age can. But unfortunately, there is no consistent measure for the biological age of an individual.

see Clinical Pathway

see Numbers Needed To

see Product Medicine

Structural Prevention

To save, to create or to recreate healthy living conditions is one of the prior strategies in preventive policies and health promotion. Particularly the care for clean water and air, uncontaminated soil and food, housing and education, and save working conditions as well as justice and equity are most successful strategies of prevention.

see Health Promotion

see Prevention

Telehealth, Telemedicine and E-Health

The development refers to healthcare consultations using telecommunication networks to transmit information.

Telemedicine is currently advancing and will become one of the most important technologies and conditions to provide medicine at its standards in future. Advanced robot technologies in surgery directed by telemedicine and done by a surgeon far away from the patient will complement that future.

Some also use the term "distance healthcare". This technology is to break down the local distances between providers themselves and providers and patients through transmitting information instead of moving patients or professionals. It is also a perspective to support self-treatment of chronically ill people or in providing advices on how to behave after minutes of an emergency.

Telemedicine is already a very advanced technology used, for example, by paramedics.

At the moment, it is difficult to foresee the future of telemedicine in its full

range of possibilities and its specific pros and cons. But it is for sure that this development will be of dramatic impact on all healthcare issues, management included. Telehealth does not know borders or national laws. Consequently, at the moment nobody can foresee if nations will be able to regulate these activities by setting legal standards for accreditation, licensing, access, reimbursement, liability or data security. Even if there is some universal legislation, nobody knows how to supervise and to regulate provision by executive bodies. Comparable problems might occur if it is organized by national health insurance or social health insurance.

Telehealth could become the road down to fully privatized and deregulated healthcare by some few internationally competing healthcare trusts covering markets and information.

It is highly recommended that both the managers and the public pay close attention to these trends.

see Accreditation
see Integrated Care
see Product Medicine

Therapy

The concept of therapy or intervention is the center of healthcare and its management. To provide the best treatment for those being in need, therapy traditionally aims at

- healing diseases and injuries
- intervening in early stages of diseases or preventively into risks
- reconstructing body functions due to congenital disorders and injuries
- prolonging the survival time if not to heal
- improving the quality of life of chronically ill and disabled people even if not to heal

The methods in use can be summarized as follows:

- doing surgeries
- providing pharmaceuticals
- conducting physic-therapeutics
- offering behavioral and psychotherapeutics or
- socio-therapeutics

Therapy intervenes into an individual's physical, mental and/or social integrity and aims at recovering, supporting or reconstructing the individual's functions. Emotional and social support has often been seen important for treatment's result as the person's will and education may support results.

These activities of intervention need a particular legislation to regulate norms of intervention practices and regulations and guidelines for managing it. This becomes particularly important under some developments towards extended cross border offers or far distance medicine.

Regarding therapy, managers are challenged by the following aspects:

• deciding on the pathways of therapy through investigating opportunities for standardized workflows

• the need of a provider organization for rewarding any expenditure on marketing, product delivery, acquisition, contracting or risk adjusting

• human resource control and management

But there are at least two ongoing developments shifting therapeutic means and techniques to other targets as well and expanding the markets for therapeutic offers:

1. One focuses on the design of strategies for preventive treatments, which means the need to intervene into healthy people but being at risk of falling ill in the near or distant future.

2. The managers' incentive to profile the providers' economy by profiling portfolios selectively

3. The other is different from any health related aim and refers to the use of medical techniques for body styling, wellness or for fighting against signs of aging.

see Medical Tourism
see Prevention
see Rehabilitation
see Risk Selection
see Wellness

Wellness

Wellness is a way of consuming services which are to let individuals profit from pro-active measures to create well-being. It might be seen as a lifestyle attitude taking advantage of the social chance and privilege to make healthy

nutrition, physical fitness, stress reduction, or wellness a priority in an individual's life.

Wellness is an expanding market for self-paying consumers. It is advertised and expected to be a product to be sold and bought beyond the medical ethics of necessity and appropriateness. It is hard to supervise and to control this market because "healthy interventions are beyond what medicine has been developed for.

Most of the offers need no or only very weak medical professionalism and accreditation. Most of the sold products are lacking evidence of effectiveness while efficiency for the consumers is mostly out of concern due to fee-for-service payments.

Wellness products are popular among older and financially independent people, but they are also a marketing offer of some health insurers to attract healthy and wealthy people to contract for insurance or for lowering premiums.

There are opinions being moved around and advertised by interested parties that wellness could become the leading market of the future according to the "Kondratieff oracle" and the assumption of a growing community of financially independent people, especially among the older ones. Both the assumptions could easily turn out to be ungrounded speculations.

Some analysts assume the influence of this flourishing market on public and solidary health insurance schemes a serious matter, others realize its importance for some nations' economy.

see Kondratieff Waves

see Medical Tourism

III

Basics of Health Economics

General Considerations

Health economics analyzes

1. the economic rationales of providing healthcare,

2. the economic risks of insuring and utilizing healthcare and

3. researches on options on how to regulate provision, utilization, or the distribution of healthcare services.

Health economics is a matter of interest for researchers, politicians and providers both on macro-and on microeconomic levels.

Macroeconomists try to understand the importance of healthcare for a nation's regulation and monetary policies. Globally "health" and "healthcare" are top political matters both for economics and for balancing social interests.

Microeconomists primarily want to help to manage the interests of particular non-and for-profit providers under a nation's given regulatory policies and to run the organizations and facilities and their business interfaces.

Insurers, the insurances' insurants, patients, providers, suppliers etc. typically have different perspectives on health economics. Politicians are involved in legal norm-setting for healthcare coverage, insurers in regulating the utilization of healthcare and in balancing conflicting interests. Insured people want to be protected for unforeseeable risks by paying reasonable proportions of their income and patients want to have access to help on appropriate standards. The socio-epidemiologic fundamentals show labor division, occupational risks,

general living conditions and poverty in particular are most important for a nation's health and its socially unequal patterns of disease and disability occurrence. For this reason, most countries see the contribution of all the tax-payers and the employers necessary for a country's economic success (see Wilkinson Theory).

To understand the fundamentals of health economics better, it is necessary to understand that

- the risks for disease occurrence and the burdens of bad health are unequally distributed within any population both for biological and social reasons
- the particular individuals' needs for coverage are (currently but with some exception) individually not foreseeable
- the overwhelming majority of people is not able to pay for total preventive risk coverage or to get along with consequences of disability
- providers are potentially in power to decide on needs and demands, and therefore decide the financial consequences of utilizing healthcare and related services.

But there will be nothing else comparably powerful for changing health services systems and their economics than gaining the chance to predict individuals' health particularly in later age.

Healthcare is coined by its double-faced nature of social value and economic benefits. That makes diseases an economic burden for some people and an advantage for others. Accordingly, regulation policies are issues of permanent conflicts and may result in consensus. But under any condition, regulation policies are unavoidably setting priorities and mechanisms, whether explicitly intended or not. Some argue consensus would be the most important challenge, but setting priorities is much more. Hence, managers should understand that patients are regularly helpless in these conflicts and are the weakest party. That is why patients need advocacy particularly regarding financial issues. That is the final reason why health economics deal primarily with social issues.

Economic regulation policies mostly intend

- guaranteeing a socially and regionally indiscriminated access to healthcare
- performing healthcare suitable for the patients' health problems, individual conditions and social resources
- avoiding risk selection, over-and under-utilization or malpractice
- primarily using available recourses for the patients

Justice, necessity and appropriateness are the key notes for the regulation

and the management policies in healthcare. And health economics is the fundamental tool for it. This has been the key driver for the development of health economics since its beginning. We find many medical doctors are already concerned with health economic issues at least in the late 18th century. Alfred Grotjahn (1863～1931), for example, was the first medical doctor in Germany who had also undergone systematic macroeconomic studies. In the United States of America, the Commission on the Costs of Medical Care (CCMC) conducted an impressive scientific work on health economics and the necessity to provide healthcare for all citizens.

After World War II, these topics became a matter of scientific interest for the RAND Corporation—one of the very leading strategic think tanks in the United States. RAND was funded by the United States Army Forces and the Douglas Aircraft Company in 1946 (*www.rand.org*). After splitting off RAND and Douglas, in May 1948, RAND became a non-for-profit think tank, to "*further promote scientific, educational, and charitable purposes, all for the welfare and the security of the United States of America*" and is "*to help improve policy and decision making through research and analysis*"①.

Nowadays, it is internationally the most influential agency regarding policy consultancy and healthcare management. Particularly this development became a leading influence on health economic consideration round the world which is primarily rooted in three developments:

• The first one is rooted in the fact that the U.S. had not been providing any public healthcare coverage to its citizens at that point. The trial of the Truman Administration to implement public healthcare coverage failed 14 times until the 1940s as it had already failed since its first attempt in 1909. At that time, tax-paid health services were only given some acceptance for spending money on prevention. The political issue was the economics of health, but not of healthcare. Considerations on health economics were considerations on preventive activities (see and Screening), while healthcare was left to private expenditures, employers' benefits, some charity and was the business of non-and for-profit indemnity insurances.

• The second aspect is rooted in the so-called demographic and

① Rebelo L P. The origin and the evolution of health economics: a discipline by itself? Let by economists, practitioners or politics? Portuguese Catholic University, 2007.

epidemiologic transition, which has been most important for private health insurance, life insurances and pensioners' funds since the beginning of the currently ongoing transition in the 19th century. This transition was earmarked by the so-called "parabolic trend of mortality rates": Any population that increases life expectancy experiences this trend and thus the U.S. population did experience it after World War II (see parabolic trend of mortality rates).

The "new" occurring causes of death under this trend were those being typical of the people dying at higher age. The transition of mortality patterns raised the necessity to understand health economics in the light of these changing patterns. If, according to the Pareto Principle, 80% of consumed expenditures for healthcare are consumed two to three years before death, that would raise the question on how to get along with paying the bills, because neither employers would be interested to ensure elder people nor the elder would be able to check their bills.

• The third root grounds in some 1950th developments' when RAND researchers developed the so-called game-theory. This theory was to become most influential also for economic research, sociology, psychology and many others. Together with the Ford Foundation and the U.S. Bureau of Economic Research, RAND has developed (additionally together with the Centre for Disease Control and Prevention and the Centre for Medicare and Medicaid Services) into today's centers of health economic research since then. More than that, RAND has played and is still playing a major role in any discussion regarding the future of healthcare systems worldwide.

In 1958, Selma Mushkin from RAND was the first people who defined Health Economics a specific scientific entity as being "*concerned with the optimum use of scarce economic resources for the care of the sick and the promotion of health taking into account competing uses of these resources*"①. Her particular approach was to interpret spending on health as any individual's personal investment which expects personal returns. It was her underlying assumption that people investing in health would develop themselves by expecting a future return in chances. But this simple assumption is full of controversies. Some few questions may illuminate the following difficulties:

---

① Mushkin S. Towards a definition of health economics. Public Health Reports, 1958, 73(9): 785～793.

• Who are the people being able to invest in health and who are not?

• What will happen with the people not being able to invest?

• How can people prospectively decide on the amount of investments and related returns and what is the exact time-line for "future" and expected "returns"?

• What is it exactly that they expect as a return?

• Can the return become calculated in this very moment when people fall ill and need help?

• Can it (individually) become measured if the future outcome relates to the investment undertaken earlier and what are the indicators?

• What will happen if investments do not get returns?

• What are the rationales and responsibilities of decision-making on the competing use of scarce resources?

The economics of the particular health services is part of the pre-conditioning frames but not the content of healthcare and its management. Healthcare managers are neither in education nor in practice health economists. But they definitely have to understand some of the key language of economics and their functioning both on a macro and a micro level and particularly the consequences for management. And as practice shows, healthcare managers always stand in the centre of all the many conflicts around health economics.

Central practical issues of the health economics are:

• funding healthcare systems

• financial management of assets

• resource allocation

• accounting of provider facilities

• cost analysis in healthcare

• concepts of reimbursement

• assessment of risks and utilization

• economically based decision-making

• economic evaluations, in terms of effectiveness, efficiency, efficacy and profitability

The given summary of issues shows the widespread interaction with other health related sciences, therefore, health economics may also become accepted as a particular approach of Public Health and of scientific cross-border thinking.

More recently, some authors define health economics as overlapping nearly any of the internationally and traditionally developed public health sciences, such

as social medicine, epidemiology, or utilization research and risk assessment, and try to cover all of these subjects under health economics. The considered particular subjects are for example

- economic evaluations
- supply and demand of healthcare resources
- impact of healthcare
- economics of the specific public health functions
- estimating the economic impact of diseases and injuries
- addressing the costs, the cost-effectiveness, and the cost-benefit of interventions preventing diseases and promoting health
- monitoring and assessing individuals' or groups' health status
- diagnosing and investigating on community health problems
- informing, educating, and empowering people about health issues
- developing policies and plans that support individual and community health efforts
- enforcing laws and regulations that protect health and ensure safety
- providing tax breaks, subsidies, and penalties to modify unhealthy conditions
- funding research to attain new insights and innovative solutions to population health problems①

The particular interest in health economics depends on what the key function of healthcare for each of the different actors will be seen. Any of the given answers will affect the understanding and function of health economics in international healthcare systems. Equally important is the role of the system's payers, providers and users and each of their relations to each other regarding power and interest.

Especially internationally active healthcare managers should be aware that they are not to manage health economics primarily but to manage the provider's organizations, particularly the access, the pathways, the organization's infrastructure, the resources, the supply, the delivery, the reimbursements and the costs under the frame of each of the national legal regulations. The functioning of such organizations is never to be addressed by economics solely. It depends on the

---

① Carande-Kulis V G, Getzen T H, Thacker S B. Public goods and externalities: a research agenda for public health economics. Journal of Public Health Management & Practice, 2007, 13(2): 227～232.

nation's social infrastructures, cultural attitudes, patients' education or the legal conditions under which managers manage healthcare. And that is what healthcare mangers should primarily be aware of.

Recent developments in the relationship between societies and economy have raised the controversial debate what a healthcare seeking individual is. While some people see a healthcare seeking person as a patient, others determine this individual a consumer. But tacking the one or the other view relates to different kinds of health services systems.

Some ideologies about what the "right" healthcare system is depend solely on the conceptions of deregulated versus socially regulated market or even planned economics. The so-called "neo-liberalism" transformation against socially regulated market economies of Western European societies has also been of tremendous influence on transforming welfare regulations such as the provision of healthcare[①]. This transformation has been moved on since the 1980s and has changed not only the world of the finance industry but also any social responsibility, financing the access to healthcare included.

While societies of the past discussed access to healthcare all of the society's responsibility, the current view sees the individuals responsible for care for themselves. The historically grown health services, such as the Bismarck or the Beveridge system came under sharp attack and many of them implemented mechanisms to transform from social policies towards market policies. This move was pushed by a variety of methods but was mostly executed by introducing (managed) market competition, co-payments, deductibles and private co-insurance, by privatizing public and community owned non-for-profit hospitals or implementing elements of product medicine. All the forcing changes in economics and financial industries resulted in the tremendous crises that have been a reality since late 2008. Since then we find remarkable trials to reanimate social market economy, but the turndown of some countries' economy hinders readjustments. In the same and very recent period the United States of America have made some historically remarkable moves in health politics particularly in regulating for-profit activities in healthcare insurance in enchaining uncontrollable entrepreneurial activities and perceptions in that field. Under this background, it

① Lundberg O, et al. The role of welfare state principles and generosity in social policy programmes for public health: an international comparative study. The Lancet, 2008, 372(9650): 1633～1640.

is not really clear at the moment what impacts these developments will have on all of those countries tacking the U.S. the ultimate model.

Nevertheless, recent reality is still a battle for keeping social welfare policy alive versus making healthcare a free market issue. The final result is open. The trials to adjust healthcare provision to market competition and to the individuals' private interest have been most powerful and have changed any frame for discussing tomorrow's healthcare. This move still continues and particularly the Social health insurance Funds wants to become "real" market players in company with up-growing large private provider organizations. But even if this transformation is successful, it is for sure that the failures and social inefficiencies of market-run healthcare will increase tax-paid benefits and subsidies.

Part of that development is the transformation of consumers who are formerly called patients or members of corporate social funds. This little switch signals one of the most remarkable dynamics pushing healthcares into the most remarkable "revolution".

In the past, a patient has always been a person being in need of assistance, support and help. Under the general position that non-for-profit third-party-payers compromise on advocacy and on the universal right of having access to healthcare independent from income and social status, access to professionalized healthcare was the most important challenge for a healthcare system's quality. It was also a parameter of assessing the ethical values which are shared within nations.

In contrast, healthcare seeking individuals taking the role of a consumer who is acting on markets and accepting their rules is by many now identified as a consumer. Consumers are competing for care to that amount and quality they can individually pay and be pre-decided by pro-active provider selection. It may also include the selection of the treatment depending on the consumer's preferences. This is the true conflict: Who is in charge of deciding on needs and rationales in healthcare provision and utilization? One may also identify the problem by asking in another way: Is the making of a consumer a sufficient solution for the dilemma of Roemer's Law and the assumed existence of a relevant moral hazard phenomenon if patients get free access to healthcare?

It is exactly the other way round: It is the healthcare system's nature that make individuals patients or consumers. The transformation indicates all the changes in what a society is for. One of the most precise and shortened explana-

tions of this transformation was given by Margret Thatcher (1925～2013, Prime Minister of the United Kingdom 1979～1990) who is by some seen as the person having brought Friedman's ideas to Europe: "*There is no such thing as society: there are individual men and women, and there are families.*"[①]It is this fundamental belief that lies behind the move from patients' to customers' rights.

Since then, it is the general observation that the discussion on patients versus consumers is one of the particular strategically used arguments if intending to transform a given healthcare system's principles under neo-liberal concepts. Those being in favor of public healthcare systems see the care seeking person still a patient under the system's legal rules. But those in favor of market driven systems are badly in need of a consumer. The assessment of the conflicting positions does not primarily depend on scientific considerations but on assessing the debaters' interests. To determine this relationship, we need to look after a nation's particular healthcare system's characteristics and its financial regulations.

But there is another frequently used argument, assuming consumers would get a better quality of care, more respect, friendly attention and improved benefits. In contrast, patients are assumed as being likely to become commanded and ruled, would get fewer benefits and would face poor motivation and quality. If such differences in the systems and the caregivers behaviors can be empirically approved, the solution will certainly not depend on the characteristics of patients and consumers but on the healthcare system's features, the caregivers education, the professional's self-concept and behavior, as well as all the given incentives for misbehavior and violating contracts. If healthcare managers would distinguish between patients and consumers, they ought to learn some more about the profession's ethics.

In general, a patient is the person seeking the benefits the provider has to guarantee according to given contractual rules, but the patient is also a person of limited abilities to perform as an independent, autonomous and self-determined individual. These limits exist because of

- the physical or mental conditions or motivations
- the asymmetry in knowledge, comprehensibility and manageability or because of

① M. Thatcher. Interview for Woman's Own, Sep 23, 1987.

• contractual rights according to the third-party-payers' conditions, the managed care organization' contracts or the medical professionals' frame conditions

The consumer is obviously the person or organization rewarding healthcare as contracted. Consequently, the person or organization contracting and paying for the providers' achievements is the consumer.

Patients do not regularly decide on diagnostics and treatments or any other measures and they are regularly (at least in advanced healthcare systems) not the healthcare paying party. The general empirical experience is that the more advanced the nations' economy is, the less the proportion of people having to buy and charge for healthcare out of their own pockets is. But the contract between the paying party and the insured person will regularly limit benefits to what is accepted as being necessary, appropriate and efficient. The relationship between patients and consumers definitely depends on the supervisors to whom the rights are left for interpreting what the regarding norms are. In developed healthcare systems, not the individual doctors nor the patients or individual agreements of the both an established authority responsible for norm-setting against patients' rights to utilize healthcare, the doctors' limits to provide care and the public and social health insurances obligations to guarantee benefits for its members.

The contracted standards are usually listed in some kind of compromised achievable products based on negotiated guidelines or product schemes (see Case-classification Schemes). Any prospective payment system or budgeted payment other than fee-for-service to be charged by the patient will exclude an individual from a pro-active consumer role. More than that, most or any of the insurance rules in non-for-profit and public health insurance do not allow healthcare seeking persons to act as consumers to the bill of a third party. But that is precisely the point that a person who wants to change that wants to make the help seeking individual the paying party and wants to terminate social or public responsibilities and the involvement of tax-payers and employers.

The emergence of a consumer results in an individually charging person by

• grounding healthcare on a private contract with the doctors or other provider organizations or

• selling additional services not being necessary and not being covered by an insurance plan

• offering or implementing some additional wellness

• deductibles and co-payments

For that reason, the same individual can be a patient under a given contract's umbrella and can be a consumer under another contract's requirements at the same time. Regarding approval and supervising the benefits, fees and billing, the legal consequences, or liability rights will affect the turnover from a patient to a healthcare consumer and consumer differently. This kind of splitting is tremendously important for any kind of norm-setting policy. If a patient experiences harm it might be a liability case between doctors and patient, but if there is a fraud that usually will be a matter of litigation between the doctor and the paying party. There are reasons to believe that patients will have difficulties in distinguishing their role of being a patient and a consumer in terms of legal regulations at the same time.

But indeed, any third-party-payer will be highly interested in staying involved in any decision on what is necessary, appropriate and efficient under a contract's rule. Here it definitely makes the payer the consumer and the true market player.

Under the rules of managed care, the problem of identifying consumers and patients is much more difficult, if capitation and prospective payment or ruling case-classification schemes unify the consumer and the provider into one part. But here the paying party is the true costumer, and a patient who has the chance to experience the advantages of the traditional purchaser-provider-split is not included.

Patients are mostly incapable to decide what they are medically in need of and to relate their individual needs to medicine based on best scientific evidence. They are also incapable to calculate and to approve prices for what is appropriate and efficient. They are simply seeking for help, for treatment and for recovery. They are asking for trust, assistance and advocacy. But according to the rules of evidence based medicine, patients are involved in shared-decision-making on what is best for them. But this important involvement does not make patients the doctors' consumers but their respected partners. Patients can be partners, but consumers can never. They are the opposing party in financial interests.

The more services are moving beyond offers being accepted as necessary and appropriate or as being of economic rationality, the more health service becomes a good, which the patient may decide to buy as a consumer or not. The acceptance of that border draws the line between what some call the first and the second healthcare market. It also earmarks the border between necessary medical

care and the offers of the wellness and the body styling industries.

Nevertheless, the patient has doubtlessly to be involved in the decision-making on what is best for her or him especially in the case of chronic illness. This inclusion is part of the physician-patient relationship. It is a patient's right and a caregiver's obligation. It is also the basic of the underlying respect for each other. This special relation is determining the patient's role in getting protection and in being freed from the demands of daily life, exactly to that amount an individual has lost the capability to care for his/her own interests and needs. Part of the healthcare professional's duty is explicitly to do anything possible to help individuals to leave the status of being a patient and, for example, to regain the role of a self-determined individual consumer. In this situation, considerations on what a patient fundamentally depend on the particular demands of acute and chronic care measures.

Here it is important to understand not the difference between patients and costumers, but between patients and disabled individuals. And, if a patient is really to determine all or some of the additional benefits like the self-paying customer, in relation to whom and to what extent will this individual play the customer's role? And what if he or she is determined to be a customer, but cannot because of being a patient?

For whatever reason, the idea to make a patient a customer having the free choice to select physicians, medical or rehabilitative facilities and treatments only makes sense if the individual is in full power to pay. It also requires the full capability to decide necessary medical interventions. But this construction of the patient as being a customer does not meet the healthcare reality at all.

Sometimes the argument is given, patients have to become consumers in order to gain more respect in relation to the doctors and nurses. But giving a patient a friendly smile, a personal word and the right of full information about his illness and the treatments to come is part of the patient's rights. This has nothing to do with an additional privilege to be gained solely if being defined a consumer, it simply has something to do with the staff's education and attitude.

Some also stress that insurants of a health insurance plan or an "accountable managed care organization" would be consumers. This might be true if the insurant is a self-paying individual, deciding ultimately and prospectively what kind and extent of healthcare he wants to get if falling ill or if becoming disabled. But realistically this interpretation is also somewhat difficult. Most of the insures are

not self-paying insurance contractors and if so, many are self-paying for health plans only to a certain proportion.

Finally, the current shortage of mainstreaming on the purchaser-provider-split and the shift from traditional services to managed care are explicitly and intentionally limiting the patients' role as pro-active consumers tremendously. Prospective capitation or DRG adjusted payment mechanisms are definitely not strategically made to make patients consumers.

Briefly, only those not depending on tax-paid services and socialized risk-sharing concepts will be purchasers, consumers and patients at the same time. But this group is definitely a minority. On this background, one may ask if the making of consumers is merely to empower patients' rights or simply to transform public health insurances into fee-for-services of the private insurance industries.

Providers are much more difficult to be defined. Who is the provider of healthcare in a hospital? Is it the care-giving staff or is it management having signed the contract with the paying party, or is it the provider organization's owner? The answer will be followed by consequences regarding the relationship between medical staff and management, liability etc. Particularly under managed care agreements, the identification of the provider may turn out a problem. On one hand, any doctor and nurse takes full responsibility for all their doings. On the other hand, managed care is ruling this doings by many regulations not necessarily being installed for medical reasons or by the individual caregivers.

Assignments of Health Economics

Health economics is researching on a macro-and on a micro-economic level both the subjects of the economics of health and of healthcare. The value of related resource consumption is assumed to be dependent on particular investments by some people. That makes the value of individuals' health a matter of the ability to invest. In other words, according to that concept, the value of individuals differs according to social status.

The economics of health

If an individual's given health has its own economics, the concepts would have some few consequences

1. it would demand to distinguish the economic value of any people according to the status of health, which clearly conflicts with the understanding of health as agreed by the signing nations of the preamble of the WHO's statutes

2. the individuals' health value would change depending on any biological and social variables which change health

3. it would include the assumption that different values depend on the chances to compensate external influences on health prospectively by particular individual investments in an individual's health

4. it classifies costs for prevention, treatment, rehabilitation as investments waiting for financial return.

The conflicting discussion of these actualities will regularly ask for the priority either of ethical and social goals or of market and shareholders' concerns as, for example, pointed by M. Friedman: "*Few trends could so thoroughly undermine the very foundations of our free society as the acceptance by corporate officials of a social responsibility other than to make as much money for their shareholders as possible.*"① Others discuss the spending on health an investment that can be stored like education or savings②. Unfortunately, this is far from reality and scientific evidence, with exceptions of some (but not all) preventive measures.

The economics of risks

Risks are used to pre-calculate "losses" in the case of falling ill. It is an economic concept using medical and clinical data to calculate losses for insurance, individuals, groups or society. But it is pre-dominantly used for loss-calculation for those types of insurance wanting to construct risk groups or insurance product specific premiums. The concept behind is that individuals grouped according to selected characteristics of similarity would predict future occurrence of specific diseases and would allow to pre-calculate insurances' gains and losses. Both advanced epidemiology and genetics provide methodologies to estimate such risks quantitatively and prospectively. Such estimates are conditioned by age and by considered time-interval and are to adjust according to each of the related characteristics.

---

① Friedman M. Capitalism and Freedom. Chicago: University Chicago Press, 2009.

② Mushkin S J. Health as an investment. The Journal of Political Economy, 1962, 70(5): 129～157.

For any private and specific health plan, such economic considerations are necessary and have been developed to sophisticated research activities. In contrast, Social Health Insurance and Tax-paid Health Plans need such investigations primarily not for group specific calculations of premiums but for resource allocation.

The economics of healthcare and provision

Any delivery of healthcare causes costs that have to be paid by somebody. But the demand of a majority of individuals regularly exceeds their financial opportunities.

Some of the operating parties may be merely interested in cost-containment or regulating consumption by using financial incentives, while others may be interested in raising the sales and business volumes of delivery. Others again simply want to maximize earnings. Some disputants see the solution for conflicts in setting goals and norms pro-actively. But others argue it would be better to leave solutions to the markets and to market competition.

It can also be seen as a target of health economics to seek for the most effective and efficient use of the resources available. The British do so with its National Institute of Clinical Excellence pre-evaluating effectiveness and efficiency for newly added pharmaceuticals and supply by using measures like the Quality Adjusted Life Years. Here, planning, budgeting, allocation and monitoring the system's performance are accepted as part of the health economics. Regulating the markets, the access to healthcare, reviewing the utilization of healthcare and differentiating qualities of care according to revenues expected are seen as targets of health economics, while others contribute these tasks to other scientific entities, such as Public Health or Social Medicine.

In regard to healthcare and its provision, health economic considerations and studies are of growing importance for studying and evaluating the allocation of available resources for healthcare. The aim is to seek for alternative objectives, priorities or strategies, even for the rationing of scarce resources. For that purpose, health economics perform studies on how healthcare and related services and their outcomes are related to costs. That needs data on results and on health and how it is distributed among individuals or social classes and groups within a population.

Those data are to be delivered by epidemiology, social medicine, medical so-

ciology, public health or by clinical studies. Health economics is now part of the multi-disciplinary network of health sciences, but is not a norm-setting science in itself and should never become.

Health economics is concerned with the scientific activities of elaborating

- the macroeconomic mechanisms and conditions for the different players in health services systems (insurance and utilization)
- the microeconomic tools of regulating the systems
- the microeconomic tools of service, production and delivery
- the accounting of facilities and provider organizations.

Analyses of health economics are focusing mostly on the following areas of concern:

- healthcare financing
- providers' costs and pricing
- reimbursements and incentives
- the macroeconomics of the service and employment market
- the input on related industries and production
- the market of research and education
- the out-come of services

Health economics is analyzing issues related to the allocation of resources on prevention, treatments, rehabilitation and care and related services.

Those studies also play a major role in most nations' health economies (covering between 5 and 17% of the GDP), with characteristics of employing a high proportion of people, covering huge resources of research capacities, of education and of production as well as of international trade.

The expenditures of healthcare industries, as part of the GDP, is sometimes seen as a cost. But the view is mostly naive because it simply measures the amount of business and services among all the economic activities of a country and measures the percentage of the value that health services take among all the GDP. That is why the health services industry is not a burden to the nation's economy but a success of services independent from the struggle around the paying parties. The true problem is not the proportion in its relation to industry but the assumption that health services would simply and unnecessarily waste money. The true conflict goes around the controversies whether or to what extent health services are to be paid by tax or out of private pockets. This indeed is a fundamental question striking the understanding of a human society and the role

and the function of the state.

Nevertheless, the arguments around health economics mostly depend on the interests of the discussants:

• Representatives of the for-profit Managed Care Industry want to increase the differences between the caped prospective revenues and the costs of the provider organization in order to maximize the profits.

• Representatives of tax-based systems are mostly interested in maximizing the outcomes but stabilizing or even lowering the budgets.

• Representatives of non-for profit public funds are mostly interested in balancing the interests of its members being sometimes net payers, and sometimes depending on subsidies.

• Because in many of the countries governments are the largest payers, they also regulate expenses and regulate in so far directly and indirectly all of the healthcare industries. This is a field of constant conflicts between both the interest to reduce tax spending for health services and to extend one of the most important national and international markets.

It is almost difficult to regulate the utilization of "necessary care" and of "appropriate care". Any trial easily leads into conflicts of interests between the providers and the third-party-payers.

Healthcare managers should be very familiar at least with the following scopes:

• the understanding of what health is

• the accepted interventions into health

• the contracted demand of healthcare and health services

• the regulation and evaluation of care at the treatment level

• the organizational frame for supply and delivery

• the dynamic and structure of the provider and the insurer market

• the planning, budgeting, reimbursements and the monitoring of the systems.

The international experiences clearly show that health can be seen as a social investment both on an individual and a nation's level. But the usual dilemmas are as follows:

• In any of the countries round the world, there exists a certain and often high proportion of people not being able to invest in health by themselves, due to lacking financial, social and educational resources.

• The intervention into the social inefficiency is not only an advantage for the underprivileged. It is also a gain for the healthcare industry often privately owned and for the employers getting healthier workers.

• If the health of a country's people is poor, the employers will also suffer from disadvantages, like low productivity, many sick days and a short span of working time. This is the reason why employers contribute to investments into workers' health through providing insurances, pensions, prevention programs, performing health centers, clinics or occupational medicine (often regulated by law) in many countries.

Under the frame of such complex considerations, it is of importance to put Grossman's interpretation of health economics under question①. Some see Grossman's concept the very fundamental of health economics while others criticize it②.

The model of the health economics as given by Grossman encompasses a so-called optimal level of individuals' investments in healthcare which are assumed to be reached if marginal cost and marginal benefit are equal. According to Grossman's theorem, the health status slows down over life-time while the need for healthcare extends. But the gain of investments in healthcare reduces. If taking health as a synonym for human capital, the return of investments has to be discussed under this concept. From an economic point of view, the optimal gain for investing in health will then differ with age, income, investments in education and more.

According to this model, the fundament of health economics would directly lead into the assumption that gains will decline with humans' aging or with decreasing social position. And if shifting the model to health politics, that could directly provoke discrimination and social rationing of access to healthcare. The mechanism could establish access to healthcare depending on criteria like age, edu-cation, social class, region or nationality and ethnic. If investments in healthcare would depend on expected returns as proposed by Grossman, these calculations might prospectively differentiate the offers according to age, gender, ethnic, education, social position etc. Consequently, we would implement diffe-

---

① Grossman M. On the concept of health capital and the demand for health. Journal of Political Economy, 1972, 80(2): 223～255.

② Kiiskinen U. A Health Production Approach to the Economic Analysis of Health Promotion. Helsinki: Publications of the National Public Health Institute, 2003.

rent standards of access, necessity, appropriateness and quality. In other words, it could easily happen where there are serious needs of healthcare. Taking into account that some countries with high life expectancy spend roughly 80% of expenditures for about 20% of the population and that in average 80% of the expenditures are used during the last three or five years of life, the mentioned model could also initiate fundamental debates not on economics but on ethics.

Decisions on economy can cause serious ethical concerns. Therefore, we see it indispensable to make fundamental health economic decisions a public health affair and a kind of decision-making involving some more considerations than economic approaches. Consequently, healthcare managers have to take health economics into account but do not solely depend on its theorems.

Resulting mostly from experiences with Managed Care and with the corporatization of healthcare organizations, a number of models and techniques have been developed adapting experiences from industrial production to the distribution of healthcare. These experiences reflect the design of offered products by selectively meeting consumers' expectations, or calculating wanted outcomes, and of advertising them selectively.

The health and medical services are not only performed at patients. They are also performed together with patients. What is more, the outcome does not solely depend on service's performance but often also on the patients' activities, adherence and compliance as well as on patients' social and health resources, on comprehensiveness and on meaningfulness. Evidence based medicine necessarily includes shared-decision-making with the patients and fosters cooperation between professionals and the patients as the pre-condition for successful services. It is difficult, even if not impossible, to adopt models from industry production and its economics to healthcare since the outcome may hardly depend on the "producer" solely as it can be done in industry production. The measurement of economic outcomes will probably not depend on "production performance" in many of the cases.

Furthermore, it has to be taken into account that health and medical services cannot pre-fabricate, store and distribute outcomes like industrial production can do. A remarkable but uncounted proportion of medical services for chronically ill and severely disabled people will only exist as long as the service is performed; the product only occurs as long as the process of "production" runs.

The productivity in healthcare can only be raised if the professionals do more

per time period. That will only be possible if reducing the time spent per patient. The replacement of staff through techniques is sometimes possible but only to a limited extent compared with industrial production. The behavior to increase productivity by portfolio selection is an economic topic of its own, due to the inhomogeneity of need and the problem of serving people with seldom diseases or disabilities.

The sometimes proposed way is rationalizing the use and consumption of qualification. Experiences with managed care show how the time per patient and the degree of qualification consumed per patient per time is reduced. But it is evident that the U.S.'s most advanced managed care has increased overall costs dramatically, has reduced time per patient to the limits but with a result of poor outcomes despite doubtless highest professional qualification and leading advances in research.

These limitations in raising "productivity" imply consequences for health services: Since the average inflation rate is determined by the high productive industry or by services able to reduce the "consumption" of human workforces, healthcare cannot keep pace with this progression and its consequences for pricing if not excluding humans and/or higher education from services. Particularly costs for liability insurance are affected by this development①.

The comparably low productivity and the limited opportunity to increase productivity as effective as other industries do, will lead to some remarkable consequences: At least in the long run, prices and wages will stay below the average of other market prices. That will make those prices for healthcare exceed the average, taking a constantly growing proportion of income for health services. The effects on any other part of consumption are obvious. Studies prove true spiraling expenses for healthcare per household which raise faster than income in most countries.

The consequences can be studied at the example of the U.S. managed care approach with its highly qualified human resources and sophisticated devices but tremendous patients' complaints. The country's managed care industry is consequently seen down to the last position of reputation comparing with all of the industrial branches (except tobacco industries) as studies have been shown in the U.S.

---

① Mello M M, et al. National costs of the medical liability system. Health Affairs, 2010, 29(9): 1569.

As a result, for international healthcare management one consequence has to be noticed very seriously:

International healthcare services will constantly seek for cheaper professionals either through draining them from other parts of the world or through medical tourism shipping and flying the patients round the globe.

Accountability

Accountability coins the need to give transparency to management by whom applied processes or the entire healthcare services have been done. The documentation of accountability allows the identification of everybody that is involved in a treatment process. It is mostly used to benchmark single persons or staff units' contribution to a result, to identify liability or increase productivity. The term may also be used to assess a patient's capability to orientate in daily life reality.

Regarding health insurance or healthcare and treatment, the term refers to various aspects, such as

- the patient's responsibility for its own activities according to a contract
- the providers' accountability against health plans
- the payers' accountability to reward the costs for contracted services
- the caregivers accountability if asked to explain their doings to the patients or to the authorities

Accountability rules can be part of health plans in order to integrate medical and financial responsibilities regarding external rules for proving the doctor's decision-making. In this regard, accountability is the obligation to disclose periodically the governance of healthcare performance and governance to the parties involved.

Regarding healthcare and managerial responsibilities, accountability also "*can be discharged by demonstrating that agreed tasks have been carried out to agreed standards …*"①.

The importance of accountability measures depends on the health systems' nature as a for-profit or a non-for-profit system.

But charging or discharging for accountability focuses on a simple but very

---

① Hunter D J, St. Democracy H. Accountability and consumerism. *In*: Iliffe S, Munro J. Healthy Choices. London: Lawrence & Wishart, 1997.

often undervalued task. That is to allow full transparency to any healthcare activities by full screen documentation on what and why something has been done.

see Documentation

see Managed Care

see Managed Competition

see Regulation

Arrow, Kenneth Joseph (born 1921)

Arrow is a US Economist and Nobel Prize winner in 1972. He was not especially but more or less accidentally writing on health economics (or more correctly "healthcare economics") in the context of his social-choice theory①. His publication of "*Uncertainty and the welfare economics of medical care*"②(*The American Economic Review*, 1963, 53: 941～973) is seen by some researchers as the beginning of health economics as a particular science③.

The socially fundamental problem is that the access to healthcare cannot really be discussed under an individual's social choice against other options. Somebody suffering famine has not really a choice except something to eat, or the individual will die. This is neither an individual nor a social choice. That is the same with preventing from communicable diseases. Social welfare is not a matter of preferences but under some considerations a matter of a group's survival. Health or access to food is essential, but it does not mean selecting from a menu card and there is no direct relation between catering for health and welfare neither of individuals nor of economy and expected returns of investment. Economy and growth depends on productivity and consumption not on voting for individual preferences.

But his scientific interests point some of the permanently very critical aspects to providing appropriate healthcare like

- the uncertainty in the occurrence of particular diseases

---

① Arrow K J. A difficulty in the concept of social welfare. Journal of Political Economy, 1950, 58(4): 328～346.

② Arrow K J. Uncertainty and the welfare economics of medical care. The American Economic Review, 1963, 53: 941～973.

③ Savedoff W D. Kenneth Arrow and the birth of health economics. Bulletin of the World Health Organization, 2004, 82(2).

• the uncertainty of a treatment's out-come

• the uncertainty of markets and demand

• the lack of market equilibrium

• the market failures, like the ineffective social allocation

• the problem of the imbalance of information between provider and consumer but also

• the necessity to compensate for the social ineffectiveness through non-market institutions

His often cited articles are by some interpreted as demonstrating that healthcare can only become performed under free market rules, while on the contrary others read Arrow pointing out market failures and the social ineffectiveness of free markets regarding healthcare provision.

Arrow has clearly made the point that the "uncertainty" of demand and market reaction is one of the origins of the so-called market failures. But nations do unavoidably need health insurance, if deciding for some social security as a source of the nation's stability and of the nation's economic progress. Some argue his thinking would necessarily support free markets as the frame for efficient healthcare. Other scientists read Arrow concluding the utilization of effective healthcare services would necessarily demand the correction of the free market's failures through offers of social non-market healthcare and health insurance institutions. One might see the comments on Arrow also the offspring of the moral hazard debate by Pauly①. This debate leads inevitably to the implementing of rationing the access to and the utilization of healthcare. But indeed such a policy violates Arrow's Rational Choice Theory stressed to be the very fundamental of freedom.

Under this situation, the work of Arrow describes the permanent and ongoing controversy on advantages and disadvantages of free markets in healthcare provision and compulsory health insurance pointing out the failures of free markets and unregulated competition. But it does not help with better access to and supply of necessary and appropriate healthcare as a human right.

see Failures of Competition

see Managed Competition

see Moral Hazard

---

① Pauly M V. The economics of moral hazard: comment. The American Economic Review, 1968, 58 (3): 531～537.

Budget Impact Analysis (BIA)

BIA is used in the prior approval of formulary or reimbursement procedures together with the cost-effectiveness analysis.

The aim is to estimate the financial consequences of a new healthcare intervention procedure under the frame of a given healthcare setting and given inevitable resource constraints. BIA is to predict how a new mix of pharmaceuticals or therapies intended to treat a specific health condition will impact the spending on that condition.

see Cost-effectiveness Analysis

see Formulary

Committee on the Cost of Medical Care (CCMC)

This committee was a privately funded group pointing health care a fundamental political and economic issue in the United States of America in the period 1926 ~ 1932. The committee's work is fundamental for the development of Health Economics worldwide. Concerns both on access to necessary medical help and on the issue of costs brought together eight charitable organizations, such as the Rockefeller, the Milbank, and the Rosenwald Foundation in 1926. The committee gathered fifty economists, physicians, public health specialists, and representatives from major interest groups for research and discussing options for providing access to health insurance.

In our days, one may call this work one of the very roots of health economics in the U.S. conducting fundamental research on the issue of medical care costs and health insurance. The results of this committee have been published in 26 volumes and 15 special reports and recommended the availability of state budgets to help with access to care and the development of voluntary health insurance.

Some members voted for compulsory health insurance, but the majority were against it. The American Medical Association condemned these documents as advocating socialized medicine. Nevertheless, the work of the CCMC can (among others) be seen as the beginning of health economics, which accepts access to health care as one of the basics for a socially and economically flourishing society.

Costs

Costs of healthcare are any money consumed by providing either insurance or healthcare services. Healthcare provided for making profits seeks to exceed cost against revenues. If provided as a non-for-profit service, the aim is to keep break even. That indicates that costs strategically play different roles in for-profit or in non-profit healthcare or health insurance. This may be of particular importance if prices for services are set by an independent external sponsor or by particular regulation policy equal to any of the listed benefits or of the insurance coverage plans. These different conditions decide the incentives on how to provide care or insurance.

Regarding healthcare, different types of costs may be attributed:

Capital Costs

Capital costs usually include equipment costs, physical hospital costs and not consumable supplies ("hardware").

Also included are interests, leases, rentals, taxes and insurances on physical assets like building and equipment (depending on national legislation). Capital costs are usually reimbursed as part of the pricing for healthcare including the owner's investments.

Internationally, there is a large scale of models where the government takes or subsidizes the capital costs, which makes the government or the tax-payer the key stakeholder in guaranteeing and providing healthcare.

Referring in particular to healthcare, capital costs are any of the costs taken to purchase the real estate, to construct the hospital and to equip it for its functions as well as to render the services. These are costs needed to bring a project to a commercially operable status, to hold its level or to keep it on the standards of healthcare provision. Capital costs are also called fixed costs and are independent from outcome and operating or variable costs. But managers have to realize that capital costs will also change over time.

If settled as a for-profit-provider, the profit rate is equal to the quotient of the profits and the sum of the capital costs plus the operating costs. In other words, tomorrow's profit rate will depend on the operating costs more than on any other cost. Increasing the prices and/or keeping the operating or variable cost

as low as possible will become the key for understanding the international healthcare markets and competition.

It is fundamental to understand capital costs as fixed costs. In the era of internationalizing (globalizing) health services, the capital costs become more and more equal round the globe because of its depending on internationally traded materials, energy and industrial goods and hardware. Consequently, only costs like wages are variable and might differ between nations and will therefore become the key for competition.

Healthcare managers acting internationally understand that the variance of the fixed costs will decline globally. It can encourage governments to subsidize capital costs to provide advantage in competition. That is why not the capital costs but the salaries of the professional caregivers are the driving incentive of a big part of medical tourism. This is also the reason why governments globally might stay in conflict because of subsidizing capital costs to protect national markets against international competitors.

see Fixed Costs
see Health Tourism
see Incentive
see Marginal Costs
see Variable Costs

Direct costs

These are costs for diagnostics, medical treatments, nursing, rehabilitation or long-term care; these costs will be counted differently by the paying party or the provider, or for in out-patient or inpatient care, particular cases or patients. In this way, any of the direct costs for particular services or treatments or types of patients can be attributed. This is the same with any cost caused by particular staff per unit of service.

Indirect Costs

These are types of costs that are only indirectly accountable to a health insurance or healthcare. It may include cost for management, labor costs, investments in facilities, governance, and supply, hygiene, data transmission and documentation, liability, advertisement, personnel development and further quali-

fication of staff, team building and many more. Indirect costs cannot become directly related to a particular service.

Patient-related Costs

Costs per insured person or per patient may vary extremely. These costs depend on individual risk profiles, health conditions, diseases, impairments, disabilities or utilization behavior. This kind of uncertainty about patient-related costs initiates the interest to look for clusters of patients with average costs but low variance, thus we can adjust mixed costs for different types of patients respectively(see Person Classification Schemes).

Case-related Costs and Product-related Costs

These costs may be related to standardized diseases, co-morbidities, particular procedures, pathways and expected outcomes. It is generally the same as the patient-related costs. The difference is the basis of counting, which is not related to clusters of patients but to clusters of cases (see Case Classification Schemes, see Product Medicine).

Net-Costs

These costs consider the overall costs of a program minus the financial outcomes. The result might be a minus or a plus. In healthcare provision, some financial risks are even, if foreseeable, not avoidable, for example offering the facilities and supply for particular emergencies or disasters. That needs particular arrangements for balancing negative net-costs.

Total Cost

This type of costs counts the complete costs for services and contains any of the variable costs and fixed costs of a doctor's office or a hospital, of an individual or family or of a nation's expenditures for insurance or healthcare. Total costs describe the amount of money consumed for the particular service as described.

Fixed Costs

These are the amounts of money required to perform the utilization of

healthcare. These costs are entirely independent from the amount of production or services or their change. They also occur if no care becomes provided. Considering international healthcare, these costs are particularly important because fixed costs are developing towards an internationally equal level over time, provided the standards for providing care will become globalized as some provides demand for utilization, the consequence is that unequally fixed costs will play no or only a marginal role in settings for international competition. This holds the potential to lower quality by reducing the fixed costs at the same time.

Marginal Costs

The increase rate of total costs for healthcare services in cases where the quantity of provided healthcare or the mix of cases grows is called marginal cost or the marginal unit of variable costs. The increase of services holds the potential to increase total costs by increasing the variable costs. The marginal cost of an additional unit of service is the cost of the additional amounts needed to provide that plus in healthcare. The grounding assumption is that an increase of services (for whatever reason) will increase variable costs.

The introduction of the concept into health economics shows some remarkable implications and may set some difficult incentives. The first problem is that considering marginal costs for management decisions would foster portfolio selection strategies. This economic rationality of providers may be in conflict with health political considerations staying exactly against such a selection ("cheery picking") for some good reasons. Here, micro-economic may stay in conflict with macro-economic interests. The second problem is that the demand of healthcare will be very changeable over time and by particular demand. All of those provider organizations not being able to select and to plan the volume and amount of services per time unit are unable to utilize resources to change demand. This again provokes the development of management models that try to deal with specific diseases through organization. Here the selection of high prevalent diseases becomes an important argument. But finally it will turn out that this kind of selection will increase total costs for insurance dramatically. The more prevalent a disease is, the less the variance of demand and the marginal costs per unit is. Lowering marginal costs, therefore, sets the incentive to concentrate on some few frequent diseases or to concentrate provision at some very few selected hospitals or other provider facilities.

Under this background, some countries try to regulate hospital care for seldom diseases through concentration policies, demanding for a certain minimum of defined cases regularly treated at a hospital. These policies are to lower marginal costs through a sharp intervention into markets and the patients' free choices.

This argument supports also trends to make seldom diseases an additional objective for medical tourism.

Opportunity Costs

This costs count those costs that would occur if an alternative decision is made or considered. Healthcare opportunity costs are a matter of tremendous concern for the reason that some alternatives might be unwanted or problematic or even illegal. Examples are as follows: 1) If spending money for health insurance is mandatory, the alternative is illegal. 2) If the decision for one or another treatment only depends on counting the opportunity costs but not quality of service, this might be problematic. 3) If appropriate healthcare can be provided by primary healthcare, it would be economically irrational to decide for specialists. Particularly in organizing healthcare and the relation among different provider organizations, opportunity costs play an important role, particularly if decision-making is inadequately regulated by third-party decisions.

If health insurance is not mandatory by law, a family may decide for or against insuring the family or selected family members against the risks of falling ill, or to buy food instead. If health insurance is mandatory, opportunity costs may occur if the selection of the insurer is possible. In some healthcare systems, all the citizens or some (mostly low earning parts of them) are mandatorily insured by state-run insurances, explicitly avoiding opportunity costs due to the choice between two opportunities of existential importance in the case of scarce resources. In this case, the legislative body has made the decision to spend tax money on citizens' health by giving healthcare priority against something else. Also the concept of "rationing" may be discussed and performed under the concept of opportunity costs.

Patients do only face opportunity costs if not covered by a mandatory health plan or if buying healthcare under "fee for service" rules.

Variable Costs

These costs are the amount of money consumed by providing healthcare.

These costs summarize all the changeable expenses if the volume or intensity of provided care changes, while the fixed costs do not. The sum of all the marginal costs has to be determined as variable costs.

Considering international healthcare, these costs are important because variable costs can be more easily influenced by management, for example by keeping wages down or by lowering the amount of consumed qualification. In globalized healthcare competition might use low wages.

Friction Cost

This cost is used to measure losses in healthcare due to losses of staff workforces, for example due to sick days, vacation or a similar friction period.

It is assumed that friction costs can be lowered by improved safety at work, workers' health promotion, and sufficient healthcare or by replacing permanently sick workers with others. This may conflict with political considerations to keep even chronically ill or elder people at work or to adapt working conditions to individuals' conditions.

Under the consequences of the demographic transition or if considering social peace a nations' goal, it could be possible that reducing friction costs finds its limits in policies to keep people at work. Experiences show that some entrepreneurs accept it being profitable to invest directly in health promotion and healthcare to avoid production losses.

Relating to Mushkin and Grossman, this strategy is also referring to the "human capital" approach.

The counting of these costs may turn out to be difficult and the interpretation somewhat hypothetical. It is often impossible, or only under specific circumstances, to relate losses (and gains) to a single worker because the others will (and typically do) replace the sick worker. But in any case, the overall experience is that employers' investments in the "human capital" are more than returned by higher productivity due to promoting health seeking for corporate identity by offering social support.

see Health Economic Analyses

Cost-Containment

This is a concept to control healthcare costs by purchasers and by providers through established mechanisms such as

- benefit design
- prior approval
- pre-admission certification
- pre-admission testing
- concurrent review programs
- second opinion programs
- discharge planning
- claim audits
- case management
- triage procedures
- employee education

It is also the process to search for inefficiencies in consumption, allocation, or production of healthcare services which contribute to higher costs than necessary. It is the mechanism of cost-containment on the provider's level. Such inefficiencies may have different roots:

- *inefficiencies in consumption* exist when health services are inappropriately utilized
- *inefficiencies in allocation* exist when health services could be delivered in less costly settings
- *inefficiencies in production* exist when the costs of producing healthcare could be reduced if using professionalized management regarding resources, structures and processes for delivering healthcare.

Cost containment is a word freely used in healthcare mostly to describe cost reduction activities by providers or government. It can cause conflicts with quality and issued performance criteria.

Cost-Containment Politics

The term refers to a debate on reducing third-party-payer expenses for healthcare but not always clarifies the background of discussion.

The particular aspects to which attention has to be paid depend on the discussant's position and interest. As a matter of politics, any of the debates set one of the considered points prior to others. For that reason, it is nearly impossible to cover the subject systematically.

The overall concern mostly is to make the health services a flourishing and expanding industry that offers highly qualified jobs, fosters research and health technology and pharmaceutical industries and even tourism and international trading. But round the globe cost containment faces the dilemma that growing markets depend on flourishing individual and third-party-payers' budgets.

But more important is the fact that healthcare is seen as a grounding offer holding a society together, helping to keep social peace and illuminating the nations' commitment to universal cultural values and humans' rights. All of these would make the availability of healthcare for everybody not a burden but a mission.

Therefore, cost-containment policies are clearly to distinguish between those anticipated to improve the use of available resources and those introduced to reduce spending on health and healthcare in order to decrease direct and/or indirect salaries and/or taxes for social purposes. Under this situation, cost-containment is not a question of economics but of a nation's preferences and goals.

Indeed, any product bought has to be paid independent of the nature of the payer, the provider or the system. If setting cost containment a priority (which truly might be necessary if there is the evidence of wasting money) any of the methods will meet the needs of different groups of stakeholders differently, and will set some people into (relative or absolute) disadvantages while others (relative or absolute) advantages. For that reason, most of the proposed measures are usually ineffective for at least one of the stakeholders and effective for the others. But it is also true that these conflicts take a tremendous amount of energy and money. The dilemma will be much bigger if cost containment politics are caused by economic weaknesses and crisis, thus causing the widening of social gaps.

Any health service industry will profit from an increasing GDP as long as the majority profits from the growth, for example trough improving healthcare. There is a fundamental interdependency of income development of the majority and the chances for the healthcare industries.

The term "cost-containment policy" is entirely free of content if not specified

explicitly. Under this situation, cost containment may focus on

- limiting or firming prices for pharmaceutical and devices
- limiting the rewards for health services according to the many methods of reimbursing the services
- limiting the access to services and the benefits covered
- limiting subsidiaries to the needy
- limiting the time "consumed" per unit or case

Each of the concepts will affect different groups' interests and will set cost-containment permanently on top of the political agenda.

Customer

Individuals pro-actively buying a health insurance or buying health services directly from the providers are customers of insurance or of a provider organization or medical professional. The interpretation sees the paying party dealing with competing sellers of products and coverage. In this case, they relate to a provider or an insurer as customers.

Under such a ruling frame, third-party-payers of any legal nature are regularly costumers of providers and provider organizations if contracting under a non-fee-for-service rule. Patients are usually not costumers in the understanding of the usual market rules but they do depend on the contract's policies.

Individuals buying wellness or life style medicines beyond the regulations of necessity, appropriateness, efficiency, evidence based medicine, guidelines and legal accreditation policies are certainly costumers. But these wellness offers are usually outside medically and scientifically supervised medical services and their rationality.

Patients do not regularly fulfill the characteristics of costumers due to the asymmetry in knowledge, health conditions and the power of out-of-pocket payments. This might be slightly different in the case of some elective operations. It is true that there are also individuals capable to make the decisions of healthcare independent from professional advices, but even if the number grows it will certainly stay as an exception. But in all these cases there may occur complications with evidence based medicine.

Independent from such considerations, the replacement of the patient by a consumer coins intended transformations form national health insurance or man-

datory Social Health insurance into a private business. It is used to make the member or insurance a costumer and the social or public insurance an enterprise. This is the same with intentions to transform non-for-profit provision into for-profit activities. While, for example, in Germany's social health insurance, any of the premium payers is determined as a member by law (which includes some specific rights), under ongoing transformation, members are regularly called "customers" nowadays.

see Evidence based Medicine

see Patient

Efficacy or Potential Effectiveness

The term refers to the measurement of treatment outcome under ideal or experimental conditions of a clinical study. It has to be distinguished between the effectiveness of a method and the effectiveness of use under real conditions of practicing medicine. The difference between efficacy and (community) effectiveness describes the difference between experiment and reality.

The interpretation of efficacy is mostly very difficult for a number of reasons, such as

- biased information practices
- the selection of the study population
- the way of marketing etc.

The evaluation of efficacy shows that marketing and advertisements are usually much faster in spreading the method than gaining experiences in the proper use of the method.

The efficacy can dramatically differ from community effectiveness.

see Compliance

see Effectiveness

see Evidence based medicine

see Over-utilization

see Under-utilization

Effectiveness or Community Effectiveness

This is the relation between a target and its outcome under the utilization's

reality. Effectiveness depends not only on the method or the treatment procedure but also on compliance and any of the frame-conditions to practice medicine. For that reason, effectiveness should be clearly distinguished from efficacy.

The community outcome will often depend on parameters like

- limits of utilization or access
- inadequate utilization pathways and processing
- over-and misuse because of marketing practices
- patients' lacking of education(self-medication, site-effects, lacks in understanding the use etc.)
- the lack of acceptance or actually of qualification of doctors or teams.

It is a matter of healthcare management to monitor the effectiveness of diagnoses, treatments and rehabilitation and nursing as well. It can be dangerous for the provider not to do so, and it also would neglect the principles of evidence based medicine.

The analysis on effectiveness points out two aspects

1.defining the expected outcomes in relation to the given frame-conditions for provision and utilization and

2.establishing measurements through inclusion of the patients' view.

To do so it is often seen as the ultimate condition to close or to lower the gap between science, doctor's promises, patient's hopes and reality. This can also be of importance in respect to litigation.

see Compliance

see Efficacy

see Evidence based Medicine

see Over-utilization

see Under-utilization

Efficiency

This describes the relation between costs and wanted outcomes. If the outcome is defined as the monetary gain of the provider, efficiency may also be the relation between costs and productivity or profitability.

The *efficiency of allocation* is the overall outcome related to all of the resources consumed.

The *technical efficiency* is the partial efficiency in each of the segments and

intervals of the process considered.

The typical measures meaning measurable characteristics in health services of efficiency are the consumption of qualification, time and devices in relation to wanted results. The most crucial point for efficiency measures is the definition of the result. Whatever the definition will be, the result is always the total of wanted outcomes minus the total of unwanted outcomes.

There are some fundamentals regarding the relationship between health conditions, costs, needs and demands, such as:

- The more prevalent a specific disease is the lower are often the costs per case.
- Increasing severity of defined cases will regularly raise the costs.
- The higher the severity of defined cases the less prevalent is regularly the specific disease.
- The lower the social position of patients the more comprehensive is regularly the need.
- The lower the social position of patients the less is regularly the pro-active demand.

These facts are of economic importance. Analysts often think that most of the for-profit third-party-payers tend to cut reimbursements or want to exclude coverage for prospectively assessed high cost patients. The above-mentioned certainties could make it most attractive for providers to offer simple and less costly medicine for highly prevalent cases under capitation.

Favorable Selection

This is the pro-active selection of individuals with particular attributes seeking for insurance or of patients and cases which prospectively show a tendency of utilizing healthcare below the estimates for the average or being likely to get diseases less costly than other people suffering from the same diseases.

Favorable selection is "improving" the risk pool through lowering insurers' and managed care providers' risks.

Favorable selection also occurs if a hospital tries to select cases or patients according to expected costs or revenues, and those that are more likely to avoid liability litigations.

see Adverse Selection

see Case Classification Schemes
see Risk Selection

Financing Healthcare

Regarding the financing of healthcare, some few "W" have to be considered such as

- Who pays for
- Who receives
- Who are the providers of
- What are
- What are the limits of

the costs for healthcare?

Asking so, some more questions and options will follow:

Who checks the bill?

- the individual patient and his/her family
- a third-party-payer (employer, tax-payer, the community, a charity foundation)
- the provider under Prospective Payment rules

What is the mechanism of paying?

- out-of pocket
- direct and indirect tax-payments
- insurance (mandatory, voluntary, indemnity)
- individually pre-paid services
- public funds
- solidary insurance
- medical saving accounts (voluntary and mandatory)
- grants and donations

Who is the agent or sponsor collecting and distributing the money?

- central or local government
- independent agency
- non-for-profit entity (public)
- non-for-profit entity (private)
- for-profit entity (public)
- for-profit entity (private)

- corporative providers

Who sets the norms?

- legislation
- private contracts
- providers
- individual patient's demands
- individual professionals
- groups of professional agents
- independent professionals

Who takes control?

- executives of state
- executives of providers
- insurances' entities
- expert councils
- providers
- patients' advocates and organizations

Friedman, Milton (1912～2006)

Friedman was an economist and Nobel Prize winner, professor at the University of Chicago. His economic concept played a leading role in transforming old capitalist economy into the recent "New Economy". This is the deregulated power of the finance industry having changed to old capitalistic economy since the beginning of the 1980s in the U.S., but was followed in the 1990s by many of the leading European countries and countries in many other regions too. His ideas are also summarized by speaking of Thatcherism.

Defeating the concept of Keynes, who has formulated a socially regulated market economy, Friedman called the concept of social markets "romanticism" and "communism", which would stand against the very nature of humans, which would exclusively aim at "*making as much money as possible*" by nature.

He especially stood in fundamental opposition to any social and environmental responsibility, to public healthcare services or education. His argument was always that any spending on health, if not out of pocket, will damage individuals' benefits of a free and democratic society. He was the leader of the opposition against the U.S. Medicaid, Medicare and SCHIP program for

the poor, the elderly and the children. He had been one of the founders of the theory of deregulation for free markets and had also been a fighter against target setting by politics.

The nucleus of his concept was:

"*Few trends could so thoroughly undermine the very foundations of our free society as the acceptance by corporate officials of a social responsibility other than to make as much money for their shareholders as possible.*"①

see Keynes, M.
see Insurance Models
see Responsibility

Healthcare Marketing

It is the ultimate function of healthcare marketing to address healthcare products and services to customers. Marketing is essential for free markets and is one of the key concepts of competition. This function basically needs

- determining and addressing the particular product
- calculating the products' prices
- announcing the particular seller and
- implementing the advertising strategy.

In particular, healthcare marketing focuses on

- healthcare products, such as pharmaceuticals or devices
- healthcare services, such as seeking for doctors, nurses, particular hospital offers, diagnostic tests etc.
- medical tourism
- "medical arms race" by offering "stars" among doctors
- healthcare provider organizations or
- insurance plans

Healthcare marketing makes healthcare a business and is seeking for advantages against other competing sellers of healthcare services. It wants to develop the wishes of getting a particular product or service and leading the consumers to the addressed providers. In marketing, a driving internal argument is regularly the calculation of the share of variable and fixed costs. This calculation will

① Friedman M. Freedom and Capitalism. Chicago: Chicago of University Press, 1962: 133.

generally be used for designing and deciding on marketing and its strategies. It will fundamentally help to forecast earnings and the financial impact of proposed marketing campaigns.

This is also the conflict: Marketing is a business tool while healthcare and its access is—at least in advanced healthcare systems—the legally regulated distribution of social goods under the rules of necessity, appropriateness and efficiency.

It is the ultimate goal to boost demands and to compete for business advantages. This indeed may originate problems for some reasons:

1. Healthcare marketing is usually channeling products or services to patients or to doctors, which are typically to be paid by a third party such as the taxpayers, the health insurance or a managed care organization. Marketing might address positive outcomes for users but negative results for the paying party or even the other way round.

2. Healthcare marketing is to increase "consumption" of healthcare. In the case of diagnoses and medical treatments, that activity may develop overutilization or even malpractice, both potentially dangerous to individuals' health.

3. If resources for healthcare are limited, marketing may channel expenditures systematically to selected but typically highly prevalent diseases or disabilities. This behavior may induce underutilization for seldom diseases, especially for activities with a minor business volume.

4. In marketing products, both doctors and mass-media are preferred promoters. This might come close to corruption.

Under that background, marketing might generate tremendous misallocations systematically directed against some other public health priorities. That is why some nations' legislation does not allow advertising for some healthcare services or products if listed in a benefit plan or formulary list.

Healthcare marketing is not to mix up with promoting health or health related behaviors, such as going for vaccination or informing people how they can self-cure a simple infection or interpret early signs of a severe disease.

see Competition
see Costs
see Medical Tourism

Healthcare Value Chain

The Healthcare Value Cain is a concept rather than a reality but it looks far ahead towards the existence of huge comprehensive integrated delivery systems. It aims at the "integration" of

- producers of pharmaceuticals, supply and devices
- sellers and purchasing organizations
- provider organizations
- insurers and managed care organizations and
- paying parties

into one big chain.

This integration will not exist in one corporatized entity but in some kind of a loose associations in a wide range of structures which include planning, exchange of data and negotiating visions, goals and "footsteps".

Such concepts and developments are particularly essential for the internationalization of healthcare, because this development will cross borders and rule particularly the smaller countries' healthcare systems.

see Healthcare Value Chain Management

see Integrated Delivery Systems

Health Economic Analyses

In recent years, a growing attention has been focusing on the regulation of healthcare utilization through economic studies. Especially the UK's National Institute for Health and Clinical Excellence (NICE) has developed the topic of economic evaluation of treatments to support evidence based policy decision making and regulatory norm-setting.

The most frequent types of studies are:

Cost-Benefit Analysis (CBA)

Aim: The concept is to optimize the financial benefit.

Remark: It compares expenses and benefit of treatments, care pathways or provider organizations using costs.

Example: Method A exceeds the profit of method B by 17%.

Cost-Effectiveness Analysis (CEA)

Aim: The concept is to maximize the patient's outcome.

Remark: It measures the effectiveness of different treatments under the same frame of resources. CEA can also measure the effectiveness according to efficiency (cost-effectiveness efficiency).

Example: There are two different methods to treat diabetes; the gain of life years will be measured and compared. The result may be that method A shows in average a gain in life expectancy of about six months compared with method B or any other.

Cost-Utility Analysis (CUA)

Aim: The concept is to measure the gain of quality in life through a certain procedure.

Remark: It is to measure the increase of life quality according to the standard of the Quality Adjusted Live Years (QALY) or the Disability Adjusted Life Years (DALY) (see Life Expectancy).

Example: The average increase of QALYs after implanting artificial knees shows an average of 0.7 life table standardized years.

Cost-Minimization Analysis(CMA)

Aim: The concept is to minimize the resources used.

Remark: It is to seek for the minimum of costs to reach a pre-defined goal; It is especially important for benchmarking the provider's costs.

Example: All the costs of two or more different kinds of treatments (or providers) become compared by adjusting the same outcome.

Cost-Productivity-Analysis(CPA)

Aim: The concept is to optimize the productivity of medical care comparing different pathways.

Remark: It is to optimize the structures and the work flow inside a hospital.

Example: Department A produces 3 and the department B 4 identical procedures per time unit.

Cost-Consequence Analysis(CCA)

Aim: The concept is to compare alternative interventions or programs in which the components of incremental costs and consequences are listed without aggregation.

Remark: It is to optimize costs.

Example: The intervention A exceeds the costs of intervention B by 10% but without achieving the same outcome.

Incremental Cost-Effectiveness-Ratio (ICER)

The National Institute of Health and Clinical Excellence (NICE) uses Cost-Utility-Analyses for evaluating the ratio between the changes of costs in relation to the change of measured effects.

The effects become measured through the gain of Quality Adjusted Life Years (QALY) per cost unit or another measure of Life Years Gained (LYG). The ratio provides information about the additional costs consumed per unit of additional outcome through implementing a new treatment or other intervention in comparison with the alternative standard.

Example: The costs of the new method "B" are £5000, the costs of the standard method "A" are calculated to £4000. The difference is £1000. While B results in a gain of 2 years(QALYs), for A the study calculates a gain of 1.5 years. The gain in QALYs is 0.5 years attributed to additional costs of £1000. The ratio of additional costs and added QALYs is 2000. The interpretation is that per gained unit of QALY one may calculate additional costs of £2000.

This ratio is the "Incremental Cost-Effectiveness Ratio" (ICER) and the basis for decision-making based on Technology Appraisals for decision-making. The norms at NICE are as follows:

- ICER of a treatment method $<$ £20.000 per QALY is seen cost-effective.
- ICER of a treatment method $>$ £20.000 per QALY needs additional arguments to accept the effectiveness positively.
- ICER of a treatment method $>$ £30.000 per QALY needs decision-making for the individual case.

ICER is an example for a method of decision-making which establishes economic considerations directly into the clinical practice.

From a methodological point of view, one may critically ask for the validity of the data regarding QALYs or alternatively, regarding LYGs. The fundamental assumption behind this is that the distribution of life expectancy and measures of quality within a population is homogeneous. But this is a problematic postulate without any evidence. In other words, ICER can only become estimated under quasi-experimental conditions as usually given when testing new drugs. For the given particular reason, effectiveness becomes different from community effectiveness and the efficacy. Under this situation, ICER is a theoretical construct that is likely to be far from reality.

The result does not only depend on the new methods for intervention but also on the available data regarding life expectancy and quality of life. Both the data will usually be biased by a large number of characteristics, most of which are age, gender, social position, pre-existing conditions and more. Consequently one has to calculate ICER specifically for age groups, gender, social class etc. If introducing such measures, one should be aware of the possibility of discrimination or infernal bureaucracy. At the same time, there is nearly no chance to test for ICER in the case of seldom diseases, especially orphan drugs.

Additionally to the methodology to ration healthcare as performed by the Oregon practice, ICER is another methodology for healthcare rationing if used as evidence based health policy decision making.

see Bias
see Cost-Utility-Analyses
see Effectiveness
see Efficacy
see Life Expectancy
see National Institute of Health and Clinical Excellence
see Orphan Drugs
see Quality Adjusted Life Years
see Rationing

Keynes, John Maynard (1883～1946)

Keynes was a British economist, who had been indirectly of influence on many of the social security systems developed not only in Europe after World War II, but also in the USA after the big recession 1927～1933.

His book "*The General Theory of Employment, Interest and Money*" (1936) was most influential on developing social security systems not so much because of ethical considerations but because of fundamental concepts of what a modern and effective capitalistic economy should be like. He was deeply convinced that the market economy will only survive if it can become regulated by commonly accepted social aims and by regulating financial markets by a proactive policy of democratic state, representing the will of the majority of its citizens.

The work of Keynes has influenced not only the development of the UK National Health Services System but also the development of what has been called the social market system. The so-called social markets have been most powerful in many countries up to the middle of the early 1990s.

With the upcoming neo-liberal economic theories by V. Hayek and Friedman and with their tremendous importance for the neo-liberal transformation of the global markets into the deregulated finance and investment industry, health services and social insurance systems were not seen and accepted as an advantage and a gain of effective industries any longer but as the "*black hole of economy*" (Friedman) and the burden of economic success. Through modeling the US market system for the world, his perspective also came across Europe and has been fostering the transformation of health services systems here.

Keynes is now mostly seen as a figure believing romantically in nations' social prosperity under the rules of today's unregulated financial market economy.

see Friedman, Milton

Kondratiew Wave or Kondratiew Cycle

This is a theorem using some macroeconomic hypothesis developed by the Russian economist Nikolai Dmitrijewitsch Kondratjew (also Kondratieff or Kondratiev) in 1925 ("*The major economic cycles*"). For his ideas he became accused of being an Anti-Stalinist economist. He was sentenced to death penalty in the former Soviet Union in 1938.

The concept describes regular, sinusoidal-like cycles of estimated forty to sixty years in length and consists of periods between high growth and periods of relatively slow growth of industries and business sectors.

This fundamental Marxist concept is not seen concordant with current theo-

ries by most of the today's economists. But some groups see the Kondratiew Cycles as a concept to forecast the future through using the cycles as described for the past five waves, such as

1. the first industrial revolution 1800～1850 (the age of the steam engine and the cotton based technology)

2. the second industrial revolution 1850 ～ 1900 (the age of steam and railways, shipping, heavy industry, iron and steel etc.)

3. the third industrial revolution 1908～1947 (the age of steel, electricity and heavy engineering, petrol chemicals, electrification etc.)

4. the fourth revolution 1947～1991 (the age of oil, automobiles and mass production of consumer goods, electronics etc.)

5. the fifth revolution 1991～2040 (?) (the age of information and telecommunications, the internet, mobile technologies, bio-technologies etc.)

Some groups want to foresee the 6th cycle for 2040～2090 (?) and discuss alternatively the 6th cycle as becoming the era of biotechnology or of nanotechnology or of regenerative energy or of thermo-nuclear fusion. But some also discuss the next wave as being coined by healthcare and wellness industries leading and pushing all the cycle's economy.

This is indeed a major argument for some speculative investors. But the discussion on the Kondratieff waves also drives some current research and investments. Unfortunately, the evidence is weak and all these postulates might easily turn out to be a trend of "clustering illusions" for shareholders.

Marginal Benefit

The additional satisfaction or utility that a person receives from consuming an additional unit of a good or service is also called Martinal Benefit. A person's marginal benefit is the maximum amount they are willing to pay to consume that additional unit of a good or service. In a normal situation, the marginal benefit will decrease as consumption increases.

The idea of some economists is to transfer the concept of marginal benefits to health economics and to patients' pro-active decisions. The concept assumes patients would utilize healthcare after balancing costs and margins of benefits. This assumption is the final reason why some see the patient a consumer. And the other way round, the making of the patient a costumer is to introduce the

concept of marginal benefits into the economics of healthcare and its offers.

The concept determines healthcare a consumer good and sets its utilization in relation to the consumer's willingness to pay for the marginal benefit expected. The expected benefit will typically decrease with severity of a disease or with aging but it may also increase with better financial resources or professional education etc. Taking that concept for practical considerations, one should keep in mind that regularly not the patients but the insurance companies are the consumers. It may also turn out difficult to adopt the concept because of its ethical implications.

In real life practices, patients—if uninsured and paying out-of-pocket—do not regularly calculate margins of benefits but investigate their own valets and count the small resources available for getting help. The resources of the low class people will limit access to benefits by using that concept. The wealthier proportion of the population regularly sees no reason to calculate the costs and the margins of benefits likely to be gained.

The concept of marginal benefits in healthcare economics makes it the central point to clarify who the real customer of healthcare is. It can turn out to be different as to the patient's or alternatively the third-party-payer's assessment of a benefit. Some analysts argue the introduction of the concept of marginal benefit into health economics as explicitly projected by the political strategy to put neo-liberal deregulation ideologies into the practice of health services systems. If the argument is somewhat reasonable, consumers (frequently third-party-payers) are expected to continue purchasing "goods" of healthcare and nursing as long as the payers' marginal benefit exceeds the price to be paid, and as long as the payer achieves its calculated surplus.

see Patient

Marginal Utility of Medical Progress

This relates to an ongoing controversy in the public and also among healthcare professionals assessing innovations in medicine.

The discussion mostly points four different aspects:

1. Any new diagnostic or treatment technology or method shows progress only in relation to the methods already available. The additional benefit of any method already available will (on average) reduce the opportunities already in use

with any new method added and cause the decrease of attributable benefits.

2. Any new diagnostic or treatment technology or method will tend to replace the methods already in use but will not be taken to close the gap between the limits of the old methods relative to their intentions.

3. A new procedure will often be more expensive than the old one. The only way to refinance it is expanding the use but with no or only with minor additional benefits. Despite limited marginal benefits, total costs will climb up because of growing investments and of the expansion of use, typically replacing the old methods, but also in cases where these methods have been successfully applied.

4. There is no concept outlining that reaching the biological life span could be possible without depending on help being applied for compensating the declining physical or mental capacities. These changes are mostly conceptualized as medical needs rather than as issues of social support and care. The following argument is simple: Any progress in life expectancy will reduce the life span available for further increases. Consequently, any progress in health reduces the chances for further progress but makes step by step any progress more costly.

Example: It was cheaper to reduce infant mortality from 20 to 10 per 100 infants than from 20 to 10 per 1000 infants.

see Compression of Morbidity,
see Dynamic Equilibrium
see Expansion of Morbidity

Moral Hazard

This term is used for a real or supposed behavior of healthcare organizations, of health technology industries and of providers, of insurance customers and of patients to utilize treatments more often than necessary and appropriate. Healthcare needs control and supervision, which would endanger freedom. Consequently health insurance would endanger freedom and has to be replaced by free market rules.

The theorem was first hypothesized and discussed as being fundamental also for the use of hospitals by Mark V. Pauly reflecting on the Medicaid legislation of the U.S. (Pauly, 1968). Pauly was working under his teacher J. Buchanan (1913～2013) who was the Nobel Prize Winner in 1986. He got that prize for his public choice theory as the fundamental part of the postwar neo-liberal economic theo-

ries. His discussion was related to public spending on healthcare in the U.S. but most of it was against the Medicaid Act and the Medicare Act as enacted after 1965.

The discussion assumes a patient's behavior is always seeking to get as many treatments as possible. If free of charge, patients served under tax-paid services would always demand more treatments from doctors than medically necessary and appropriate. The empirical evidence for such a moral hazard on the patients' side is still rather weak despite being widely discussed①.

But some analysts argue with a much better evidence for a tremendous importance of the problem on the providers' side. The critiques on doctors' moral hazard became tremendously forced by M. Friedman in 1979, who argued the American Medical Association was exclusively controlled by moral hazard. Doctors would always want to drive costs systematically to the top for income reasons systematically and purposely while lowering quality. This argument, supported by a famous TV show presented by the Friedman's family, was part of his fight against tax-paid healthcare. But, interestingly these actions are not remembered in the context of the moral hazard debate and its likely very different impacts on patients and providers.

The philosophy behind is the belief that individuals would biologically be created in a way that does not enable them to act as altruistic, solidary and public responsible human beings. This assumption was developed by Hans Selye. (1907～1982) and first published in his book *The Stress of Life*. *New York*: *McGraw-Hill*, 1956. Regarding medical services, it often is given the argument that social health insurance systems would be some kind of romanticism against the very nature of human beings. But those holding an opposite position argue moral hazard a misbehavior that results from social and societal environment.

Searching for evidence, studies usually come to the conclusion that moral hazard exists but only among a minority of patients and with a marginal effect on healthcare expenditures. There is much more evidence that moral hazard among the providers and the healthcare industries is widespread, such as the reported

---

① Vogel J. Institutions and moral hazard in open economies. Journal of International Economics, 2007, 71(2): 495～514; Arnott R J, Stiglitz J E. The welfare of economics of moral hazard. NBER Working Papers, No. 3316, National Bureau of Economic Research, Inc.; van Dijk C E, van den Berg B, Verheij R A, et al. Moral hazard and supplier-induced demand: empirical evidence in general practice. Health Economics, 2013, 22(3): 340～352.

phenomenon of "Roemer's Law", let alone of the supplier induced demand.

The moral hazard argument plays a prior role in the political controversy on the effectiveness and efficiency of different health insurance and services systems but more or less exclusively in systems with third-party-payers. The following quotation illuminates the controversy precisely:

"*The moral-hazard argument makes sense, however, only if we consume healthcare in the same way that we consume other consumer goods, and to economists like Nyman this assumption is plainly absurd. We go to the doctor grudgingly, only because we're sick. 'Moral hazard is overblown,' the Princeton economist Uwe Reinhardt says. 'You always hear that the demand for healthcare is unlimited. This is just not true. People who are very well insured, who are very rich, do you see them check into the hospital because it's free? Do people really like to go to the doctor? Do they check into the hospital instead of playing golf?'*

"*For that matter, when you have to pay for your own healthcare, does your consumption really become more efficient? In the late nineteen-seventies, the RAND Corporation did an extensive study on the question, randomly assigning families to health plans with co-payment levels at zero per cent, twenty-five per cent, fifty per cent, or ninety-five per cent, up to six thousand dollars. As you might expect, the more that people were asked to chip in for their healthcare the less care they used. The problem was that they cut back equally on both frivolous care and useful care. Poor people in the high-deductible group with hypertension, for instance, didn't do nearly as good a job of controlling their blood pressure as those in other groups, resulting in a ten-per-cent increase in the likelihood of death. As a recent Commonwealth Fund study concluded, cost sharing is 'a blunt instrument.' Of course it is: how should the average consumer is expected to know beforehand what care is frivolous and what care is useful? I just went to the dermatologist to get moles checked for skin cancer. If I had had to pay a hundred per cent, or even fifty per cent, of the cost of the visit, I might not have gone. Would that have been a wise decision? I have no idea. But if one of those moles really is cancerous, that simple, inexpensive visit could save the health-care system tens of thousands of dollars (not to mention saving me a great deal of heartbreak). The focus on moral hazard suggests that the changes we make in our behavior when we have insurance are nearly always wasteful. Yet, when it comes to healthcare, many of*

the things we do only because we have insurance-like getting our moles checked, or getting our teeth cleaned regularly, or getting a mammogram or engaging in other routine preventive care-are anything but wasteful and inefficient. In fact, they are behaviors that could end up saving the health-care system a good deal of money.… The issue about what to do with the health-care system is sometimes presented as a technical argument about the merits of one kind of coverage over another or as an ideological argument about socialized versus private medicine. It is, instead, about a few very simple questions. Do you think that this kind of redistribution of risk is a good idea? Do you think that people whose genes predispose them to depression or cancer, or whose poverty complicates asthma or diabetes, or who get hit by a drunk driver, or who have to keep their mouths closed because their teeth are rotting ought to bear a greater share of the costs of their healthcare than those of us who are lucky enough to escape such misfortunes? In the rest of the industrialized world, it is assumed that the more equally and widely the burdens of illness are shared, the better off the population as a whole is likely to be. The reason the United States has forty-five million people without coverage is that its health-care policy is in the hands of people who disagree, and who regard health insurance not as the solution but as the problem."

see Arrow, Kenneth
see Competition in Health Services
see Friedman, Milton

Pareto Principle

This principle refers to the often reproducible observation that 80% of a class of effects would be related to 20% of its relation. It is also called the 80-20 rule and is named after Vilfredo Pareto 1848～1923), an Italian economist, engineer and sociologist. Pareto used that concept to describe the unequal distribution of wealth and access to necessary goods and services. In health economic, it is often observed and reported that 80% of resources would be necessary for about 20% of the population or that 80% of resources would approximately be used in 20% of individuals' lifetime. Another (healthcare related) example is the concept that 80% of work related diseases would be due to 20% of risks.

This principle might be helpful to describe disparities and to support the ar-

gument that healthcare, according to fundamental necessity, needs either tax-payment or pooled funds. But this principle is neither systematically proven nor does it give an explanation for this correlation in terms of the causes and facts behind inequity. But it has been of some remarkable influence on the development of theories on health economics.

Profit Centre

In the context of healthcare, it is a hospital, department, a clinic, a single doctor's office, or a nursery etc. that is managed as a financially self-responsible facility. The concept is made to give providers the opportunity to decide on the Profit Center's own profitability.

In order to act as a Profit Centre, it is allowed to determine both offers and expenses. Decision making on offers is a kind of risk selection pro-actively designing a provider's portfolio. This is to optimize both financial gains and expenses. But the profitability depends both on revenues and fixed and variable costs. Because most of the variable costs depend on the managers' decision-making, profit centers are often known as dumping the staffs' wages selectively.

In most of the advanced healthcare systems, the process for healthcare and treatments are legally regulated to avoid overpricing selectively and excluding diseases, and the situation where patients and treatments are not financially attractive. Under that frame the implementation of a Profit Centre will only work under a concept of advertising for over-utilization or under strict measures of cost dumping.

Under certain conditions we also find healthcare providers allowed to decide their offers' prices. This is mostly the case in the wellness industry, in cases of offers particularly addressed to the wealthy people and also in cases of medical tourism.

see Medical Tourism

Patient

As part of the controversy between health care systems that are driven by social health insurance versus free-market systems, the discussion of what character a person in need is, turns out to be profound. In any traditional system

these persons are called patients. These are individuals who receive medical care depending on a doctor's or other medical professionals' recommendations such as diagnostics, treatment or rehabilitation.

Under a contract's frame the role of the caregiver and of the patient is typically explicitly outlined. This guidance describes the expected characteristics of interaction and the share of information, responsibilities and the processing of treatments. Some insurance or particularly managed care contracts explicitly define the patient's role as not being allowed to intervene into the provider's guided decision-making on therapies. Others promote the contrary.

Internationally, the patient's role is often combined with legal rights that aim to protect them from unwanted consequences for their health under a given treatment.

Many see the patient also a co-producer of recovery who can autonomously partner and share decisions on diagnostics and treatments, as well as manage and prevent diseases. Some want to make the patient a consumer and a purchaser of goods which he/she wants to invest in.

The fundamental problem is the force from public, state run or public services towards privatization and for-profit-provision and also from the shifting of the legal construction of the patient to that of a consumer, who acts and decides to be a self-determined market player by freely deciding on the products and treatments to be bought.

The problem is substantial because some countries are explicitly running a process of adopting the nation's health service under the frames of market competition. Here, it needs the reconfiguration of the patient as being a consumer with still widely not reflected consequences for medical guidelines, evidence based decision making, liability and many more.

see Competition
see Costumer
see International Health Insurance Systems

Planning

The term stands for prospective thinking, decision making and acting according to a vision, and relating statements of mission and the following objectives. Proper planning is a very important part of any service and production,

particularly if being paid by the public.

In healthcare it is the prospective balancing of the healthcare organizations' accessible portfolios of medical indications and interventions. It also relates to the prospectively assumed needs and the demands for healthcare in a given regional social-economic and demographic surrounding. Particularly public health is researching on data in order to pre-estimate required resources and to allocate budgets for all the different aspects considered. Planning needs basically fixed and compromised targets and data which are mirroring the reality of the subject considered.

There is not really an internationally compromised and systematic procedures of planning. But it will regularly compile the planning of resources, capacities, the processes of performance, the revenues expected and the demands in the covered region, the investments and the supply planning.

For the start-up of new facilities intending to operate in the healthcare sector, it must be part of planning to fix the operations and treatments to be performed, the investments available, the qualifications required and the activities to be adopted, the growth and the expansion expected, the pathways of healthcare etc. A mission statement, a strategic concept, plans for further growth, the analysis of the market, of the costs, and of the pricing and also of the likely expenditure are substantial for planning offers of healthcare.

It is a general experience that it is easier to plan quantities than (internal) infrastructures. The last ones do not only depend on rationales but also on the particular human resource and the individual personalities working with the staff. That makes it most reasonable to focus on strategic planning and to leave the details to the facilities' management.

In healthcare which fully covers a region or a total population, planning may turn out to be in many conflicts which derive from analysts, politics, management, staff and people. Here, the key problem is to determine, to measure and to assess the content of needs and prospectively to allocate limited resources.

Public health and epidemiology, particularly social epidemiology, are the fundament of proper planning of healthcare.

Purchaser-Provider-Split

This principle relates to traditional healthcare systems which separate the in-

terests of providers and (third-party) purchasers strongly and systematically. The split intends to avoid incentives to mix up the patients' interests in care and the providers' and insurers' interests in earning money. The proven problem is that without that split providers' and insurance interests in profit-making markets would hamper access to benefits, limiting the quality of utilization and risk selection.

The Purchaser-Provider-Split is assumed to make both the providers and the third-party-payer compete for advocating the interests of the potential or the real patients. It is also discussed as a precondition for competition and as an advantage for patients.

It can also be seen as the opposite to the managed care philosophy where providers buy the risks of insurances, and where traditional third-party-payers sell the risks to managed care organizations.

The Purchaser-Provider-Split was traditionally implemented as a safeguard for patients. It currently becomes diminished in order to safeguard the paying parties, namely the risk-pool holder.

see Capitation
see Managed Care
see Risk Selection

RAND Health Insurance Experiment

The RAND Health Insurance Experiment (1974～1982) is internationally the only controlled and randomized study experimenting with different types of health insurances.

It was made under the hypothesis that individuals' not providers' behavior would decide on the effects of different health insurance plans. Thus the aim was to look after patients' behavior if healthcare is accessible under different frames. It was performed by one of the most influential think-tanks within the U.S, the RAND Cooperation. It is nowadays also active in Europe, both researching on strategic forces and armaments' planning and on health and social insurances to be recommended not only to the American's. Regarding health insurances the RAND Corporation is the most powerful institution lobbying against any other privately safeguarded healthcare.

The background goes back to one of the central RAND histories, namely the

research on the Game Theory makes a "new science of choice" followed by developing the theorem of "social-choice". The theory was the basic for the theorems of Arrow, Buchanan and Pauly regarding health economics and their fighting against compulsory healthcare insurance.

The RAND experiment was designed to investigate on costs, utilization and outcomes in a longitudinal setting adapted to the environment of the U.S. It has had also shown tremendous impacts on international health insurance designs and spreading of U.S. experiences round the globe. The study became a fundament for nearly any internationally acting consulting firm active in matters of healthcare and its insurance and was channelled internationally by RAND consulting agencies also massively influencing the transformation of health insurances in Europe.

The interpretation of the study was and still is most conflicting for the following reason:

The first interim results concluded health insurance without co-payments would lead to more people using services and to more services per user, both for outpatient and inpatient services. The initial results have made co-payment policies one of the favored methods to contain costs.

Consequently the study became the "mother" of any co-payment policy globally.

In contrast to the early findings, the final results of the longitudinal study have shown that co-payments are of minimal influence on individuals' favorable or adverse selection of free or managed care. But co-payment will bring low-income groups and those being sicker than the average a greater risk of dying early compared with those middle class people assigning to fee-for-services.

The experiment is nowadays seen as giving the evidence that cost sharing mechanisms reduce appropriate and necessary medical care but interestingly also reduce medical care evaluated as being inappropriate or unnecessary.

But indeed, the study has been the very influential political argument to increase co-payments tremendously in the 1980s and 1990s in nearly any of the West-European health insurance systems.

The study is still under review. In 2008 researchers concluded from a large meta-analyses and critical appraisal procedure:

"*Increased cost sharing is associated with lower rates of drug treatment, worse adherence among existing users, and more frequent discontinuation of*

*therapy. For each 10% increase in cost sharing, prescription drug spending decreases by 2% to 6%, depending on class of drug and condition of the patient. The reduction in use associated with a benefit cap, which limits either the coverage amount or the number of covered prescriptions, is consistent with other cost-sharing features. For some chronic conditions, higher cost sharing is associated with increased use of medical services, at least for patients with congestive heart failure, lipid disorders, diabetes, and schizophrenia. While low-income groups may be more sensitive to increased cost sharing, there is little evidence to support this contention."*①

see International Healthcare Systems
see Responsibility for Health Insurance

Rationing

Rationing refers to the legally administered access to treatments by controlling the kind, the amount and the frame-conditions of rationed medical services below what is commonly accepted to be necessary and appropriate. The term and the discussion around is coined by the ethical controversy whether people living below the official federal poverty level should have free access to necessary and appropriate medical services or not. Rationing is distinct from prioritizing but rationing might be used as objectives of priority.

For the simple reason that for most of the world's humans access to medical services is limited and for a remarkable proportion of people are also far below the simplest standards, the discussion on rationing becomes a symbol for the unequally distributed essential human rights round the globe.

From a more technical and managerial point of view, one question has to be answered, that is, how we can decide what under rationing will be available and what will not.

The debate became noticed globally first when the U.S. State of Oregon decided to offer only rationed access to tax paid medical services for "*the poorest poor*" under the U. S. Medicaid Act. The implemented program's decision-making is the responsibility of the Oregon Health Services Commission, publi-

① Levy H, Meltzer D. The impact of health insurance on health. Annual Review of Public Health, 2008, 29: 399～409.

shing "*a list of approved … disorders ranked in descending order from those that are the most economically worthwhile to treat to the least worthwhile*" (1991, *The Dallas Morning News*). The total list of about 700 up to 800 positions in hospital care is yearly readjusted according to budget for the year that follows. The methodology behind ranks the pre-classified health conditions according

- to the assumed likelihood of a therapeutic benefit
- to the costs
- to the prevalence and
- to the assumed importance for an individual's quality of life

An article by *T. Mayo*, *The Dallas Morning News* (1991) illuminates the procedure precisely:

"*Once the commission has established the annual costs of providing treatment for each medical condition, the Oregon Legislature will approve a budget for its state Medicaid program, which pays for healthcare for Oregon's indigent population. The size of that budget will determine where on the list of disorders the line will be drawn to eliminate Medicaid coverage for conditions deemed insufficiently economically worthwhile to cover. ..The list of exclusions will almost certainly include such conditions as extremely low birth-weight babies and terminal HIV disease. Acquired immune deficiency syndrome, when detected in its early stages, is in the top quarter of the Oregon list and will probably survive the Medicaid budget tax.*"

While rationing that way would be an enormous advantage for numberless people round the world, the model also became a matter for controversial debates within the so-called economically developed countries as a model for reducing the benefits for the poor. That is why the model is closely investigated and permanently reinvestigated not only in the U.S. but also in some European countries. Comparing the costs of people under those rationing procedures with those not being rationed reduces overall expenses to a very low extent. That is quite well understandable for two reasons:

1. Treatments beyond the yearly cutting point are seldom and cover only a marginal proportion of the budget.

2. If crossing the cutting point, it might be a problem of illegal discrimination to cut access to healthcare according to given legislation prohibiting social or other discrimination.

From an international point of view, the debate on rationing is somewhat overblown because the majority of people on earth live under dramatically limited access to minimal medical services and even the most advanced services systems are setting the benefits under the precondition of characteristic of necessity and appropriateness. In this situation, rationing as described above could turn out to be an advantage for a majority of people on earth. Much more important is to clarify procedures, conditions and the transparency for the public.

Especially out-of-pocket payments and countries leaving health insurance to the individual's own decision may experience rationing far beyond the extensively discussed Oregon model.

Risk Selection

The phenomenon of risk selection describes an insurer's or a provider's behavior to select risks and to seek for advantages in cost management and coverage.

Nowadays, risk selection is broadly common in healthcare as a management method to seek advantage in market competition. Marketing is the most favored method of risk selection. There cannot be any competition without risk selection which is also discussed as the freedom of choice to select risks for coverage individually chosen and accepted by insurances.

Regarding healthcare, experiences with risk selection go back to the 1920s in the U. S.. The lack of healthcare insurances (both private and public) was limiting economic progress and advances in healthcare provision and was also limiting economic chances of some industries. Since the beginning of the 20th century any, trial to provide the nation with national sick funds has been failed. That has turned out to be a tremendous disadvantage. The small proportion of those able to buy sufficient health services was not large enough to foster the branch of health services.

Under this background and with the worldwide economic crises, Justin Ford Kimball, manager of the Baylor University Hospital Texas, proposed a plan to cover a hospital stay of 21 days at maximum per year against a payment of $6 per year, but exclusively for the 1200 teachers of Dallas and on a non-for-profit basis. At those times, insurances generally believed health insurance will never become profitable because of unforeseeable risks and expenditures. But the pro-

posed plan by Kimball became a striking success. Especially employers wanted to offer this new benefit to their employees. Thus, a non-for-profit funded insurance philosophy was set up calculating risks not individually but as the average risk of a branch of industries like the lumber industry.

The success has made private insurance companies to rethink business models even if the models are challenged to compete with an already successfully developing model. The concept to compete against this model was simply the idea to be cheaper than the already existing model. The mechanism chosen by private insurance companies was simply to contract with insurants on the basis of strict risk selection and especially focus on those being healthier than the average as calculated in the non-for-profit models. In other words, selecting systematically those being healthier than the average was the business concept. Simultaneously, they started a campaign against socializing risks to health, stressing the argument that the acceptance of a social responsibility would violate the universal human right of any American individual's self-responsibility and the American way of life and freedom.(Starr,1984)

The major importance of these mechanism and background for health services systems is explicitly outlined and combated by the neo-liberal economic concepts of M. Friedman (1812～2008) and is nowadays influencing and transforming health insurance systems round the globe, even those being most successful.

The most common strategies of risk selection are

- favorable risk selection
- adverse risk selection
- implementing simple medicine
- defensive medicine
- profiling and regionally concentrating the services being offered and designing selective portfolio
- setting selected targets prior to others

Roemer's Law

The term refers to the outcome of a study by Milton I. Roemer (1917～2001), professor for Public Health at the University of Los Angeles and pioneer of international healthcare system research. "*In an insured population, a*

hospital bed built is a bed filled" ①is his typical opinion.

Through studies in 1961 together with the famous Dartmouth Atlas Project, he could systematically prove that traditional health services put doctors into the position to decide on the amount of medical procedures declared necessary and appropriate. But at the very moment in doing so, doctors also decide on their earnings, also called "supplier induced demand".

What some call the Roemer's Law is in his words the following:

"*Supply may induce its own demand where a third party practically guarantees reimbursement of usage.*"

Working for the introduction of a National Health Insurance System in the U.S., he had always been aware that there must be mechanisms to regulate doctors' decision-making as the pre-condition for keeping the system healthy.

On this background, he was most influential in developing Medicaid and Medicare, the first non-for-profit managed care organizations (the Health Maintenance Organizations) and also influential in developing the later DRG classification schemes.

He was also an activist for international healthcare management and had been working for the WHO in about 70 countries round the globe.

Supplier Induced Demand

It refers to the well documented provider's practice to decide on diagnostics, therapies, pharmaceuticals or supplies and on personal income rather than on what is medically necessary and appropriate.

There is also evidence that many of the variations in medical and nursing practice are only explainable through the supplier induced demand phenomenon.

see Crunching
see Moral Hazard
see Roemer's Law

① Shain M, Roemer M I. Hospital costs relate to the supply of beds. Modern Hospital, 1959, 92(4): 71～73.

System of Health Accounts

This is a databank designed to provide comparisons on the country's health expenditures, run by the OECD. Currently 23 countries take part in the system.

The system was installed to answer the following questions:

1. What are the main drivers accounting for health expenditure growth?

2. What factors explain the observed differences between countries?

3. What are the main structural differences in health spending between countries?

4. How are changes in the structure of health spending and performance of health systems related?

see Total Health Expenditures as Percent of GDP

Total Health Expenditures as Percent of GDP

This is a figure widely used to describe the relative amount of sales money devoted to the healthcare industries as a segment of all a nation's sales of a year.

The term expenditure might be misleading if interpreted as a cost. It is simply the sales volume of a defined branch relative to the nation's total sales volume.

For international comparisons, it is also used as a kind of a benchmark or a figure for the economic ranking of the nations in healthcare activities. It is also taken to describe changes over time regarding the volume of sales.

Unfortunately, some politicians and also educated analysts try to reinterpret the sales volume as a nation's expenditures for healthcare or actually a loss or an economic burden. In fact, this figure describes the proportion of the sales segment relative to all of the nation's sales activities. It has to be understood that both these uses are facing some important limitations.

The Total Health Expenditures as Percent of GDP exclusively expresses the importance of the branch "healthcare industry" as, for example, defined by the International Standard Industry Classification (ISIC). This proportion does not depend on the amount of money spend for the individuals. The relative figure simply depends on all the economic activities of a country and their relation to each other. Any change in the proportion of the nation's economy will influence

the proportion of any of the parts. Given an economic crisis, the proportion of steel industries can slow down to the half. If the expenditures for health continue to hold the same level in absolute volumes, the relative proportion will logically increase. The change or the ranking of the proportion to GDP can never be used for ranking the costs but only for ranking the relative importance of a branch.

What is more, there are no reasons to interpret this figure as burdens for economy. If doing so, one would deny the importance of the entire sector for all the economy, and deny the fact that in some countries the health sector is much more important than any other industries. Reducing the proportion would be a severe disaster not only for people but also for the nation's economy.

If taken to describe expenses, the average spending per capita and its change over time is the only valuable figure. But in doing so, it needs to recognize the dependence of these expenditures on the population's structure, for example regarding age or social structures.

But it has to be considered that 100 percent of a nation's total sales volume can show extremely different structures of its relative expenditures. To provide such information, the System of Health Accounts as used in OECD countries may be seen as an interesting and helpful approach. It informs readers about the relative proportions according to different functions of the healthcare system, to the different types of providers and the different kinds of providers.

People who is interested in evaluating the increase or the decrease of expenditures on health in order to express the political concern on health and on its impact on economy needs to do the followings:

• it has to be defined what a given figure for what health expenditures really covers

• it has to be indexe what amount of change is due to inflation

• it has to be differentiated what amount is related to the different age groups, and to the differences and changes in population's age structure

• it has to be clarified if direct expenses for patients or simply gains or overhead costs are changing.

Comparing the overall figures, one has to adjust the relative proportion of each of the different age groups, called standardized or adjusted average of per capita costs, which is the only acceptable measure for comparing and ranking the expenditures for health.

see Adjusted Average of per Capita Costs

see Standardization

Willingness to Pay (WTP)

WTP is an economic concept which became transferred to healthcare to help with decision making. The concept sees the willingness to pay the coining point if patients are to decide on a medical intervention according to marginal benefit.

Economists want to measure, in this way, the maximum a person is willing to pay when challenged with scenarios about random outcomes in the case of specific medical interventions.

The more realistic approach would probably be to ask for the ability to pay. And in most the advanced health systems, care does not depend on the patient's decision but on third-party-payers and their willingness to pay. In this situation, the concept is strongly related to patients' out-of-pocket payments and fee for service regulars. Concepts like this are typically and interestingly developed in countries not really experiencing such decision dilemmas on the patient's level.

see Marginal Benefit

IV

Health Insurances and other Financing Models

General Considerations

This chapter intends to give brief orientations about models of health insurances.

Health insurances are internationally very complex and of tremendous dynamics. Insurance schemes regulate the relationship between financing, providing and experiencing healthcare basically. Readers should understand that both insurance and concepts to provide healthcare are closely connected and hard to be separated. Any change, transformation or reform of the financing of healthcare will show impacts on provision of healthcare and its organization. But this is also true the other way around: provision and organization are a complex issue for their financing. Changes in organizing healthcare can be necessary because of dynamics in social, epidemiologic or demographic patterns of the care needs or of innovations in medicine. This impact regularly causes conflicts and tensions between both financing and providing healthcare and challenges managers' practice, which might be in conflict with ethical rules and needs to refinance investments or to meet investors' expectations.

It is empirically well-proven that only the minority of a country's population are able to pay for their own or their dependent family members' healthcare expenditures in cases of diseases, injuries or permanent disabilities. Even for the

middle classes, expenditures for healthcare will exceed regular income and savings very soon if suffering from serious or chronic conditions and if not having access to insurance or tax-paid subsidies.

Most countries accept expenditures for healthcare as a spending into all the nation's social and economic prosperity, coherence and well-being. But some economists discuss individual expenditures for healthcare and related services a personal investment in the individual's own "human capital", which has to be paid and can expect a return of that investment. According to this belief, the return of investment would occur in better social and career chances and income. But Public Health and Socialmedicine have a different empirical experience. The lacking of access to healthcare for so many people does not depend on the willingness to pay for but on the impossibility to provide the financial resources. If taxpayers and employers ensure access to necessary and appropriate healthcare, this will be rewarded by social and also by financial gains for all the society. Particularly entrepreneurs are gaining profits. But only a small minority of individuals are able to pay for necessary healthcare. The existence of a third-party-paying institution is preconditioning for the entire nation's success, for social peace, for raising productivity and individual chances. On this background, sufficient health insurance and access to healthcare are pre-conditioning for social and individual independency and freedom.

Concepts on how one can cover the expenditures for healthcare reflect a nation's social-economic concept. But if a national payment model is implemented, it will definitely deeply influence the entire system of healthcare provision and will have an impact on a nation's economy not as a burden but as a driver of economic growth. Consequently, coverage and payment rules are regularly and also controversially discussed among different groups of stakeholders.

Any of the systems has to find its national answer for the same questions:

1. What are the main sources of payments, and how one can adjust the typically given mix of the sources (tax paid, voluntary or compulsory social public funds, donations and charity, private insurances, private out-of-pocket)?

2. Which part of the population is depending on what kind of funding rules, and is covered with its health expenditures (the unemployed, people with no individual income, any social group and minorities, foreigners, legal and illegal migrants, drug depended persons etc.)?

3. Is there a common acceptance to develop the healthcare system sufficiently

by including all the population's financial resources into one single fund and to distribute the fund's resources independent from payments into the fund?

4. Which kind of services can or has to be in-or excluded from coverage (prevention, medical care, rehabilitation, nursing, simple medicine, out-patient care, in-patient-care, pharmaceuticals, psychotherapy, dental care, evidence-based proven medicine, alternative medicine etc.)?

5. Who is the independent and norm-setting and norm-supervising institution deciding on "necessity", "appropriateness", "efficiency" and on norms for quality?

6. Which proportions of costs shall be covered by insurance or other benefit plans, and by co-payments, voluntary and mandatory co-insurances, deductibles etc.?

7. What kind of providers are licensed and accredited to contract with the paying party for providing healthcare (state or community run facilities, or employer and charity settlements of provider organizations, public non-for-profit providers, public for-profit providers, private non-for-profit providers, private for-profit providers etc.)?

According to the standards of current knowledge, the following statements may illuminate the difficulties:

1. With the increase of a population's life expectancy, people's needs and consumption of healthcare services increase too. On average, about 80% of resources are taken by approximately 20% of the population. On average, about 80% of resources are used two up to three years before a person dies (see Pareto Principle).

2. The lower a person's or social group's position among a population is (measured through education, income etc.) the higher are the burdens of disease and disablement and the lower is the particular social group's life expectancy.

3. Increasing co-payments, co-insurances and deductibles regularly reduce access to necessary healthcare for the neediest persons (see RAND Health Insurance Experiment).

4. The more advanced a countries economy is the higher is the proportion of public or social health insurance spendings on healthcare.

5. The more advanced a countries economy is the lower is the proportion of out-of-pocket payments for necessary healthcare.

6. The less developed social health insurances are the higher is the proportion

of individuals' out-of-pocket payments.

7. The less developed a country's healthcare system is the lower are the chances for social and economic progress.

The moral hazard theorem is the mostly used argument by those combating universally and socially indiscriminated access to healthcare. Followers of that theorem, like Pauly, (a scholar of the economist Buchanan and heavily fighting against tax-paid healthcare for the poor and the elder in the USA) accept the still unproven assumption "*that all individuals are … utility maximizers and are risk-averters, and*" assume "*the incidence of illness … a random event*"(Pauly, 1968). But epidemiologists and public health experts have no empirical evidence for that moral hazard belief. Patients are neither "*utility maximizers*" nor are diseases randomly distributed. On the contrary, the lower the social-economic status the poorer the health status and life expectancy is①.

But the follower of the moral hazard theorem discuss health insurance as being adverse to prevention and being likely to promote the assumed nature of humans that would primarily seeks for as much consultations, remedies and surgery as possible. The reason of over-utilization and raising costs for the consumption of treatments is seen in having insurance and in going to see the doctors free of charge. Some explicitly argue health insurance would endanger health. This argument is one of the very principles of liberal and neo-liberal economists and politicians underway to transform healthcare systems into free market approaches.

The question who is right with his position and who is not is easy to be answered by asking for whom it is right or wrong. The answer depends on interests and ideology rather than on empirical evidence. But there is not really a chance to decide social conflicts and conflicts of interests by science. Science can only clarify the positions and their origins as rooted in interests and concepts to make them true. Inside a system's borders, it is obviously possible to give evidence for advantages and disadvantages, for strategic routes and rules. But it is not a matter of science to decide on a nations' preferences for healthcare and insurance

---

① Whitehead M, Diedrichsen F. International Evidence on Social Inequalities in Health DS Series NO 15. London: The Stationary Office, 1997; Williams R B. Lower socioeconomic status and increased mortality: early childhood roots and the potential for successful interventions. The Journal of American Medical Association, 1998, 279 (21): 1745 ~ 1746; Olshansky S J, Antonucci T, Berkman L, et al. Differences in life expectancy due to race and educational differences are widening, and many may not catch up. Health Affairs, 2012, 31(8): 1803~1813.

systems from an outsider's perspective. The nation's decision on how to cover expenditures and provide healthcare clearly expresses the fundamental values and visions of the nation's societal life.

It has to be considered seriously, why nearly any of the internationally most advanced and influential think-tanks and economic schools and research units recognizes internationally striking strategic, economic and financial problems of healthcare a problem of fundamental importance. The most influential ones are some U.S. think tanks, such as the RAND Corporation, the Ford Foundation, the National Bureau of Economic Research, or the Centre of Health Administration Studies at the University of Chicago.

But indeed there is evidence that providers try to maximize utilization and to avoid risks, if not regulated and supervised by mechanisms, which have to be installed in any of the healthcare and insurance systems. This proven evidence is the true reason for all the constantly developing concepts, methods and tools to regulate or to manage healthcare alongside necessity, appropriateness, and effectiveness, efficiency under cost-containing objectives. But most of what is usually seen as bureaucracy in healthcare simply aim to get along with the moral hazard phenomenon among providers.

WHO and World Bank in-line with the International Monetary Fund see direct fee-for-service payments, co-pays and deductibles very critical: "*Direct payments have serious repercussions for health. Making people pay at the point of delivery discourages them from using services (particularly health promotion and prevention), and encourages them to postpone health checks. This means they do not receive treatment early, when the prospects for cure are greatest. […] Direct payments also hurt household finances. Many people who do seek treatment, and have to pay for it at the point of delivery, suffer severe financial difficulties as a consequence.*"①

Accountable Health Plan (AHP)

Accountable health plans offer privately contracted insurance and healthcare as a single product and try to compete with others through offering care as con-

① World Health Organization. Health systems financing: the path to universal coverage. http://www.who.int/whr/2010/en/index.html, 2012-01-11.

tracted but with lower costs. These plans can be offered by insurances employing doctors or by providers offering pre-paid services. The aim may also be to offer some benefits for the poorer part of a nation's population. This is in some countries also regulated by law. AHP sellers may offer more than one insurance health plan or buy the insurance risks of a defined group of people from another organization and are to guarantee risk coverage according to the specified plan. AHP is also another type of managed care organization. The contracting paying party can also be the state, a community, an employer or a public or private insurance fund.

AHPs can also be seen as partnerships or joint ventures between single outpatient practitioners, provider organizations or payers buying and selling the guaranteed responsibility for delivering medical care. The plan will be in duty to manage the contracted fund. Physicians and other providers work for, contract with or offer their own health plans of that kind. The frame is often also a delivery system or a hospital chain, settled to cover the markets and to increase volumes by some kind of internal payments for patients' referrals. These practices of "accountability" may legally not be accepted or even seen as corruption in some countries.

When such provider organizations operate and offer one or more health insurance plans, this offer regularly needs a minimum scale of medical products and even nation-wide settled sub-contractors. This is, when a plan is obliged to guarantee service and insurance all over the country. The often observed problem is here the economic instability and the incentive to reduce benefits and/or the quality of service. AHPs try to organize into large groups of doctors and hospitals to lower the financial risks, but these behaviors are critically supervised by national anti-trust agencies. Some of such provider organizations try to internationalize their economic activities in order to avoid national anti-trust policies.

The idea behind is to integrate both the function of an insurer and a provider through overcoming the traditional model of the purchaser-provider-split and to increase volumes. The increase of the number of patients and activities may lower premiums.

A particular model of AHP is its construction as a non-for-profit cooperative integrating the insurant as a risk-sharing patient and an owner as well.

To avoid the risks of the functional integration (losing the independency of medical decision-making and advocacy for patient's interests), this model gene-

rally needs supervision by an independent agency or sponsor responsible for looking after the outcomes of AHPs.

see Accountability
see Independent Provider Association
see Integrated Delivery System
see Managed Care Organizations
see Purchaser-Provider-Split

Benefits, Benefit Design and Benefit Package

In the context of healthcare insurance, benefits are the list of specified coverage by third-party-payers for contracted healthcare, such as outpatient visits, hospitalization, drugs, supply, sick leave compensation and so forth. The benefits define the range of medical services that a paying party offers to its insurant or beneficiaries, and that can be demanded by the contracting party or beneficiary.

The benefit list and the premiums are the contractual agreement, specified in an evidence of coverage (EoC). While in privately contracted insurances, these lists are the insurance product bought by the insured person and sold by a third-party-payer. In social or public health insurances or national health services, these lists are resulting from particular agencies' activities based on the public health sciences, such as social-epidemiology, for example. The practice of using those benefits needs independent supervising agencies and particular bills of patients' rights. Briefly, benefits are the products sold by a private insurance or offered by a social health insurance or offered by government, employer or other public fund.

The benefit design might include any of contractual procedures to determine

• the general benefits, such as the kind of services, the region, the length and limits of coverage

• the disease or the severity-related products, which will be available to the insurant

• the rules for payment, co-payments and deductibles or other cost-sharing and

• how and where a member can access or choose medical care covered by the health plan.

The benefit design is the product's description or the guarantee of coverage.

In general, it is expected that the design of a health plan covers what is compromised as being necessary and appropriate. In well-developed systems, the norms of necessary, appropriate and efficient healthcare are typically set as a legal frame. The making of a benefit list needs well-established, independent and transparent mechanisms. If a country has decided for rules of rationing, the benefits may be added by some co-insurance. In systems universally guaranteeing everything what is accepted as being necessary and appropriate, the benefits may additionally focus on "extras" as some marketing offers.

The list may also be called the benefit package and can additionally contain specified costs and annual or lifetime spending limits, including and explicitly excluding risks, diseases and conditions, treatments etc. Instead of a benefit, one might also speak of a product, a health plan or an insurance contract.

For managing provider organizations, it regularly turns out to be an organizational problem if the provider has been contracted by a variety of different benefit packages. It can also be seen as a matter of discrimination, if patients suffering from the same disease will get different treatments.

see Appropriateness
see Necessity
see Product Medicine
see Rationing
see Social Epidemiology

Beveridge Model

This model refers to Lord William Henry Beveridge (1879～1963), a British economist and social reformist. His so-called *Beveridge Report* (1941) on "*Social Insurance and Allied Services*" is the grounding concept of the British National Health Service, which became established in 1948.

The report recommended that government should find ways of fighting "*the five 'Giant Evils' of Want, Disease, Ignorance, Squalor and Idleness*". To combat these "evils", the British National Health Service (NHS) was created:

"*Medical treatment covering all requirements will be provided for all citizens by a National Health Service organized under the health departments and post-medical rehabilitation treatment will be provided for all persons capable of*

profiting by it".

Beveridge included also detractors and political opponents into the plan, arguing that the welfare institutions he proposed would increase the competitiveness of British industry in the post-war period, not only shifting labor costs like healthcare and pensions onto the public account, but also producing healthier, wealthier and thus more motivated and productive workers who would also serve as a great source of demand for British goods and would globally advertise for the British way of life.

Today, the National Health Service is seen as one of the few fundamental models providing health services and is also called the "Beveridge Model". Since his ongoing transition under the influence of the neo-liberal ideology and introducing managed competition, the model is under many transitions.

see Managed Competition

Bismarck Model

This model refers to Otto von Bismarck (1815～1898), who has been chancellor of the German Empire (1871～1890). He developed the concept of what is still known as the German model of health insurance in 1881. The concept became introduced by the law of "Health Insurance for Workers" in 1883. Originally, it was designed mostly to compensate for the loss of workers' salaries due to sick days but not primarily to pay for treatments. Nowadays, it is primarily to cover healthcare and is the financial ground of Germany's giant healthcare industry but is going away from its origin step by step.

The model's prime intention was social peace keeping. Due to the extremely bad living conditions for most of working class people, there had been dramatic social tensions endangering successful economic progress of the fast expanding industries. At the same time, workers' parties and unions were not allowed to work by law. This law was also implemented by Bismarck. Thus social security was assumed to be the method to ensure social peace. That policy has also been called the policy of "sugar and whip" The advantage of having such insurance has made employers supportive to the concept and encouraged them to share the premiums to be paid.

Today, the fund covers about 90% of all the German citizens and guarantees (among others) access to benefits, including prevention, medical care, dental

care, medications and rehabilitation. The German model has been taking a constant sales volume of about 6 to 7% of the GDP since the early 1970s. This percentage is quite stable.

The model has been socially most effective and has also been attractive because of its medical effectiveness and efficiency for 130 years. Under neo-liberal economic concepts, it is now under transformation but with uncertain outcomes. One of the major reasons is the transformation of the labor markets and the globalization of economics.

see Friedman, M.
see Managed Care

Co-Insurance

Co-insurance might be a voluntary or compulsory cost-sharing requirement under some public or social health insurance policies. It says that the insurant will have to pay for a portion or a percentage of the costs of the benefit package either to gain extra benefits or to complement costs for all or parts of the listed necessary benefits.

The policy is frequently seen in a kind of insurance with state-run policies under which the insured individual and the insuring party, for example the employer, covers healthcare expenses only according to a specified ratio or at a fixed sum. The amount of the co-insurance sum may be demanded for a specified risk or benefit, for a range of income or for a time-period or for a maximum of payments according to age. Co-insurance might be paid by the insurant or by a third party.

In some countries, the implementation of co-insurance policies is also a political strategy to transform mandatory public or social health insurance into some kind of a new model or towards privatization. The mechanism is to exclude traditional benefits from social or public coverage and keep them on the mandatory beneficiary list. In this way, the insurant is made legally obliged to buy additional private insurances, as it, for example, is in Germany.

Depending on income, co-insurance affects people differently and diminishes effects of socialized risk coverage and share.

Co-insurance is an additional strategy of copayments by insurance.

see Co-Payment

Community Care

"*Community care means providing the right level of intervention and support to enable people to achieve maximum independence and control over their own lives. Community care means that a wide range of services provided in a variety of settings need to be provided. It is not simply care provided by family members. These services, range from domiciliary support provided to people in their own homes, strengthened by the availability of respite care and day care for those with more intensive care needs, through sheltered housing, group homes and hostels where increasing levels of care are available, to residential care and long-stay hospital care for those for whom other forms of care are no longer enough.*"①

Community Medicine

The term is not clearly defined and refers to different concepts of providing healthcare and related services.

The following variants are examples but do not entirely cover the subject:

1. Community Medicine can be a facility owned by the community and providing health services to the community. Such facilities may be called ambulatory, policlinic or dispensary.

2. Community Medicine may be seen as a public-oriented regional concept of prevention through improving living conditions and access to health services.

3. Community Medicine may also refer to a grass rooted social support systems mostly for the poor or disadvantaged ones.

4. Community Medicine may conceptualize a pattern of beliefs in traditional medicine.

5. Community Medicine may exclusively focus on nursing and offering social advocacy for dependent and disabled people.

The importance and understanding of community medicine differ round the globe according to a broad variety of national, social and cultural frame-condi-

---

① UK Government White Paper Caring for People: Community Care in the Next Decade and Beyond. London: Her(His) Majesty's Stationary Office, 1989.

tions. Its importance is closely related to the political and ethical concepts of responsibilities for health and service provision.

see Dispensaries

see Policlinic

see Primary Healthcare

Co-Payment or Co-Pay

This is a cost-sharing policy in which the health plan's insurant pays a certain amount of money for a specified healthcare either the provider or the insurer directly. It is a method of cost-cutting for insurers and a strategy to increase payments for providers without increasing costs for insurers.

The concept is to keep premiums down for reasons of insurers' competition or for reducing costs for the insuring employers. But the given argument follows mostly the ideology of moral hazard, believing people would always demand more diagnostics, pharmaceuticals and surgery than necessary and appropriate if free of direct charge.

see Moral Hazard

see Rand Health Insurance Experiment

Deductible

This is the demanded out-of-pocket money to be paid by the insurant before the insurer pays the contracted charges for a covered risk or for the doctors' and hospitals' services. Different components of a health plan can have separate deductibles. Deductibles may be specified in

- money amounts per episode of illness or
- per unit of service or as
- percentage of total costs.

Deductibles might be limited or not. But they are to help insurers to reduce expenditures and losses by inducing the avoidance of seeking for help. Deductibles are also used to keep premiums low particularly if employers are the insuring party.

Both deductibles and co-pays are a severe burden for the poor, the elder and the chronically ill. They are both traditional concepts of private insurance and are

also frequently used if groups are intending the transformation of social and public insurances.

Dispensaries

This institution was first established by Cardinal Richelieu (1585～1642), Prime Minister under France's King Louis XIII and by the docteur Theophraste Renaudot (1586～1653) in France in 1640. It is the first model of tax paid healthcare in Europe for the very poor but provided by government. These "dispensaries" offered free medical consultations and can be seen as a type of a very first policlinic.

In these early times, the purpose was to prevent Paris from epidemics and social battles rooted in poverty. But it became also a model for many countries and regions like England, Scandinavia, the United States or the former Soviet Union.

In general, dispensaries can be seen as the pro-active, rationed and selectively focused management of healthcare and prevention for selected groups sharing similar risks, demands and needs but being financed by the public.

The term seems to be out of use but the concept is not and it currently regains influence in many countries. Here they can also be seen as a kind of disease management program. To understand currently leading trends around healthcare management, the history of dispensaries should be remembered.

The institution is mostly seen in the advantage of pro-active healthcare management for disadvantaged people. The critical aspect is mostly seen in the incision into the existing provider system through implementing an additional type of healthcare management and its organization but potentially disintegrating the system.

Some see dispensaries a form of community medicine, others see disease or prevention management programs and managed care rooted in the dispensaries of the past, but with tremendous impacts on already existing provider systems.

see Community Medicine
see Disease Management
see Public Health
see Rationing

Enrollment

This is the initial procedure whereby individuals become members of social health insurance or costumers of private insurance. In terms of private health insurance, passing procedures of proving the evidence of insurability will be part of the application procedure.

The term can also refer to the process by which a health plan accepts groups for a health plan membership after proving the specific preconditions of the groups characteristics.

Enrollment is important if undertaken selectively in regard to different plans and benefits. The methods used for selection may include questionnaires, proving of medical files or even physical examination. If so, individuals are strictly demanded to report any of the circumstances that could potentially has influence on risk load and the Evidence of Insurability (E of I). If not reporting correctly, they may lose not only any benefit but will also become demanded to pay back any of the earlier insurance expenditures for the insurant.

These procedures are most critical social regarding discrimination. That is why some nation's legislation forbids such procedures of risk selection, like just recently the United States of America did decide to regulate these practices within the years ahead.

see Indemnity Insurance

see Risk Selection

see Triage

Equivalence Principles of Health Insurances

This coins a type of private health insurances offering plans which calculate benefits and premiums according to concepts of equivalence between premium and individual risk load. Premiums are adjusted to the risk profile of the consumer, and a particularly designed group of risk carriers or of a calculated benefit list. Those principles are fundamentally opposing principles of social equity and solidarity as focused by other types of health insurance.

One of the ethical and economic problems is how one can fix an individual as belonging to a predefined risk group. There are at least three concepts: life style

features, genetic features and features of environment (such as natural conditions, social conditions or the kind of labor. If, for example, individuals do extremely risky kinds of work, then they are not only burdened by higher risk, they may also become excluded by such procedures or have to pay more for their risks than the wealthier part of the population has to check for. That is the same case with the poor or the disadvantaged people.

For that reason, for example, nearly all of Europe's health insurance systems are explicitly settled to avoid social discrimination by the principles of equivalence in health insurance. Also the health reforms under Obama in the U.S. try hard to go this way despite of massive counter-reactions.

see Beveridge Model
see Bismarck Model
see Health Insurance
see Risk Group
see Risk Selection
see Social Health Insurance

Flexible Spending Account or Flexible Spending Arrangements

This is a family of health insurance arrangements used or politically advertised in some countries and, for example, offered by employers for their employees or by government subsidizing such accounts. The rule is that the employer and the employee give a (flexible) part of the earnings into a saving account (for example for the entire healthcare or only for permanent care plans or for the costs of over-the-counter medications etc.). These savings are not subject of tax and help to save tax payments, but they may get lost if the employer gets bankrupt. The gains of the funds become accumulated year to year if not spent. Regularly these accounts are regulated by national legislation.

The concept is also called consumer-driven healthcare. The philosophy behind is making the insurant a consumer for its own interests in health insurance and by privatizing risks and needs in cases of illness and disability as the alternative to "socializing" health coverage. Other types are the Health Reimbursement Account, the Health Savings Account, the High-Deductible Account, and some further specific arrangements of Medical Savings Accounts. The particular ar-

rangements for these accounts are designed as groups' accounts (social accounts) or as individual/family accounts but with different pros and cons.

The implementation of accounts for healthcare may turn out to become a severe problem because it regularly takes years that account holders (groups or individuals) can expect profitable returns from the fund. That results in a strong dependency on the continuing abilities to pay into the account, the related income amount and the duration of spending from the account. These types of accounts mostly depend on the stocks' ups and downs which makes the access to care dependent on financial speculations but with great uncertainty. That leaves tremendous risks at the accounts' holders side but is a big business for the accounts' administrators and financial managers.

Such arrangements are also discussed as very critical in some countries for the reason that it has impacts on the amount of tax that employers and employees have to pay. If a country has other tax-paid health plans, such accounts will weaken tax-spending for healthcare, for example for the disadvantaged groups. Parties supporting these concepts argue they would limit the growth of healthcare costs, improve efficiency, and protect individual freedom against social welfare. In contrast, critiques argue that such accounts would be a kind of social risk selection and in most of the cases a loss for participants. But there is no empirical evidence for advantages. It is the reverse effect that healthier and wealthier parts of population will gain financial advantages by saving tax obligations.

Many economists share the fundamental view that health insurance should never be run by any kind of prospective saving accounts because of the uncertainty of future, while finance industries will gain substantial gains from the moment of beginning. They also argue that only healthy and young people expecting higher life expectancy than average would profit from such arrangements and that these concepts would make healthcare more expensive for others. Considering the accounts' particular history, there are reasons to state that these accounts are primarily developed and implemented to limit the social effectiveness of health insurance.

These kinds of accounts are permanent matters of reform discussions in many countries, such as Germany. But the issue is also how one can solve the severe social-political conflicts between those representing interests of employees or of the poor and those representing the interests of employers.

see Health Savings Account

Group Insurance

The term stands for any insurance policy or health services contract by groups of workers sharing an average level of risks but with a minor variance. The beneficiaries and (if so regulated) their dependents are covered under a single policy or contract, issued by their employer or other group entity, such as residences or a group of retirees.

These types of insurances go back to the US in the late 1920s and in the early 1930s when the first non-for-profit insurance plans occur but primarily offered to different professional groups of employees and workers. The premiums became calculated through adjusting the average risks of the profession covered, for example for teachers, lumberjacks, miners, steal-workers etc.

The very first but tremendously successful offer was developed at Baylor University, Dallas, Texas by Justin F. Kimball in 1929. He offered a prepaid hospital treatment of 21 days per year for the premium of $6 to the town's teachers. The concept became the model for the private non-for-profit insurance "Blue Cross and Blue Shield" still being the very powerful health insurance in the U.S.

Also the German Social Health Insurance might be discussed having had been a group insurance, because it was originally exclusively established as a workers' health insurance, which later on became transformed into an insurance accessible for any citizens.

Health Insurance

Health insurance is to cover expenses for healthcare depending on design and on contract. The kind and amount of covered healthcare is the content of the specific insurance product. The product can offer full coverage or only cover parts of the needs; it may not only cover the premium paying person but also his or her family entirely or partly.

The coverage might be paid by the insured person and/or his/her employer, by a solidary group arrangement of the citizens of a region or as a kind of a federally regulated health plan for all the citizens or only for some groups like children, elder people, and disabled, former soldiers or for the poor.

Internationally, the insurances mostly differ according to different definitions of risks, according to the groups being covered or according to the benefits being offered or according to the mechanisms how given services become reimbursed. Accordingly, a tremendous variance of health insurance systems and mechanisms can be found globally. These insurances vary widely in (social) effectiveness or efficiency even if similarly constructed. What kind of health insurance meets missions and promises best depends on the compromised interests of all the stakeholders and their agreements.

But each of the different models has to cope with similar basic facts:

1. In contrast to other goods to be insured, health risks are not randomly but extremely unequally distributed within a population. The unequal distribution may be indicated or even caused by characteristics like age, gender, social conditions (income, kind of employment, education, work, access to clean water, air, food, housing etc.), life style, genetic conditions or geographical region. The inequality makes the demand for healthcare very inhomogeneous which can be differentiated into vertical inequality and horizontal inequality. The vertical inequality describes the social strata within a population and their correlation with to health. The horizontal inequality describes the variance in each of the social strata caused by biological variance and life style.

2. There exists a tremendous asymmetry regarding the needs of healthcare and the capability to pay for. It is assumed that about 80% of the needed expenses will be necessary for about 20 up to 30% of the population while about 80% will be "consumed" two or three years before an individual dies. The asymmetry of expenditures is more extended the higher the population's life expectancy is.

3. It is a matter of fact that the lower the social position is the higher the burdens of illness and disabilities are. There is tremendous evidence that the kind of work, education and the level of income are the most important reasons for the unequal distribution of risks to health. But the need for services increases with the decrease of social and individual resources. To give an example, according to the social groupings as officially used in the U.S., most of the middle class, the under middle class and the underclass are not able to cover all the needs for healthcare. The inability to cover the unavoidable expenses for healthcare is the most striking reason for private bankruptcy in some countries, such as in the US.

4. It has proven true that in many—especially European countries—the availability of sick funds as part of the nation's social security is lowering social ten-

sions, is improving the social coherence and the productivity of economic activities and is also developing a huge market for labor, education, research, production and trade and additionally contributing to economic and social progress.

5. The kind of health insurances has impacts on administrative and overhead costs taken from premiums for healthcare. These costs are the highest in private insurance.

The striking problem is that those who are not able to cover the costs for healthcare are also those loaded with the most severe burdens of illness and disabilities, and are also less able to care for prevention. For these fundamental reasons, different national models have been developed to cover citizens through mandatory health insurance.

Typical models are

• tax founded health plans, leaving the government the right and the duty to determine what and for whom healthcare can legally be covered but also leaving the duty to the government to control contracting, provision and rewarding, and evaluating the system's efficiency and quality

• a (privately) individually or group paid insurance (possibly including direct and indirect payments by the employers to a certain extent)

• an employee health insurance benefit as a non-taxable form of compensation for the employee in lieu of taxable salary or wages, provided through employment

• public funds working as a kind of self-help organization of the public, including payers like the employees, the employers, the pensioners and the pensioners funds and also being the state's additional guarantees for the fund's permanent liquidity

• varying models of mandatory medical savings accounts

• indemnity insurances with no special benefit plan, simply offering a limited sum for yearly or life-time coverage

Various types of insurance, such as accident plans, disability income lost compensation plans, medical expense compensation arrangements, pharmaceutical cost plans, dental plans or plans for medical needs in the case of injuries due to any accident or only due to work related health problems and many more may add to the basic insurances models.

Benefits can also be available for the economically dependent and active em-

ployees such as children, spouses or retirees through employment with or without an extra premium. The employer may purchase benefits or the costs may be shared between the employer and the employee. The benefit is usually administered by a central sponsor such as a government agency, a private business or non-for-profit entity but may also be provided by any or only selected provider facilities.

Internationally, there are many examples of kinds of legislations regulating and supervising any of the types of insurances including the private ones and determining that all of them(not only for-profit and non-for-profit insurances but also for-profit and non-for-profit providers) have to act under the rules of given legal standards.

Each of these insurances is mixing the risks of any insurant and calculates an average risk resulting in a certain premium. The fundamental difference between all of them is the accepted variance of the risk pool under calculation. There are models like the German public sick funds calculating only one premium for all the insured people (independent if they are payers or not) and there are models differentiating this average premium according to different but selected risk groups, and splitting of the entire risk into different partitions of risks. If the state is funding services by tax, it clearly is a legal and federal responsibility to determine the budget and to define the benefits.

A further consequence of these different models is not only the extent of coverage for people or certain social groups. The consequence is also that the kind of insurance determines the rules of defining the benefits, the rules of reimbursing the providers or the pre-paying patients or of the licensing and accrediting of the providers, the legal mechanisms of supervision and the mechanisms of managing the system, including the methods of cost and utilization control.

From an international perspective, the most important aspects of the managing all these issues are:

- the insurance contract
- the covered benefits of insured persons
- the duration of the contract
- the exclusions and inclusions of benefits
- the limits of coverage
- the out-of-pocket maximums

- the rights of choice
- the paying parties and the premiums
- the kind of payments (fee for service, managed care contracts etc., capitation and prospective payment systems)
- the needs of prior utilization authorization
- the deductibles and the co-payments
- the co-insurances
- the in-or exclusion of a free choice of doctors
- the drug lists

The mechanisms of reimbursing healthcare are varying widely but with tremendous influence on supplier induced demand, effectiveness and efficiency or the methods of resource allocation.

see Reimbursing Healthcare

Medical Savings Accounts (MSA)

This is a family of insurances coining some particular types of financing healthcare. The concept was originally developed in the US.

Currently, MSA is, for example, relevant in Singapore where it became established in 1984.

The model's characteristics are self-financing out-patient services and a mandatory saving account mostly for financing hospital stays.

Singapore's MSA is divided into four different parts:

1.Medisave: Employees and employers pay into an individual stock account sharing 50% each. Medisave is to pay 20 up to 80% of fees for hospital stays. The proportion depends on the kind of service or the choice of doctors and hospitals.

2.Medishield: In cases of catastrophic risks. Medishield is to subsidize Medisave.

3.Eldershield: similar to Medishield

4.Medifund: offers subsidies by state if the account cannot cover the fees

In 1994, MSA became also introduced by private insurers in South Africa and MSA is spread among most of the private sick insurance plans.

In the late 1990s, the People's Republic of China developed MSA for employees co-paid by employers in urban surroundings. But there is a similar one for

the rural population (RMSA) co-financed by the government.

The U.S. Bush administration decided on tax incentives to make MSA an opportunity for none or under-insured self-employing middle class people in combination with high-deductible health plans in 2003 and 2006.

The overall evaluation shows:

1. MSA is a model both for private and for non-profit insurance often co-paid by employers and directly and indirectly by all the tax-paying citizens.

2. MSA depends on long-time savings which raises the problem of foreseeing future developments of income, needs for healthcare and the stocks' progression and also on changes in the patterns of demand.

3. MSA may have a negative impact on any tax-payer independent of whether having access to MSA or not.

4. MSA may severely influence the risk pools of other forms of insurances through adverse risk selection, an effect being very likely but unwanted by most of the countries.

5. MSA may be effective for insuring some much selected risks and benefits but will be more profitable for those parts of population enjoying high life expectancy. Depending on design, there is a danger that poorer people will subsidize health insurance for the wealthier ones.

6. MSA is depending on the stock's uncertainty, but the patients may need care right at the moment when a disease occurs and cannot wait for better cycles, while overhead costs and shareholders' interests are nearly uncontrollable for MSA buyers. This problem might be particularly strange if MSA health insurance is mandatory for any citizen.

see Deductible
see Moral Hazard
see Responsibility

Risk Group or Risk Grouping

This refers to the method to group and to screen people according to preassessed characteristics of particular concern. The assessment is made by comparing groups of people showing evidence of developing more events in a defined time-period compared with another group varying in its characteristics. This grouping may also use not primarily different epidemiologic patterns (objective

risks) but different utilization patterns(subjective risks).

The procedure is used to monitor and to screen the identified individuals of an invariant risk group for disease occurrence, for the purpose of early intervention or in order to calculate future prospects regarding whatever is of interest.

While medical staff is mostly interested in prospective knowledge regarding hazards to health, treatments, prognosis, utilization requirements, managers ought to be interested in pre-estimating costs, gains or losses regarding an insurance plan.

The growing availability of personal data via internet use makes it both easier to mine data independent from the enrollees' information and to supervise and control related behaviors by health insurance. Even if forbidden by law, these practices are hard to be controlled. That is why risk grouping is one of the major ethical and social challenges of what some call modern predictive medicine.

Selected Health Insurance Systems

The global health insurance systems vary widely. Many politicians and the public often ask the question what kind of systems could play the role of the best performing model. But asking for the best one it makes sense to change the question slightly: The question to be answered is, what financing systems is in-line with the particular conditions, economic development, cultural beliefs and strategic orientations of a nation and for whom are such systems performing best.

Therefore, the following selection is not to give recommendations; it is to give orientations for discussion. The selection is done to illuminate the diversity of health insurance systems but not to include or to exclude particular countries from considerations.

Australia

The country has a "public health system" called Medicare (not to mix up with the U.S. Medicare). It provides all citizens with free access to hospital care and subsidizes out-patient medical diagnostics and treatments. It is funded by a 1.5% charge on all tax-payers and another 1% levy on high income earners on the basis of the total taxable income per year.

The "private health system" is a second trunk of healthcare funding by a number of private health insurance companies. The largest is "Medibank Private"

which is government-owned. It operates under the same regulatory regime as any other private health insurance which has to be registered and licensed.

Some private health insurers are 'for-profit' companies, while some other private health insurers are non-for-profit-organizations, but in any case equally regulated by law. The insurances are not permitted to discriminate between members by premiums, benefits or membership against racial origin, religion, gender, sexual orientation, kind of employment, and leisure activities. Premiums are calculated on a "community rating" basis depending on the average of each of the particular communities' risk level. The use of person-classification schemes and individual risk assessments for fixing premiums are not allowed in order to prevent risk selection.

The government has implemented incentives to encourage adults to buy additional private insurance coverage for hospital stays, such as Lifetime Health Cover for hospital coverage, Medicare Levy Surcharge for people exceeding a certain income border or Private Health Insurance Rebate. The overall goal of these incentives is to encourage the better earning individuals to choose private hospital insurance.

Brazil

The system is classified as a public system and managed by the government. It is called "Sistema Unico de Saúde". It serves the majority of the population. An additional private sector is composed of health insurance funds and private entrepreneurs.

The public health system was established in 1988 by the Brazilian Constitution on the principles of universality, comprehensiveness and equity. It is guaranteed by constitution that any citizens must have access to healthcare services, without any form of discrimination regarding skin color, income, social status, gender or any other variables.

It is administered by the Ministry of Health and the "Instituto Nacional de Assistência Médica da Previdência Social (INAMPS)". The system operates in a decentralized way in its management and organization. Some health reforms are made to extend coverage to those people outside the social security system.

Equity demands that health policies should be oriented towards the reduction of inequalities between population groups and individuals, setting the groups most in need prior to others.

The system intends to give all Brazilian citizens the right to get free medical assistance both from public and from private providers and both will be reimbursed by the government. Public and community offers focus on basic and preventive healthcare, while private non-profit and for-profit healthcare providers deliver most of the medical services, including tax-paid hospital care. This mixed tax financed (but healthcare privately providing) system continues to intensify its focus on high-cost sophisticated treatments and rehabilitation. But the system is still considerably underfinanced and lacks quality in regard to qualification and the available equipment. Public health expenditures as a share of GDP range about 3 percent. This is about half of the total health expenditures. Another 3% is paid by private health insurances and out-of-pocket-payments. Both individuals and employers can purchase private insurances. That makes private insurance attractive but not reachable for those unemployed and lacking financial resources.

The private sector of healthcare provision covers more than a quarter of the citizens and offers four types of medical insurance products: private health insurance, prepaid group practice, medical cooperatives, and company health plans. Additionally, large health maintenance organizations (HMO) are both financing and providing healthcare. As many managed care organizations try to do, these HMOs provide coverage of low-cost procedures and simple medicine but push the burden of high-risk procedures to the publicly funded health system.

Canada

The country's healthcare system is one of the so-called socialized health insurance systems and covers all of the country's population according to the Canada Health Act which sets five principles, namely the public administration, the comprehensiveness of insurance for necessary care, the universality for any citizen, the portability of migrating from their residence and accessibility of appropriate care.

Health insurance in Canada is administered by each of the provinces but legally guided by the federal government. It is required by law that any citizen have free access to basic health services which provides preventive care and treatments by primary care physicians and guarantees free access to hospital care, dental operations and some additional services.

Private health insurance is allowed, but only for services which the public health plans do not offer, like private rooms in hospitals and drug plans. It is also

allowed to buy private insurance for elective medical services such as laser vision correction surgery, cosmetic surgery, and similar procedures. An estimated 65% of Canadians have supplementary private health insurance, often paid by the employers.

The system is under controversial discussions by those demanding the re-adoption of the U.S. model of coverage and provision, which the Canadians had abolished in 1972. The opposing arguments are that this roll-back would increase inequalities in health coverage with only the upper-class being able to afford high-cost treatments.

Regardless of the political debate, Canada does have one of the globally highest life expectancies (about 80 years), attributed to the healthcare system while the U.S. system does not share these advantages.

France

The national system of health insurance was instituted in 1945, just after the end of World War II. The French model is regularly ranked as one of the best in international comparisons. It is seen as offering high quality of care and allows nearly total patients' freedom of choice based on the principles of equity, solidarity and universal access. In some perspectives, the system follows the Beveridge model of the UK while others see similarities with the Bismarck system. The coverage is constructed as a basic insurance ("régime général") covering 85% of the population and paid as a proportion of salaries but being added a 33% share by state. The system is centralized and state-run. While the out-patient providers are nearly free to settle, hospitals are strictly planned and regulated through global budgeting and a centralized resource allocation by using a particular French system of product classification for hospital services.

All citizens are obliged to pay a portion of their income to a health insurance fund, which is to cover medical expenses. Children and spouses of insured people are eligible for benefits as well. Each fund is free to manage its own budget, and is used to reimburse medical expenses at the rate it see fit according to a number of regulations.

Out-patients are served by privately settled doctors of any specialization, dentists, pharmacists and nurses.

Hospitals also offer out-patient services. These hospitals are mostly owned by public and non-for-profit entities (80%). Another 20% are licensed private

hospitals. Patients have the free-choice of doctors and providers. In general, the system follows fee-for-service rules and the insurance is reimbursing the patients' expenditures. A case-classification similar to the DRG has been used since early 1982 for hospital services. This mechanism is not installed for rewarding single cases but for allocating global budgets by prospective planning.

The system is highly regulated, except the out-patient doctor's offices with no accreditation policy. Especially hospitals are strongly regulated by planning and accreditation rules, and are managed respectively by contracts between the national health insurance and the providing party. Any contract has to be accepted by the Ministry of Health.

Health politics try to support an increase of the self-responsibility of providers and of the population. The intention is to improve healthcare pathways and prevention. It is anticipated that the currently ongoing reforms will increase the role of the state.

The government holds mostly two responsibilities:

1.It determines the rate at which medical expenses are to be negotiated (by negotiating prices for treatments with the manufacturers; this is based on the average price of sale observed in neighboring countries and by working together with a doctors board declaring the medical procedures seen beneficial for patients). This also means that a doctor is free to charge the fee he wishes for a consultation or an examination, but the social security system will only reimburse it at a pre-set rate).

2.The government supervises the health-insurance funds and the public hospital network.

A special regulation of the system is that the more ill a person falls, the less the person is obliged to co-pay healthcare. 85% of French people have complementary private health insurance.

Common characteristics of the system are:

• out-patients practice settlement with nearly no regulation and free choice of doctors

• services offered for out-patients are regulated by contracts negotiated between the regional national sick fund and doctors' associations but have to be accepted by the Ministry of Health

• hospitals, hospital investments and rehabilitation need planning and have to pass relevant approvals

• the regional agency for hospitals (Agence régionale de l'hospitalisation—ARH) is responsible for any planning and resource allocation

Regulation practice focuses on

• the increasing of deductibles and co-insurances to a remarkable extent over the years but not for the poor and some chronically sick and disabled people

• trying to focus policy on voluntary family doctor's systems ("médecin traitant") by giving some financial incentives, making it cover about 80% of the population

• the planning of hospitals using a sample of criteria such as specialization, number of beds, quality, access, efficiency, pathways and levels of provision

• the regular evaluation and re-accreditation of hospitals

• the budgeting (that is the responsibility of the parliament)

• guidelines for medical care which are to be implemented on a voluntary basis

• the "High Health Authority" (Haute Autorité de Santé); this is the supervising and accrediting authority

• focusing public health concerns by prioritizing prevention and disease management programs

• the development of a Regional Health Agency (Agence Régionale de Santé—ARS), which is responsible for managing any regulation objective in future

• the regulation policy regarding prescriptions by firmed prices, a positive drug list and substitution rules taken by pharmacists

Cost containment and guaranteeing access to healthcare in under-populated rural regions are seen as challenges of the future.

The internal controversy on future developments goes around the conflict between empowering state and population or fostering competition between entrepreneurs active in healthcare. The conflict is still unsolved.

Germany

The system is also called the "German model" or the "Bismarck model" and was established in 1883. According to law, the currently still existing about 150 social health insurance (SHI) funds have five comprehensive targets and are (with some exceptions) obliged to offer the same benefits. The SHI is

1. covering individuals' necessary healthcare independent from income and

payments into the fund, and non-working family members have the same coverage despite of not being obliged to pay premiums (the solidary approach)

2.providing prevention, treatments, rehabilitation including pharmaceuticals according to a drug list (the comprehensive approach)

3.performing as a non-for-profit corporation under public law (the self-administering approach)

4.rewarding providers for necessary, appropriate and efficient healthcare according to the scientifically accepted standards of medicine and complementary and alternative medicine (the non-cash benefit approach)

5.contracting with any of the licensed healthcare givers' organizations (the purchaser-provider-split approach)

The premiums are currently firmed to 15.5% of the income below a yearly defined limit of income. This premium is shared by the employees (8.2%, plus deductibles and co-payments) and the employers (7.3%). It includes a mandatory insurance for sick leave days' compensation. The deductibles are to pay for staying at hospital per day. The co-payments are to be paid for pharmaceuticals and utilities.

In the 1990s, government decided to abandon the tradition of a "fifty-fifty" premium sharing policy between employers and employees. And beginning in 2011 any increase in premiums has to be paid by employees exclusively. This is part of a policy reducing wages as wanted by German entrepreneurs in order to improve the international competitiveness and to raise profits for shareholders.

Currently, the German's SHI is still constructed by the following principles:

• It is mandatory for every citizen to have a health insurance. Family members without their own income are insured free of charge. People earning above a defined income limit, which is yearly readjusted, have the right to choose private insurance. People who has voted for private insurances has lost the right to go back to SHI. About 90% of the citizens are insured at one of the currently (but fast declining) about 150 SHI funds. The decline results from dramatic competition between the funds targeted towards implementing giant public health trusts according to the managed competition's philosophy.

• Reimbursements for out-patient services are regulated by paying capitated fees, which are negotiated between the SHI and the doctor's regional associations. These associations and their elected bodies distribute the prospec-

tively negotiated total amount of money among the contracted doctors by using a sophisticated methodology, which is considering the number and the intensity of care, the particular costs of different medical specialties and many more factors. Any of the hospital services, including children hospitals and psychiatry is reimbursed directly by the health insurance and by using the German Diagnosis Related Groups (DRG). Also drugs and medical supply for out-patients are directly paid by the funds. Services of rehabilitation are selectively contracted between providers and funds.

• Any of the social sick funds has to offer the same benefits with some few exceptions. These benefits are to cover prevention, diagnostics, emergencies and chronic treatments and care, out-and in-patient care, pharmaceuticals, home-nursing, rehabilitation, dentistry, the compensation for the loss of income due to illness if the employer is not responsible for paying for and many more.

• The SHI offer equal coverage for everybody insured independent of the total amount of payed premiums.

• State run agencies pay for the unemployed, migrants and prisoners etc. Illegal expatriates have no access to SHI benefits

• Pension funds pay half of the premiums for the pensioners who have the same benefits as any other person.

Any of these principles is under sharp controversy between opponents and supporters. The opponents are split into those voting for a managed competition but solidary arrangement model, while others prefer the way towards privatized insurances and less or even unregulated healthcare markets. Those groups vote for compensating for the social ineffectiveness of privatized insurance by extending tax-paid subsidies. And others again demand to continue the traditional Bismarck model for insurance but want to transform the organization of provision and utilization. One of the most controversial positions is to diminish any income-limit for mandatory SHI premiums for any citizen and by terminating private health insurances(except some co-insurances).

SHI has been taken a relatively constant proportion of the GDP of about 6 to 7% since 1974. The inflation adjusted per capita costs have been nearly stable for about 15 years at the average level of about 250 Euro per capita per month. Any increase of total expenditures is primarily dedicated to private insurances, copays, co-insurances and payments for wellness offers. While covering any person and offering a large scale of benefits, the system can be seen as one of the

most effective and efficient ones globally.

Health Insurance in the European Union

The EU has not developed concepts of unifying or narrowing health insurance systems until now. Health insurance is still mandated under national authority while the EU stands for the free flow of services, goods and trade within the member states. This leads to some problems because healthcare is also seen as an industry or business.

The only exceptions are some prevention regulated as follows

"*Everyone has the right of access to preventive healthcare and the right from medical treatment under the conditions of national law and practices. A high level of human health protection shall be ensured in the definition and implementation of all Union policies and activities.*"①

The EU is aware of healthcare's importance for all the political processes and supports research programs, such as the "Health Theme" under the EU Framework for Research 2007～2013 projected to research on providing decision makers with basics for "*informed policy decisions on health systems*" and on effective strategies for health promotion, prevention, diagnosis and therapy.

The necessity for equalizing the inequality among the states of the European Union is clearly expected and the improving mobility within a unified Europe will also affect health insurance for many different reasons. At least the following ones now already play an important role:

- visitors temporarily being abroad may fall ill
- long-term residents (working people or elder residents) may live abroad but having paid insurances somewhere else in the Union
- people living in border regions may (or have to) decide for utilizing cross-border services
- patients might be sent abroad for treatment or rehabilitation on their residential third-party-payers
- people may seek treatment (for example experimental therapies) or wellness abroad on their own initiative

Access, financing and the organization of the health services vary widely throughout the European Union member states, and the health problems will do

---

① Charter of the Fundamtntal Rights of the Europtan Union, 2000: 35.

for a longer time in future.

Summarizing roughly the systems leads to the followings:

• there are countries with mostly public insurance: Belgium, Bulgaria, Luxemburg, France, Austria, Romania, Slovenia, Czech, Cyprus

• there are countries with mixed public health insurance and tax paid health plans:Estonia, Greece, Italy, Lithuania, Poland, Slovakia, Spain, Hungary

• there are countries with primarily tax paid systems: United Kingdom, Ireland, Denmark, Latvia, Malta, Sweden, Finland, Portugal

• there are countries primarily based on SHI and rewarding costs by third-party-payer directly to the provider: Bulgaria, Denmark, Germany, Estonia, Greece, Lithuania, Spain, Ireland, Italy, Portugal, Finland, Latvia, Austria, Poland, Romania, Slovakia, Slovenia, Sweden, Czech, Hungary, Cyprus

• there are countries primarily based on fee-for-service: Belgium, France, Ireland, Luxemburg, Malta

• there are countries with coverage for all the public: Bulgaria, Denmark, Estonia, Ireland, Italy, Lithuania, Malta, the Netherlands, Portugal, Finland, Sweden, United Kingdom, Germany,Poland,Slovakia, Slovenia, Czech, Cyprus

• there are countries covering citizens selectively: Belgium, Greece, Spain, France, Luxemburg, Austria, Romania, Hungary

• there are countries under transition in their healthcare systems with currently unclear outcomes but primarily based on regulated private insurance such as the Netherlands

While writing this compendium, the EU parliament is expected to decide on a future giving its citizens the right of free choice of doctors and hospitals within Europe. The new regulation will allow cross-border treatments on a fee-for-service basis to prices equivalent to the home-countries prices, but including a voucher system which involves the national third-party-payers.

India

India has a universal healthcare system constituted by the Parliament of India in 1983. The system is run by India's states and territories. Since then India has developed a government sector and a private sector for healthcare, but it is still short of an adequate insurance system. Charity plays an important role.

While the government sector is said to be remarkably underfinanced and under-equipped with low, actually with dramatically low quality at public hospitals,

privately managed doctors' offices and clinics offer services to those able to pay for services at standards as internationally accepted. The critical assessment for the public sector might be true especially for the rural territories and most of the over-populated suburbs but also with remarkable exceptions. But there also seems to be a growing awareness of improving services in the average of the state-run hospitals. These hospitals provide healthcare mostly for the under middle class, the underclass and the very poor and the only chance for them is to get some tax-paid and subsidized medical help.

There is no sufficiently established healthcare insurance developing options to provide healthcare accessible at least for under middle class and middle class people and by over-coming the traditional out of pocket payments on unregulated free markets. But health insurance is expected to expand very fast within the next decade but it is running behind the growing population and the development of indispensable regulatory policies.

A special focus is given to primary healthcare and community medicine if available at city hospitals, district hospitals and rural primary healthcare centers. Here treatments of common diseases are free of charge and there is the provision of basics like prevention, pregnancy care and child care. Others in need of secondary or tertiary care become referred to respective centers if available. Especially healthcare for the rural population may be seen as a catastrophe with uncounted numbers of people who die because of lacking access to adequate healthcare. There is an uncounted number of people suffering from severe but avoidable disabilities if prevention and healthcare would be a matter of concern. But the improvement of healthcare is not the true challenge. It never can compensate for the health results of hazardous working and other living conditions, the tremendous social inequality and the widely unregulated use and even misuse of work forces, including children.

While it is difficult and sometimes impossible to get necessary help for sick citizens, India has a fast expanding healthcare industry focusing on medical tourism and on attracting national and international pharmaceutical industries to take India's population as a source for testing new drugs. The medical care sector is supposed to be one of the fastest growing economic sectors experiencing a growth of an estimated of more than 10% a year. Traditional medical concepts like Ayurveda and Unani are very relevant and common throughout the country and attract also foreigners from all over the world.

Experts see a huge disharmony in economic growth and social progress, access to healthcare included. This can turn out to be a substantial problem for social peace-keeping and successful economic development.

The Netherlands

The Netherlands introduced a new system in 2006. The new system is in favor of Managed Competition and has primarily established competition among providers, not among insurances. Insurances are obliged to offer at least one benefit plan that meets a minimum standard level of coverage detailed by government; but insurers are allowed to offer additional benefits beyond the basic standard. All of the health insurance providers are private companies.

The member's fees are pooled and are distributed to each of the funds according to the number of members and after passing through procedures of risk equalization. The total pool is run by a sponsor who collects salary-based contributions from employers. This accounts for about 50% of all healthcare funding. Another 5% of funding comes from the government and from tax and is to cover people and children who cannot afford healthcare. The remaining 45% of healthcare funding comes from the insured people who pay the same per capita premium independent from income.

The avoidance of risk selection is a main objective and has made to install some principal regulations to prevent from incentives of "cherry picking".

Insurance companies are not allowed to contract with providers by prospectively paid capitations; neither co-payments nor deductibles are allowed. Insurance companies are also not allowed to deny coverage to any person applying for a contract or to charge anything other than the nationally set and published standard premiums. Every person contracted for insurance has to pay the same price as everyone else buying the same plan and every person gets at least the minimum level of coverage.

One of the early lessons of the transformed system is that about 20% of the insured change the insurer within a year because of dissatisfaction. That makes it a challenge to balance the risk pool and to avoid competition between insurances. At the moment, there is no clear reporting on the effects of the number of insurers and the social characteristics of the persons taking the choice of change, and if the changing individuals are randomly or selectively self-selecting in the decision-making on to which company they want to migrate. There is, at the mo-

ment, also no substantial experience available as to how the free-choice strikes the risk equalization pool, what the truly important question is due to the experience that such pools are not able to equalize all of the occurring risks. The consequences could be remaining interests in "hidden" risk selection strategies or the bankruptcy of an insurance company.

It will be interesting to learn if the reduced role of a regulating legislation can truly guarantee the accessibility and quality of the system when the players increasingly move forward, behaving as market-driven for-profit companies.

While the system goes back to discussions in the US where the system's implementation failed, it is now discussed as a model for the US in return[①].

Singapore

see Medical Savings Account

Switzerland

Private health insurance is mandatory for everybody living in Switzerland but on an individual basis and is paid as a percentage of wages, plus high deductibles also called franchise, up to a maximum of about 2500 CHF (deductibles plus out-of-pocket payments) per capita and per year. Any insured person is the only premium paying party. Depending on residence premiums for basic health, insurances vary widely up to 100% with an estimated of 260 CHF in minimum and 500 CHF in maximum per month (basic premium per capita in 2012). Any fund is obliged to offer a basic insurance meeting legal requirements and has to accept any applicant. To avoid risk selection, there is a regional risk equalization pool. Insurers offer any kind of co-insurances. The basic insurance covers out-patient healthcare and medical treatments and inpatient care within the country if the providers are licensed.

Switzerland has been pioneering managed competition since 1990. Due to the dramatically spiraling costs for this system, cost-containment is the major topic

---

① de Ve W, Schut F. Universal mandatory health insurance with managed competition in the Netherlands: a model for the USA? http://www.itinerainstitute.org/upl/1/default/doc/forum%20HA%202008%20Universal%20mandatory%20HI%20in%20the%20Netherlands%20%20draft%2024jan08.pdf, 2010-09-17; Enthoven A, van de ven W P M M. Going Dutch—managed-competition health insurance in the Netherlands. New England Journal of Medicine, 2007, 357(24): 2421～2423.

of the country's health policy. The discussion focuses either on increasing the co-payments or limiting the accreditation of new providers. The well-known Princeton health economist U. Reinhardt has given the following picture:

"*To compete in the market for compulsory health insurance, a Swiss health insurer must be registered with the Swiss Federal Office of Public Health, which regulates health insurance under the* 1994 *statute. The insurers were not allowed to earn profits from the mandated benefit package, although they have always been able to profit from the sale of actuarially priced supplementary benefits (mainly superior amenities).*

*Regulations require "a 25-year-old and an 80-year-old individual pay a given insurer the same premium for the same type of policy. Overall, then, the Swiss health system is a variant of the highly government-regulated social insurance systems of Europe that rely on ostensibly private, nonprofit health insurers that also are subject to uniform fee schedules and myriad government regulations."*①

While some hold the opinion that Switzerland has been pioneering managed care since 1990, others like Reinhardt make the point that the system would be primarily a kind of regulated or managed competition but not a for-profit-managed care. In any case, the model of Switzerland is highly regulated like most of the European systems and the system of the U.S. are, but it is definitely one of the most costly ones for the insured. That is why cost-containment is on top of the health political agenda and makes the regional governments and health policy authorities intervene into that privately ruled system.

Healthcare is regularly offered by Health Maintenance Organization or by a family doctor's network, with a public preference for the latter. Both these models are directing care provision through

- care management
- contracting with other providers selectively as sub-contractors
- gate-keeping
- quality management
- strict cost-containment

---

① Reinhardt U. The Swiss health system: regulated competition without managed care. Journal of American Medical Association, 2004, 292(10): 1227～1231.

Taiwan

Taiwan has a compulsory National Health Insurance (NHI) for any citizen and the legal expatriate residents if staying longer than six months. The system was instituted in 1995 and provides universal coverage and easy access to appropriate medical care. The system promises equal access to healthcare for all citizens, and the population coverage has reached nearly 100%. The benefits are outpatient and hospital care, traditional chinese medicine, care during pregnancy and childbirth, medication, preventive services, rehabilitation and homecare, and the free choice of doctors and hospitals are also allowed.

Premiums for insurance have to be paid by people (40%), employers (33%) and the government (27%). Premiums are adjusted to income and are to be paid directly to the NHI. It is established as a single-payer system. The system takes additional deductibles, 20% for prescriptions but up to a limit of MYM 6.50, about MYM 7 for outpatient care, and MYM 2 for dental care. Individuals suffering from some specified diseases, or in the case of childbirth, or of preventive services are free of charge. Also the poor, children and retirees are excluded from paying deductibles.

Most healthcare providers operate as entrepreneurs in a competitive market. To cover the costs, NHI changed the payment system from fee-for-service to a global budgeting in the form of a prospective payment system in 2002.

In this system, a central Department of Health contracts with healthcare providers on a single pay schedule. The single-payer-system makes overhead costs of an estimated of 2% of the total budget, which is about 6% of the GDP. Any insured citizen owns a record card (Smart Card) with the patient's data and prescriptions. The card immediately checks the bill against the National Insurance Fund.

The system is constructed in a way encouraging doctors to increase referrals to more costly medical specialties. The global budgets are reported to initiate remarkable over-utilization and risks selection which is discussed as the system's most striking failure. The country, as many others nowadays do, faces a slowdown in budgets and average income, but spiraling national debts. This raises discussion on cost-containment mechanisms and on re-adjusting the distribution of costs.

United Kingdom

The National Health Service (NHS) is a tax funded healthcare system and provides coverage to everyone normally reside in the UK. Strictly speaking, it is not an insurance system because (a) there are no premiums collected, (b) costs are not charged on the patient's level and (c) costs are not pre-paid or rewarded from a pool. The costs of running the NHS are taken directly from general taxation. The NHS provides the majority of healthcare in the UK, including primary care, in-patient care, long-term healthcare and dentistry.

Private healthcare is in parallel with the NHS and is covered by private insurance, but it is used by less than 8% of the population, and is generally a top-up to NHS services.

Because the system has developed from William Henry Beveridge (1879～1963), it is also called the "Beveridge System". It is seen as one of the predominating and internationally fundamentally accepted types of systems competing against the Bismarck system and the market system.

The British NHS is basically designed by

- an out-patient system with privately licensed general practitioners (GP), dentists, pharmacists and opticians and
- the state owned hospitals plus a small proportion of private hospitals for selected indications but preferably elective operations.

The GP is the gatekeeper to the hospitals with their specialized medical staff, which is also in charge of out-patient demands. The NHS together with the government holds a pact against "medical consumerism". This pact is seen fundamental for containing the costs. The GP is an entrepreneur but is subsidized if paying wages for staff and if investing in hardware. The GP gets prospectively capitated global budgets and extra revenues for certain conditions like diabetes care by the state.

Hospitals employ a wide range of specialists. A patient who has to see the specialists needs a referral by the GP. The idea behind is a "competition-free cost containment mechanism".

The NHS is additionally regulated by

- state-controlled prices for drugs
- a positive prescription list
- nationally negotiated salary

• a centralized regulation of investments

The system is additionally regulated by patients' demands.

Reforms tried at introducing rules for internal markets through introducing elements of managed competition in 1991. It was assumed being fundamental to introducing a "fund-holding system" and to making the GP the fund-holder for all the expenditures of his patients, hospital charging included. Most of the new mechanisms of a managed competition failed its goals and became revised in 1997.

In 2000, a new reform has been implemented, intending to increase spendings on the NHS from about six to nine per cent of GDP for

• more and better-paid staff using new ways of working

• investment in hospitals, primary care centers and

• implementing IT systems.

The increase in spending was coupled with plans to create a patient-centered service, a transformation that would require huge changes in culture, organization and practice. One new policy was the devolution of government's power, initially in Scotland and Wales and more recently in Northern Ireland.

Three broad strategies were pursued to a greater or lesser extent in all devolved services.

• The first focused on improving operational transparency through developing better measurements of costs and outcomes, through reviewing performance, with an emphasis on quality as well as efficiency, and through sharing more information with the public.

• The second involved restructuring NHS organizations and management systems so as to make services more responsive to patients' needs.

• The third strategy stemmed from frustration at the slow pace of change and a determination not to let productivity fall as the NHS took on more staff through introducing patient choice and some market mechanisms.

see Beveridge Model

United States

The U.S. system is one of the most interesting, but controversial systems on globe. Despite of many trials to develop a national health insurance system, any of the numberless attempts had been failed since 1909. But in March 23, 2010, U.S. President Obama signed the Affordable Healthcare Act and in 2012 the Supreme Court rendered a final decision to uphold the health care law.

After more than 100 years of dramatic conflicts, Obama succeeded in establishing the legal frame for mandatory health insurance for any US citizen against dramatic counteractions of nearly half of the U.S. citizens. The law does not establish a NHS or a SHI or some other new types of health insurance. But the law makes it an obligation for U.S. citizens

- to have health insurance
- to become accepted as an insurant by any health insurance company and the law
- to provide incentives to develop some new kinds of insurances on a non-profit basis.

The new Affordable Healthcare Act will be set into action step by step up to 2017 at latest.

The U.S. has also developed some insurance systems since the late 1920s and has established additionally tax founded health plans for the poor, the retirees, the children, the military (veterans) and the native Americans since 1965. All of these developments are fundamentally helpful to illuminate and to exemplify the challenge of establishing health insurance.

In the U.S., the first types of health insurance were pre-paid services offered by doctors. Some later insurance were prepaid non-for-profit offers by a hospital in Dallas, Texas. By far, the raise of health insurance roots in prepaid offers of doctors. In the 1930s also for-profit health insurance developed. That was for the simple reason that insurance companies realized the tremendous success of these non-profit offers. But in order to get access to that market, the only way was to compete by offering lower premiums. Since then health insurance development has always been based on risk selection methodologies and on establishing methods to avoid payments.

But both non-profit and for-profit insurance was always voluntary and based on private contracts between individually insured people, groups of individuals or employers and insurance companies but leaving the poor with no insurance coverage.

Today, individuals with income below the Federal Poverty Level (FPL) have access to the Medicaid Program covering certain low income families (adults and children).

Medicaid was founded in 1965 through Title XIX of the Social Security Act and is the U.S. health plan for people eligible for the program's rules as defined

by the different states of the U.S. It can only cover citizens below the Federal Poverty Level (FPL) but under additional rules particularly qualifying those citizens according to the federal state's own regulations. In most of the federal states, it not only covers expatriates, both adults and their children, but also disabled people. While the FPL is the U.S. norm for access to Medicaid, it is in the federal state's decision to interpret this norm. Some may decide to go below while other federal states go beyond the FPL, but they are also free to decide these norms differently for different groups of individuals. The health plan is funded both by the U.S. government and the federal states which are free to join the program.

The praxis of regulation differs among the federal states. Medicaid pays low-cost coverage for outpatient and inpatient for acute and long-term medical care, dental care, and most of what is defined as basic care. Periodic Screening, diagnostic and treatment are mandatory for the Medicaid program if dedicated to children.

Each federal state administers its own Medicaid program while the federal Centers for Medicare and Medicaid services (CMS) determine and supervise the plans' requirements for service delivery, quality, funding, and standards of eligibility. In some states Medicaid is run by subcontracted private health insurance companies. But most of the states pay providers, typically managed care organizations, directly. Children from family not qualifying for Medicaid may have access to the State Children Health Insurance Program (CHIP).

People are mandatorily covered by the tax-funded Medicare Program if older than 65. Medicare has four outlays of different benefit plans and these have varying amounts of compulsory co-insurances, co-payments and deductibles. Founded in 1965 Medicare is the U.S. health plan that covers hospital care for people aged older than 65. Any American will have access if having the right to get a pension because of having paid Social Security Tax. The Medicare health insurance program is designed for:

- people aged 65 and older
- people with pre-defined disabilities
- people of all ages with end-stage renal disease (permanent kidney failure requiring dialysis or kidney transplant)

Medicare is alternatively available at four parts:

Part A

is mandatory and pays Critical Access Hospitals, Skilled Nursing Facilities, Hospice Care, and Home Healthcare without medications but with high co-payments.

Part B

covers in addition to the Part A's benefit plan out-patient services and some defensive medicine; it can (regularly) exclusively be taken at Managed Care HMOs but needs a voluntarily paid co-insurance. Co-payments rise up to 50% of the additional fees.

Part C

is also called "Medicare plus Choice" and offers the coverage of services according to fee-for-service if wanted or if the insurant chooses Medicare Managed Care. The condition is a higher co-payment.

Part D

refers to an extension of Medicare enacted in 2006. The program is to subsidize the costs of prescription drugs for Medicare beneficiaries in the U.S. Those can obtain the Medicare drug plan by contracting privately either a Prescription Drug Plan for drug coverage exclusively or by joining a Medicare Advantage Plan that covers both medical services and prescription drugs. The latter type of plan is actually part of Medicare Part C and has several other differences relative to original Medicare. But not all drugs will be covered under the same conditions. The rule is established to encourage the plan's members to prefer cheaper pharmaceuticals to others.

People between the age of 21 and 65 are mostly privately insured, either by themselves or by employers or by both. The insurance companies are a wide range of competing non-for-profit and for-profit health plans, today mostly established as one of the many different Managed Care Organizations.

In spite of their declining proportion, traditional Indemnity Insurances are also active in the insurance market. Premiums for the insurances are paid privately, and/or by employers fully or partly. Depending on plans for managed care,

basic coverage for a family might monthly cost between about $150 and $400 for basic coverage plus deductibles between $3.000 and $10.000 and co-insurance up to 20% and more. If so contracted, it can include an out-of-pocket limit for co-payments of about $10.000 and a lifetime maximum of 2 million to $5 million. But that will be one of the issues of reforms implemented under the Obama Administration.

In addition, there are federal run administrations covering the medical services for the veterans of the military forces and the Indian Health Service. It is estimated a number of 40 million up to 50 million of individuals aged between 21 and 65 are with no coverage at all and another up to 40million to 50 million are remarkably under-insured. Both groups mostly belong to the middle-middle class and to the under middle class, while underclass people are often covered by the Medicaid legislation. That means, lacking health insurance is a problem of middle class and under middle class people pre-dominantly.

In spite of its low social effectiveness, the U.S. system is the globally most costly one and with an inadequate efficiency on a macro level. But at the same time, it is probably globally most profitable because of having developed a tremendous number of cost-containment procedures characterizing today's Managed Care Industry. Especially this has made the U.S. system most interesting for any of the global healthcare industries as a model for studying how one can make remarkable gains through market competition in healthcare.

A study on the quality of the provided healthcare has shown some globally remarkable results. The "United Healthcare Report on Quality" within the U.S. care providers has made the authors draw the following conclusions[①]:

1. Access, quality, costs and efficiency of healthcare vary two-to threefold or greater across the U.S. Therefore, patients' healthcare depends on residents to a very high extent.

2. Better access to healthcare leads to better average quality in outcomes and makes access most important for outcome parameters and quality. Any mechanism to lower access (for example by co-payments and deductibles) shows results adverse to outcomes' standards.

3. The larger the number of the uninsured and the people depending on the

---

① Martin A B, Whittle L, Heffler S, et al. Health spending by state and residence 1991—2004. Health Affairs, 2007, 26(6): 652～663.

federal or state programs is the higher is the score for necessary preventive and chronic illness care. This can result from limited access to other forms of necessary care as well as from simple medicine and from defensive medicine.

4. Higher average quality is not associated with higher spending on healthcare. That makes quality not an issue of resources but of the system's functioning and of social selection.

To give a brief understanding of what the US health services system is like, it should be helpful to refer very briefly to its history.

Healthcare has traditionally always been seen as a private matter not a public or social responsibility in the U.S.. Consequently, any of the trials to build up a comprehensive system of coverage for all the citizens has been failed since first trials under the administration of Theodore Roosevelt (1901～1909). It clearly was a disadvantage in developing the healthcare industries. The beginning of change dates to the late 1920s and is accompanied with the occurrence of the first third-party-payers, which were non-for-profit organisations like Blue Cross and Blue Shield. These organisations offered health plans with premiums calculated at the average risk level of different industrial branches. This was because employers realized the advantage of providing health insurances to their employees as an extra benefit. This development gained importance when government tried to get along with the tremendous economic crises in the late 1920s, but especially after 1935 (the New Deal by the Roosevelt administration). It became common that employees got the benefit of a health insurance as an employer's extra benefit.

But any of the numberless trials to establish universal health insurance failed even if supported by very conservative administrations. To offer the benefit of a mandatory health insurance has always been accused of being a communistic trial only undertaken to undermine the very fundamentals of freedom in the U.S.A. This argument became especially forced by the American Medical Association which was spending extraordinary sums of dollars to pay for propaganda and lobbing against public healthcare coverage. (Starr, 1984)

In 1965, the U.S. government compromised on establishing tax paid health services for the poor and for the elder people. But the question of how to transfer the money to providers and how to control billing and expenses occurred. For the reason that it is constitutionally seen problematic to have businesses other than privately offered ones in the U.S., there was the HMO act (established in 1974

by the Nixon administration) to foster non-for-profit provider organizations for all of those utilizing services on a tax paid basis. Additionally any citizen was given the right to be covered in case of an emergency.

Meanwhile, most of the health services are provided by Managed Care Organizations both on a non-for-profit or a for-profit basis. In the United States, ownership of the healthcare system is mainly in private hands (both for-profit and non-for-profit), but federal, state, county, and city governments also own facilities. The non-for-profit hospitals share a total of 70% of all the hospitals. This proportion is, for example, higher than it is in Germany.

Hospitals also provide selected outpatient care at emergency facilities and at specialized clinics belonging to hospitals but most are only staffed by nurse practitioners using external doctors' skills pro-actively but after assessing necessity.

The health services in the U.S. take a proportion of about 17% of GDP which indicates the importance of the healthcare industry which is the largest branch of the nation's economy. In 2010 there was a per capita spending of about $10.000. But at the time this system is evaluated for being rather ineffective①.

According to category, 31% of this budget is to cover hospital revenues and 21% for physicians service both for in-and out-patients services. Another 10% is spent for pharmaceuticals, 8% for nursing homes. And another 7% is calculated for administrative costs by state run programs additionally to the proportion already included in all the other categories. A final proportion of 23% goes to diagnostic services and medical devices. A percentage of 25 to 30% from the total is estimated for profits. According to estimates, the total of the spending has been about $3 trillion in 2010.

Government programs cover directly 28% of the population (83 million), including the elder, the disabled, the children, the veterans, the Indian Americans and a high proportion of the poor. Federal law mandates free access to emergency facilities regardless of ability to pay if proven as U.S. citizen. Public spending, namely tax paid (also called socialized) healthcare accounts for an estimated of about 55% of all U.S. healthcare spending (In comparison the same proportion is about 8% in Germany).

Health insurance costs are climbing up faster than wages are. The costs for

---

① Steven H, Woolf S H, Aron L. U.S. health in international perspective: shorter lives, poorer health. Washington: National Academics Press, 2013.

health insurance and out of pocket co-payments are overloading many U.S. families. Individual charging for healthcare is the main cause of private bankruptcy according to the U.S. legislation(chapter 7).

Increased spending for defensive medicine and preventive testing is one of the major causes for increasing costs and not reducing them as advertised by providers.

Around 65% of working citizens have health insurance of some form. This insurance is fully paid or (as it regularly is) partly paid through their employer or through the parent's payments for children (60%). Only 10% are purchased individually and about 30% are covered by government programs. Here the co-payments, deductibles and co-insurances are not taken into account.

Expenses for dental and vision care are usually uncovered but individuals are free to take extra insurance. Prescription drugs are not or only limitedly included in coverage of any kind.

Individuals covered by private insurance or state-run health plans are limited in the choice of doctors and healthcare which only accept the particular type of medical insurance they are contracted by. Visits to facilities outside the contracted managed care program are usually either not covering benefits if the patient does not bear extra costs. Hospitals negotiate with insurance programs for reimbursement rates; while rates for state-run programs are set by law.

The bill paid to a doctor for a service rendered by an insured patient is generally discounted and less than the sum to be paid by an uninsured patient "out of pocket". In order to draw this discount, the insurance company makes the doctor part of their "network", which means more patients are eligible for lower-cost treatment there, because the number counts more than the price does.

Decreasing payment rates have generated complaints from the providers' side, and some patients with Medicaid and Medicare health plans are reported to have difficulties in finding providers for certain types of medical services.

All of U.S. healthcare has changed by Managed Care and the raise of the Managed Care Industry tremendously. Despite the system is spending that much money on health, the effectiveness and the macro-economic efficiency is assessed as being rather poor. The U.S. healthcare industry is seen as the most regulated industry in the U.S. both on a micro-and on a macro-level. It is assumed that the macro-regulation-costs of about MYM 340 billion a year would exceed the benefits for regulating party (mostly the third-party-payers) by 100%. On the

contrary, the micro-economic efficiency is mostly excellent due to its working mechanisms and is the reason for remarkable profits. This has made managed care an attractive model for many players globally.

The U.S. system has huge administrative overhead costs, far greater than in public single-payer systems. Some analysts estimate that some provider organizations take up to 31% or in single cases even more of the entire U.S. healthcare spending, and more than MYM3.000 per person per year are taken by all of the administrative costs on average (The equivalent is just about 150 Euros per capita in the Social Health Insurance in Germany).

The arguments around the system differ widely. The one take the argument that the lack of effectiveness, efficiency and average quality would be due to its market driven ideology. Others assume these characteristics would be due to the substantial lack of market drive and due to the existence of Medicaid, Medicare and the State Children Health Insurance Program (SCHIP). Consequently one group demands less, the other more regulation on the healthcare markets.

The system's problems are obviously not due to lacks in finances. It relies on much more samples of ideological contractions, as expressed by former Senator Kennedy:

"*Healthcare is not just another commodity. It is not a gift to be rationed based on the ability to pay. It is time to make universal health insurance a national priority, so that the basic right to healthcare can finally become a reality for every American.*"①

In 2012, the Obama administration finally succeeded in implementing the legislation to make access to healthcare coverage a right (or an obligation) for any U.S. citizen. This will change healthcare and healthcare coverage in the U.S.②.

This compendium cannot fully describe the content and the regulations of the Affordable Healthcare Act and the accompanying Bills. But the authors assume it beneficial for readers to give a brief overview of that Act, containing about 3000 pages.

The Law contains altogether 10 titles:

---

① Kennedy S. http://www.pnhp.org/news/…/national_health_insu.php,2009-09-14.

② http://www.whitehouse.gov/blog/2010/03/23/whats-health-care-bill,2012-12-21;http://www.opencongress.org/articles/view/1738-Summary-of-the-HCR-Reconiliation-Bill,2012-12-22.

- Title I. Quality, Affordable Health Care for All Americans
- Title II. The Role of Public Programs
- Title III. Improving the Quality and Efficiency of Health Care
- Title IV. Prevention of Chronic Disease and Improving Public Health
- Title V. Health Care Workforce
- Title VI. Transparency and Program Integrity
- Title VII. Improving Access to Innovative Medical Therapies
- Title VIII. Community Living Assistance Services and Supports Act (CLASS Act)
- Title IX. Revenue Provisions
- Title X. Reauthorization of the Indian Health Care Improvement Act

The Law's basic philosophy is to offer choice for consumers and to provide ways to hold insurance companies accountable for citizens. That means, the law promises to overcome the supposed contradiction between market rules (choice) and social ethics. The key points of the law are (very briefly):

1. All insurances and group health plans must use the same standard forms to enable people to compare health plans.

2. The U.S. states have to give assistance in order to help people to find affordable health insurance or resolve problems with a health plan, such as when the insurer denies a claim or refuses to pay for needed treatment.

3. The insurant may be eligible for some preventive services at no additional cost if the plan is created after March 23, 2010. Depending on age, the insurant may have access to preventive testings such as blood pressure, diabetes, and cholesterol tests, cancer screenings, including mammograms and colonoscopies, counselling on topics like quitting smoking, losing weight, eating healthfully, treating depression, and reducing alcohol use, regular well-baby and well-child visits, from birth to age 21, vaccinations against measles, polio, or meningitis, counselling, screening, and vaccines to ensure healthy pregnancies, flu and pneumonia shots.

4. The law implements a patients' bill of rights. This contains the following rights:

- Coverage to Americans with Pre-existing Conditions
- Choice of Doctors inside the plan's network
- Young Adults are covered up to age 26 if covered by the parents' health plan.

• Lifetime Limits on Coverage are ended up

• Pre-Existing Condition Exclusions for Children if younger than 19 years old is no longer allowed.

• Ends Arbitrary Withdrawals of Insurance Coverage in case of honest mistake of an the insurant

• Insurance companies must now publicly justify any unreasonable rate hike

• Premiums must be spent primarily on healthcare.

• Annual limits on the health benefits will be phased out by 2014

• The insurant can seek emergency care at a hospital outside his/her health plan's network.

5. Under the Affordable Care Act, health plans cannot limit or deny benefits or deny coverage for a child younger than age 19 because the child has a "pre-existing condition".

6. The Law helps preserve the choice of doctors by guaranteeing that the insurant can choose the primary care doctor or pediatrician they want from their health plan's provider network.

7. The Law stops from retroactively canceling the coverage solely because the insurant made an honest mistake on the insurance application. Before the new law, if the insurance company found that the insurant had made a mistake on the insurance application, the company might declare the policy invalid from the day it began. The insurance company might also ask the insurant to pay back any money already spent for medical care.

8. The Pre-Existing Condition Insurance Plan makes health coverage available to people if they are U.S. citizens or reside here legally, and if they have been denied health insurance because of a pre-existing condition, and have been uninsured for at least six months. If the plan covers children, it is now possible to add children on the health insurance policy until they turn 26 years old, Starting in 2014, exchanges will allow individuals and small businesses to compare health plans, get answers to questions, find out if they are eligible for tax credits for private insurance or health programs like the Children's Health Insurance Program (CHIP), and enroll in a health plan that meets their needs.

9. The Affordable Care Act creates a new type of non-profit health insurer, called a Consumer Operated and Oriented Plan (CO-OP). These insurers are run by their customers. CO-OPs are meant to offer consumer-friendly, affordable health insurance options to individuals and small businesses.

10. The Affordable Care Act requires insurance companies to spend premium dollars primarily on health care. It does this by enforcing a policy called the "80-20 rule" to hold insurance companies accountable.

11. The Affordable Care Act prohibits health plans from putting a lifetime dollar limit on most benefits. The law also restricts and phases out the annual dollar limits a health plan can be placed on and does away with these limits entirely in 2014.

12. As of January 1, 2011, the costs of over-the-counter medications will be reimbursed under a Flexible Spending Account (FSA), Health Savings Account (HSA), or Health Reimbursement Account (HRA) only if the medications are purchased with a doctor's prescription.

13. The Affordable Care Act creates a Rate Review program in the citizens' state to help protect individuals and small businesses from unreasonable health insurance rate increases. Health insurers must justify any rate increase of 10% or more before the increase takes effect.

14. If citizens are older than 65 years old and have Original Medicare (Part A & B), eligible persons may qualify for a yearly wellness visit and preventive services.

15. If citizens are older than 65 years old under the Law, the life of the Medicare Trust Fund will be extended to at least 2024 as a result of reducing waste, fraud, and abuse, and slowing cost growth in Medicare. This is to provide with future cost savings on premiums and co-insurance. The government is taking action to reduce payment errors, waste, fraud, and abuse in Medicare. The President has made a commitment to reduce Medicare fraud by 50% by 2012. The health care law makes an 10-year $350 million investment to prevent, detect, and fight fraud in Medicare, Medicaid, and the Children's Health Insurance Program. The coordination of care between doctors will improve so that citizens will be less likely to experience preventable and harmful re-admissions to the hospital for the same condition.

16. The Affordable Care Act helps small businesses and small tax-exempt organizations afford the cost of covering their employees. Rising health care costs have made it difficult for employers to provide quality, affordable health insurance for workers and retirees while also remaining competitive in the global marketplace. The percentage of large firms providing workers with retiree health coverage has dropped from 66 percent in 1988 to 29 percent in 2009. Premiums

for older Americans are over four times more expensive than they are for young adults and the deductible that the insurant pays is almost four times that for a typical employer-sponsored insurance plan.

see Managed Care

see Managed Care Organization

see Managed Care Industry

see Medicare

see Medicaid

Indemnity Health Insurance Plan (IDY)

This is a particular but traditional type of for profit health insurance. An indemnity insurance contract usually defines the maximum amounts which will be paid for covered services. The insurance policy leaves it to the insurant's decision to choose his healthcare provider. Most of these plans require deductibles and co-payments. Those providers are reimbursed by fee-for-service.

The so-called Medical Underwriting is the IDYs policy to select applicants for an insurance product by questioning them for pre-existing health conditions and earlier treatments. Depending on answers, the insurance company makes its decision to accept the applicant or not or with some particular conditions. The applicants have to answer these questions completely and accurately or will partially or totally lose coverage. Some insurance companies will additionally demand a doctor's expertise or any of the applicant's earlier medical records. If the insurant does not comply with these rules they might be demanded to repay earlier treatments.

IDY will often also offer an Out-of-Pocket Maximum. This is the firmed maximum payment an insured individual or family will be self-responsible for and often defines deductibles and/or co-payments an individual has to pay. Such maximums are typically defined for given time-periods.

With the raise of the Managed Care markets, IDY has lost its market share.

This is presumably the reason why some indemnity health insurance plans now experiment and incorporate some of the managed care techniques such as pre-certification for non-emergency hospital admissions and utilization reviews. These types of IDY are also described as "managed indemnity" plans.

see Fee for Service.

Pre-Existing Conditions

The term is used to classify a medical condition an individual has earlier developed than the health insurance product was contracted.

These statements distinguish between known and unknown conditions but each with remarkable consequences for plans' benefits and premiums. It usually results in the limitation of the contract defining the coverage. Some policies exclude coverage of such conditions and the exclusion can continue for a specific period of time or permanently. Other policies may offer the inclusion of a certain pre-existing condition but for an additional and mostly very expensive price.

Individuals are regularly obliged to inform the insurance company correctly. Insurance companies are in most the countries not allowed to demand physical examinations but are mostly allowed to ask the clients' doctors for expertise. The legal rights of the clients and the insurance companies are hard to be balanced and the advantages are mostly left to the insurer.

It is necessary to understand that it depends on the insurance plan's particular design to define what a pre-existing condition is. This does not depend on medical or biological considerations. The insurance companies try to hold a position that any deviance from what the insurance defines as good health might be a pre-existing condition.

These so-called pre-existing conditions, if not regulated exactly, leave it to the insurance policy to define what pre-existing means in terms of contract. This can be limited to any change in health under the insurance contract that has to be reported regularly, but can also mean any condition which is of potential influence on the occurrence of disease, but also any behavior that may influence the patients' decision to go and see the doctors. Under current developments in genetic research, the insurers' intention might be to define "pre" as anything earlier than the day of birth.

That makes some legislative bodies develop legal rules which forbid such practices of investigating for pre-existing conditions other than using questionnaires as well as distinguishing between a "lie" and an "honest mistake". The purpose is to avoid risk selection and to demand universal coverage for any citizen independent if the insurance company is a public non-for-profit organization or a private insurance company.

Public-Private-Partnership (PPP)

This is a concept or a political strategy to mobilize resources and private capital for public targets. There is no single or ultimate or compromised definition of what PPP is in detail. The meaning only depends on the agreements of the partners, their legal construction and final goals. It can exclusively or additionally include any of

- financing
- know-how exchange and delivery
- personal exchange
- management and planning skills and capacities
- the facility's operation

It might be a strategy to apply to private interests in public sectors or a strategy to privatize public matters entirely or partly.

Under the rules of market neo-liberalism and the related strategies of deregulating against public interests, it is also a way of transforming the traditional state run responsibilities into the free markets' rules, as well as privatizing public property. That is why PPP can be so important for making public health services a profitable business.

PPP is of growing importance for facilitating health services especially used in emerging countries and therefore it is one of the major trends around international healthcare management.

Nowadays, a special and seemingly preferred kind of PPP in facilitating healthcare institutions is the so-called BOT, which means Build-Operate-Transfer strategy. The investment will be transferred after the successful operating has been proven for the number of contracted years. BOT clearly reduces the risks for the contract giving party but adds the risks of the operating partner. This risk becomes compensated by higher prices in return. This way, PPP is mostly followed by remarkably increasing costs for the users.

Joint ventures are another type of PPP. They are a type of partial structural integration of two or more joining partners and common in developing healthcare organizations and facilities to a growing extent in many countries. One or more organizations put their resources together in order to develop a compromised goal, mostly by sharing investments and financial risks. Such kinds of joint ven-

tures play a growing role in international health provider activities, for example via some kind of public-private-partnership models.

Joint funding is one of the many mechanisms in private-public partnerships. This is the practice of funding projects and investments jointly and is very common in funding healthcare facilities.

The term is not specifying details, which may vary widely. In any case it is fundamental not only to justify the joint funding. It is much more essential to contract further responsibilities, risk and profit sharing or how to repay investments.

What a joint venture is in detail depends on the contractual nature under the national legal frames.

Responsibility for Health Insurance

This topic coins the controversial debate on the distribution of responsibilities within a nation on how to ensure the citizens' access to necessary and appropriate healthcare.

The discussion raises regularly controversial answers to the following questions. These are:

- Who or what is responsible for the unequally, respectively not randomly distribution of health risks among a nation's people?
- Is it acceptable that access to prevention, treatments and rehabilitation depends on the unequally given social and individual resources?
- Who should be responsible for the unequally distributed economic and social burdens of bad health?
- Who gains profits from improving people's health?

Resulting from the given answers, the concepts regarding responsibility vary widely. There are parties prioritizing charging for any health services individually, stressing the point that investing in health will gain return of investments but exclusively to the investing individual and would leave the freedom to decide on benefits and their margins to any individual privately contracting for services.

Others discuss universal healthcare a matter of all the citizens' solidarity. Doing so gives any of the norm-setting responsibilities to the public, particularly how to regulate access, effectiveness, efficiency and quality. It will be the states'

responsibility to design, to run, to allocate recourses and to supervise not discriminated access to healthcare.

A third group discusses healthcare coverage an approach individually negotiated between employers and the depending individuals and their families administering together one or several solidary funds.

Looking back to history, the most important reasons for developing healthcare as a public issue have been

- needs to prevent from epidemics (the argument on sanitation)
- interests to avoid social conflicts around health matters (particularly if related to working and environmental conditions or poverty (the argument of social peace-keeping and social coherence)
- potentials to make healthcare, pharmaceutical industries and related supply a flourishing business (the business argument).

Despite different contexts, any of the mentioned issues would support the development of both healthcare insurance and the provider organizations and facilities.

There is internationally neither compromise on what effective healthcare is nor is there a compromise on what the reasons for social inequity and its consequences for health are. Consequently, there are arguments against any public responsibility for healthcare and arguments supporting the contrary. The most important topics of controversial considerations are

- the theorem of the individuals' personal fault for falling ill
- the "moral hazard" theorem
- the "expansion of morbidity" theorem
- the concept of "individualism" instead of public responsibility as the true basic source of freedom.

The political debate has introduced the term "self-responsibility" in order to distinguish from any other responsibilities but has never clarified the content. The ongoing debate on making healthcare for sick people dependent on self-responsibility becomes "*a policy of blaming the victims*"①.

Self-responsibility restrains the responsibilities of the society, of the state, of the employers and of the community. The usual interpretation discusses self-

① Crawford R. You are dangerous to your health. The ideology and of victim blaming. International Journal of Health Service, 1977, (7): 663～680.

responsibility an individual's interests and free decision to keep good health as a personal investment and results from a free-will decision. It is rather difficult to accept this view as being conform to current standards of public health and life sciences. Additionally, this argumentation does usually not value the individual's responsibility to help others or to save a nation's future. Activities to overcome unhealthy labor conditions or help with social support for neighbors etc. stay also uncounted as individual responsibility. Self-responsibility is regularly coined as the ego-centric behavior of single persons. That is far from the reality of daily social life.

The central point of all the arguments against an all society's responsibility for healthcare usually is the discussants' particular concept of humans and society. One party sees society a collective of a certain number of individuals others see society comprehensive interactions, dependencies and accept public responsibilities as pre-conditioning any human's life and survival.

Since most of the industrialized countries have developed a public or state responsibility, the "reincarnation" of these debates signals political trials to readjust the responsibility of state and community for covering healthcare.

In Europe, the ongoing new debate is closely connected with what some call "Thatcherism" grounded in F. v. Hayek's *The Constitution of Liberty* and in M. Friedman's theorems such as "*that nobody spends somebody else's money as wisely or as frugally as he spends his own. … No third party is involved when we shop at a supermarket. We pay the supermarket clerk directly. The same for gasoline for our car, clothes on or back, and so on down the line.*" ①

M. Thatcher, British Prime Minister 1979 ~ 1990 enrolled the new philosophy against public responsibility for social security systematically as a model for many of the Western European countries. Her fundamental beliefs are summarized in the often quoted remark: "*There is no such thing as society: there are individual men and women, and there are families.*"②

The concept behind is that there would be no interlinks between groups and social classes, employers and employees, professions, researchers, teachers, farmers and industrial workers, the poor and the rich as sociologists and economists of the 19th century and the first seven decades of the 20th century have

① Friedman M. How to cure healthcare? Hoover Institution, Stanford University, 2001.

② Thatcher M. Interview for woman's own. Margaret Thatcher Foundation, 1987.

studied. The neo-liberal strong belief is that in the era of globalization nations become only constituted by independent individuals with no responsibility other than care for themselves. Consequently, this belief is against any public responsibility for education, health and social security, water supply and supply of electricity etc. The explicitly demanded consequence is to give any of the traditional public responsibilities to free markets and to competing individuals for any goods but exclusively for their own benefit.

In contrast, others still make the argument that economic outcome and a country's progress mostly would depend on social cohesion and public responsibility(Wilkinson,1994,2005).

see Health Politics

see Moral Hazard

see Social Epidemiology

Single-Payer-System

This is a system in which everyone is covered under public or social health insurance and that is solely paying for any of the healthcare benefits under the programs' rules. A single payer might be a government or a legally accepted institution serving as a single source of payment for listed services. While some countries have a single-payer-system, others are developing it or are demanding it for the future. The background is the higher social effectiveness and efficiency of centralized payment of doctors, hospitals, and other healthcare providers from a single fund. International comparisons prove these assumptions regularly true. This demand is also the key to understanding the managed competition approach.

A single-payer-system sets two fundamental questions on top of any other concern:

1.Is the access to healthcare accepted as an universal right within a society?

2.Is (alternatively) healthcare exclusively accepted as a good, which is privately bought and consumed depending on the individuals' free choice of an out-of-pocket resource allocation?

Most of the economically advanced countries have developed single-payer-systems as related part of the nation's socio-economic progression. But the issue is still a battlefield of ideologies between the "Keynesians party" and the "Friedman's Chicago Boys", and the "Old European economy" or the "new neo-liberal

economy".

Examples for single-payer systems are given by Australia, Cuba, Canada, Denmark, France or Sweden and the United Kingdom.

Social Health Insurance (SHI)

This is a socially and legally constructed type of health insurance. Coverage is essentially independent from pre-existing health conditions and covers any or a predefined proportion of citizens. Social health insurance is usually spent under a health plan with or without co-payments and deductibles but with a solidary share of payments. SHI makes access to necessary care independent from the premiums. The main feature and solidary mechanism of this type of insurance is the equal coverage of benefits by the premium paying members and the self-governess of the insurance. Payments or premiums are usually fixed as a proportion of income. These funds are typically shared by employers and/or by state. The fundamental aim is the self-responsibility of the members for all the insurance's rules and its administration. That is why some share the opinion that these constructions would not really exist as insurances but as self-administered cooperatives of the members even if legally framed and supervised.

Under the policy of such insurances, risk selection is regularly against law but includes rules that are to determine what necessary and appropriate healthcare is.

Social health insurance is the "natural" opponent of private health insurance companies, regularly with ongoing battles rather than competition. One of the predominant arguments in those battles is the trial to make social health insurances "real" companies and the insured members to customers.

The example is the so-called German or Bismarck Model of health services systems.

see Health Insurance Systems
see Responsibility for Health Insurance

Specified Disease Insurance

This is a type of insurance covering healthcare up to a maximum amount in the case of a specified disease, such as cancer or diabetes.

Such kinds of insurances are very controversial because it grounds on specified and selected predictions on the occurrence of a disease. Such prospective measurements will use investigation on a person's genes or other individual risks. These types of insurances are working with a risk selection mechanism and endanger the working of other insurances fundamentally. The idea behind is simple and assumes that any disease could become medically managed like a standardized and de-individualized product. Such concepts might be used by specialized providers offering pre-paid services. This kind of offers is also most problematic because particularly elder people will regularly suffer from more than one disease. In that case there is a high danger of conflicts regarding the question what has to be covered under the insurance rule and what has not.

The occurrence of such insurances regularly signals forces towards competitive market rules for insuring health coverage against public, social or solidary coverage. While such insurances are designed to be profitable for the particular insurance company, such concepts influence costs for all the other mechanisms of insurance coverage.

see Product Medicine

see Social Health Insurance

Sponsor

Regarding healthcare management, it is an organization or institution which defines and manages the choice of health insurance products for a group of individuals. Sponsors are also to administer and supervise single-payer-systems.

The function may be carried out by employers, government or organizations of the insured but it is established to manage insurance coverage on a universal and equal basis.

Especially the existence of an independent sponsor is seen pre-conditioning not only for the concept of managed competition but also for social health insurance.

see Managed Competition

see Single-payer System

Subsidiary

This is the principle of making individuals self-responsible for healthcare coverage. After crossing the cutting point of what is legally defined as margin of self-responsibility (for example a country's level of poverty), it is usually seen as a public task to cover expenses for necessary health services. Some political groups see subsidiary the contradicting alternative to solidarity and the fundament of market competition in healthcare provision. Others argue subsidiarity the complement to solidarity.

Healthcare based on subsidiary makes access a social aid which is spent by tax-payers if there is no other resource available (also called subsidiaries). Most of the legal procedures demand to check up on an individual's private circumstances and resources closely before social aids are spent. Such regulations often turn out to be very bureaucratic and time-consuming.

Third-Party-Payer

Any organization, public or private which pays or insures healthcare coverage acts as a third-party-payer.

The paying party holds the responsibility and economic power for purchasing health services (for example private, public, solidary, sick funds, government bodies, for-profit and non-for-profit private organizations, employers, international aid and charity organization). Each of them will develop its own governance policy and regulation strategy and methodology.

In healthcare, third party-payers are usually the consumers of the providers. Therefore, the legal nature of the third-party-payer is an important aspect, because the patients have to trust in the payer's loyal advocacy for patients' rights. This forces the discussion on a universal and internationally accepted charter of patient's rights but not only in regard to the providers' behavior but to the insurers' policies as well.

More theoretically, to analyze the particular relationship between patients, providers and the paying parties is a fundamental methodology for researching on international healthcare systems and their particular management requirements.

Voluntary Health Insurance (VHI)

This is a type of health insurance strategy opposing, substituting and/or complementing compulsory risk coverage. It may also ensure access to some additional benefits not covered by insurance. VHI is often used for coverage of medications, dental care, and the right to choose the providers, for long-term care or some kind of additional luxury according individual preferences.

VHI is seen as a methodology to adopt healthcare in the philosophy of market competition especially in this part of services going beyond the scientific evidence for necessity, appropriateness and economic rationality. While compulsory sick funds traditionally focuses on patients, VHI is intended to transform patients to consumers.

Voucher for Healthcare

This is a mostly prepaid certificate ensuring health services, for example in cases of

- traveling abroad and seeking overseas treatments but is sometimes also
- used for expatriates or migrants or it is
- given to employees by their employers instead of spending insurance or avoiding regular insurance premiums

The voucher can be used to purchase needed health service according to the voucher's value. It may offer a free choice of doctors or may be limited to pre-selected providers. If given by employers, the voucher can be accumulated or even sold, as reports on examples have shown.

In a broader sense, some see such a system encouraging competition and enabling to terminate current insurance practices. Ezekiel and Fuchs from Stanford University advertise vouchers "*an efficient, fair, and relatively simple approach that might elicit broad support.*" ①The authors summarize the following pros for a voucher system for the U.S.:

- *universality*

---

① Ezekiel E, Fuchs V R. Healthcare vouchers—a proposal for universal coverage. New England Journal of Medicine, 2005, 352(12): 1255～1260.

- *free Choice of Health Plan*
- *freedom to Purchase Additional Services*
- *funding by an Earmarked Value-Added Tax*
- *reliance on a Private Delivery System*
- *end of Employer-Based Insurance*
- *elimination of Medicaid and Other Means-Tested Programs*
- *phasing Out of Medicare*
- *administration by a Federal Health Board*
- *establishment of an independent Institute for Technology and Outcomes Assessment*

The fundamental problem with such a concept is the asymmetry of necessary healthcare making the management of healthcare provision so difficult and different from other services. The concept is well adapted to the "classic" market approach but not to the reality of social healthcare utilization.

Payments via voucher play internationally a role in overseas treatments and can be helpful in evaluating and avoiding illegal billing practices.

New regulations within the European Union could make voucher the mechanism to pay for cross border utilization of healthcare.

Managed Care（MC）

General Considerations

There is probably nothing having changed healthcare provision and its management more than Managed Care has since the first occurrence of the France' Dispensaries, the evidence based hospital care or the rise of the first non-profit and social health insurances. Managed Care stands for a new kind of delivering and managing health and medical care. It is of tremendous impact on any of the relationship among the three key-actors in healthcare, the patients, the providers and the paying parties. Because the proponents of managed care try to make Managed Care the global model, the topic is accordingly worth covering.

The major mechanisms of Managed Care are:

1.MC manages benefits by prospective capitation, by gatekeeping the access to care and nursing, by excluding the free choice of doctors, and by making the choice of a product to be sold and bought, by terminating the provider-purchaser-split, by extending co-payments, deductibles and co-insurances, by postponing financial risks of insurance to the providers and the making of former patients to consumers of healthcare industries.

2.MC introduces a strong management of utilizing and providing treatments and nursing by depersonalizing care, by reviewing and supervising closely and permanently utilizers and providers (patients and doctors/nurses), by insurance' s guidelines for disease management, by benchmarking caregivers' resource consumption and outcomes, by introducing incentives of risk selection and "portfolio

profiling" policies even if not allowed by law.

3.MC changes the mechanisms of delivering healthcare by introducing new technologies into the regular healthcare infrastructures and process of delivery, such as triage, the active management of qualification consumption in healthcare utilization, the extension of simple and defensive medicine, the contractual exclusion of liability (if possible), and the offer of group practices for chronically sick, poor or elder people.

Limited (regulated or managed) access but unlimited bureaucracy are the most important results which are to widen the gap between prices and costs but also are slowing down the macroeconomic efficiency by spiraling costs for the public and by reducing social effectiveness.

First developing in the U.S., it became globally most influential on public debates, political concepts regarding the transformation of nations' healthcare systems and the transformation's practice. Today, managed care is the regular kind of healthcare provision in many countries, and many countries try to introduce it. Because of doctors' and patients. resistance, some countries, such as Germany, are making the change towards managed care a long term transformation. Other countries, such as the Netherland, decided for an immediate change in 2006.

Managed care should more precisely be called "regulated care" since the philosophy is regulating and guiding

- the access,
- the utilization and
- the decision-making of the care providing professionals

rather than managing healthcare and treatment. For this purpose, managed care tries to develop product medicine and to contract it between (giant) provider organizations and similarly giant third-party-payers.

The results fundamentally depend on the underlying missions and intentions such as non-or for-profits providers, the legally given bill of patients' rights or the legally established mechanisms to avoid, to investigate and to fine illegal practices regarding access, over-utilization, under-utilization, mal-practice, billing or corruption.

Managed care has shifted the traditional prime doctors' decision-making on patients' necessities and appropriate treatments to somebody else, and often to the economically responsible managers. It still leaves some liability to the doctors

and other medical personnel. Some believe patients would have to share liability if patients would not comply with what is demanded by the treatment contract. To some extent, managed care practice can include patients' responsibilities in litigations between providers and insurers. That might be particularly the case if patients contract under the roof of a specific disease management program. This development is indicated by some shift in words and by transforming patients into pro-actively acting consumers of a market's products with responsibilities and competitive interests parted into those of a selling and a buying party.

Managed care is said to improve both quality by the making of true consumers and would reduce costs by the making of standardized products which are managed by the paying or the capitated fundholding party. For these targets, certain sets of micro-economic tools are practiced to guide both the patients and the doctors closely on how to perform any of the particularly defined and contracted cases and benefits. The development of managed care has transformed the paying party to consumers and the medical staff to product providers, regulated by contracts, the products' descriptions, and the pathways of performance, the benchmarking of economic outcomes. Comprehensive supervision and entire control about doctors' and nurses' decision-making are most important mechanisms of MC. The change is explicitly intended by guiding care as designed under a contract's regulation rather than leaving decisions to patients, doctors and nurses.

Especially the introduction of numberless micro-economic tools into the processes of utilizing and performing healthcare is understood as being the new kind of managed or regulated care. These mechanisms are not only seen as the key to quality, cost and price reduction but also as the chance to put medical care under the umbrella of true market rules. These rules would leave providers and consumers the free choice

- to negotiate on the products' demands and delivery
- to pre-determine the quality wanted or be paid under a certain payment mechanism
- to be charged with the price as negotiated and
- to comply with the norms as benchmarked by the management and its contractual frame

It is obvious that MC changes the frame-conditions for healthcare:

- an increasing number of doctors become employees of big provider chains and

• both costumers which are regularly the third-party payers and providers are integrating by terminating the traditional norm of splitting purchase and provision and by developing big strategic alliances

These transformed and extensively regulated healthcare industries do not necessarily share and represent the interests of the insured people. Under managed care rules, the traditional free choice of the doctors becomes replaced by the free choice of a managed care insurance plan. This plan guides through the contracted product's content.

Discussing advantages and disadvantages of introducing managed care will address a number of aspects which might be solved differently under a third-party-payer's cost containment policies and a provider's interest in financial outcomes.

This development has made

• a sharp decline of the independence of the medical staff's decision making against the providers' will

• the selective contracting of the providers, particularly the sub-contracted providers

• the rights of the insured and the patients (Patients' Rights Charter) an issue of growing concern and

• the nature of the healthcare system as a non-profit or a for-profit system, a public or a private construction of an extending conflict

The trend's background refers back to almost seven arguments on why traditional healthcare works inefficiently from the managed care proponents' point of view. The seven reasons are referring to the following key characteristics of traditional healthcare provision, namely

1. the free choice of doctors and hospitals by patients

2. the free choice of diagnostics and treatments by doctors

3. the supplier induced demand (Roemer' Law)

4. the fee-for-service rules

5. the healthcare provision by single doctors' offices

6. the retrospective reimbursements of healthcare, especially at hospitals (the bill follows utilization)

7. the purchaser-provider-split

Managed care is seen as the mechanism to overcome these traditional failures

of healthcare provision[①]. It is easy to understand that each of these aspects will be most influential for healthcare management and covers nearly any of the controversies on today's and tomorrow's healthcare. It is also easy to understand that any of the decisions to overcome these failures is potentially of dramatic impact on healthcare and both the traditional users' understanding of utilization and the professional providers' culture and self-reflection.

But from certain types of provider organizations' and the third-party-payers' points of interest, the change of all of these seven features will create a new setting of healthcare provision and will be of tremendous impact on any kind of healthcare markets[②]. There is nothing as powerful as managed care to transform traditional healthcare into a new kind of service for sick people. For that reason, the authors decided to give managed care a particular focus. For the reason that the U.S. healthcare system is globally the most advanced managed and regulated care system, it is taken as the model for the compendium's summary on this subject. Readers should also realize that the reforms of healthcare as going to happen in the U.S. are illustrating both some of the problems of managed care and political decisions to overcome them. If and how the reforms of the U.S. healthcare will influence and transform managed care is, at least for the authors, not foreseeable.

But readers are also asked to understand that it makes a fundamental difference if the Managed Care Organizations (MCOs) are serving for federal health plans or for employer-based insurance or for privately contracted benefits. It also makes a fundamental difference if managed care runs under for-or under non-for-profit interests.

In order to go deeper into managed care, authors see it necessary to distinguish between managed care, its specifically developed organizations and the waste managed care industry rooting in that methodology but being different from managed care depending on its particular legal and social-economic frames.

see Disease Management Program

---

① Walshe K, St. Shortell M. When things go wrong: how health care organizations deal with major failures. Health Affairs, 2004, 23(3): 103～111.

② Kaplan R L. Analyzing the impact of the new healthcare reform legislation on older Americans. http://www.papers.ssrn.com/pape.tar? abstract_id=, 2013-01-27; Gottlieb S, Miller T. The closer one looks at obamacare, the more it looks like medicaid. http://www.forbes.com/sites/realspin/2012/08/19/the-closer-one-looks-at-obamacare-the-more-it-looks-like-medicaid/, 2013-01-27.

see Health Insurance Systems
see Managed Competition
see Product Medicine

Managed Care (MC)

This is the mechanism of providing pre-defined products of healthcare under rules of predominant micro-economic non-medical management and under particularly designed contractual and organizational regulations. MC is designed by provider organization and insurance and is generally provided by government, but the government needs to

• buy any or parts of the economic risks of the contracted services from a paying party or

• combine both administrations of the contracted health plan benefits and delivery for a third party or

• include insurance and provision either as a business trunk of insurances or of providers.

The MC contracts offer incentives to reduce utilization and to minimize the provider's costs per contract, per person and per case utilized under contract. To meet this goal, some techniques have been developed and introduced in order to standardize and to manage the provisions' pathways of healthcare but also to control, to limit and to standardize medical staff's independent decision-making on what is necessary and appropriate under a given contract.

The rise of managed care is the key for the understanding of today's U.S. healthcare system as it has been developed since 1965 (Medicare and Medicaid Act). The costs of MC have been spiraling on the macro-level, but its efficiency has been improved on the micro-economic providers' level. Originally, it was spurred by the enactment of the Health Maintenance Organization Act of 1973. The act was to enable Health Maintenance Organizations (HMO) to provide healthcare by removing legal restrictions to offer care by federally certified health plans. The act demands a minimum of 25 insuring employers in order to offer federally accepted HMO plans. These new types of HMOs were defined as plans with an explicit and a specified list of all benefits to all its members, charging any member the same monthly premium and no fee-for-service billing, and were legally constructed as a non-for-profit organization. In this way, HMOs were given

a better position to compete for employer-based health insurance benefits and they were very successful and were accepted among people in the beginning. But managed care philosophy also became the grounding of Medicaid and Medicare step by step. Today it is the regular mechanism of healthcare for the overwhelming majority of Americans under the Medicaid and Medicare Act and employer insured healthcare.

But while managed care techniques were pioneered by non-for-profit providers in the beginning, they are now widely used also by for-profit private health insurers and by for-profit provider organizations. Managed care is now nearly ubiquitous in the U.S. and stands for tremendous controversies around healthcare provision. The central critique on managed care has largely failed its overall goal of extending access, of controlling medical costs and of improving quality. Some analysts share the position that MC has caused exactly the contrary by decreasing access, by raising unexplainable costs and decreasing quality for those not belonging to the upper class fraction as defined by law in the US. But it was very successful in increasing profits and in transforming the system towards for-profit market interests of the healthcare industries. Despite all the critiques, some groups are highly fascinated by the advances in decreasing internal provider costs, in spiraling revenues and in making healthcare a big and profitable business beyond considering issues of necessity, appropriateness, evidence based medicine and quality for the average.

Critiques argue the spread of managed care would be the reason for uncontrollably increasing costs for individuals and third-party contractors. It is also associated with the establishment of a remarkable bureaucracy, a tremendous macro-economic inefficiency and extended social ineffectiveness. Other stress the argument that managed care has improved the micro-economics of provider organizations to the highest standards.

Managed Care is, among others, featured by selective contracting even if not allowed. Selective contracting is the mechanism which managed care organizations use for market power and in order to bear the price for sub-contractors. In some of the constructions of today's managed care organizations, the closure of the split of purchasers and providers is essential.

Basics of Managed Care are capitation models based on person classification schemes which focus on differently mixed and prospectively calculated expenses per capita, and the link-up of the insurer to the provider organization by dimi-

nishing the free choice of providers. For these goals, MC has developed many person-classification schemes and case-classification schemes used globally today. These mechanisms are the very fundamental for understanding the transition of traditional health services concepts and ethics into today's big medical business.

The term Managed Care is often misunderstood, and is assumed to refer to the numerous ways of providing an individualized healthcare management. But individual care management might contrast managed care rather than support it. Managed care can include care management as an important tool. But it is not necessarily and certainly not primarily used to improve the quality of care. All the management primarily focuses on keeping the costs below capitated revenues.

Some Managed Care models are netting both the interests of care providers and of risk insurers. It is designed to integrate different levels and mechanisms of value creation. Most important for Managed Care is the free and sometimes widely unregulated competition between the providers seeking for as many contracts as possible or seeking only for profiled and selected risks but always looking for the most attracting difference between capitated revenues and variable costs.

The provider's surplus will depend on the services provided. Therefore, managed care has developed a wide range of techniques in order to control any internal costs and the mechanisms of utilizing contracted benefits both for inpatient and for outpatient health services. These techniques mostly focus on three trunks:

- controlling access and the utilization of contracted service in the most efficient way of care
- supervising systematically what medically might be necessary and appropriate under prospectively capitated healthcare
- utilizing the hierarchically qualified (and rewarded) professionals strictly

Managed Care will regularly include micro-economically effective tools, such as

- triage systems
- pre-admission testing
- pre-admission or pre-treatment certification
- second surgical opinion programs
- pre-estimation of costs
- fee or price negotiation with subcontractors
- pre-and post-treatment protocol reviews

- permanent stay reviews
- discharge planning
- individual/large case management and designs
- defensive and simple medicine
- permanent utilization reviewing both internally and externally
- group appointments for chronically ill patients and many more

Failures to comply with Managed Care requirements and decisions by patients usually reduce health benefit coverage or may increase additional charges. The penalties may affect both the patient and the individual provider inside the organization. Recent Managed Care can also be a component of traditional indemnity or fee-for-service health coverage.

MC strictly controls the use of any of the utilized services and reviews the medical necessity under the frame of a contract. Some typical methods are

- guidelines and pathways
- utilization reviews
- appropriateness protocols
- financial incentives for benefit reduction
- standardized case management rules and guidance both for the professional staff and for the patients

Today, most employer-provided health coverage is provided through managed care organizations. But Managed Care tools are changing very fast. The employers are usually in a very strong position and pay substantially lower prices for healthcare insurances than an individual would be charged if paying out-of-pocket. The example is to show that employers' interest and behavior depend on their market environment and are most influential and are forcing the dynamics of change.

Especially the economic crisis of 2001 has made people reintroduce and refocus utilization management techniques like disease and case management. It has also made people push experiments with new variants of Managed Care, including provider networks and incentive-based provider payments. The impact of such incentive-based provider payments on quality has forced movements back to some kind of fee-for-service payments at least among some of the health plan providing communities and employers[①].

---

① Mays G P, Claxton G, White J. Market watch: managed care rebound? Recent changes in health plan's cost containment strategies. Health Affairs-Web Exclusive, 2004, (11): W427～W436.

The impact of the 2008 crises mostly led to a sharp decline in the utilization of healthcare, the decline of employer-based benefits, and also a growing number of outstanding bills and private insolvency because of not payable medical costs. Similar reports are given by the Pharmaceutical Benefit Management Companies.

see Capitation

see Health Maintenance Organizations

see Managed Care Organizations

see Pharmaceutical Benefit Management Companies

Managed Care Organizations (MCO)

MCOs encompass a wide range of different types of organizations which offer listed benefits, buy and administer risks coverage for a defined population selectively from employers, federal programs and private costumers. MCOs also provide healthcare guided by explicitly defined service products but do not necessarily perform the healthcare services. Some MCOs provide coverage by subcontracting with other providers for parts or all of the listed services. The evolution of the MCOs started with the so-called Health Maintenance Organizations which are performing as the prime type of the MCOs.

Managed Care Organizations employ a variety of "incentive payment" schemes which try to shift at least some of the economic risks onto the provider if the insured use healthcare more than prospectively calculated. That makes providers see such deviation from prospectively contracted per capita payments an "over-utilization" or a loss. The defense of such per capita losses is the major challenge for the provider's Managed Care policy against the staff's decisions and the patients' requests.

This is the crucial point for Managed Care: Any of the capitated payments based on statistically calculated risk clusters must be invariant inside the statistical borders of confidence around the average mean of the distribution of any of the elements calculated in the clusters. This procedure reduces the real distribution of the characteristics to a single point. This interpretation of a product can create some severe problems if over-utilization is assumed to be any of the utilization that exceeds the calculated average of resource consumption. This mechanism of excluding the variance of decision-making for individuals will unavoidably affect any and permanently all of the following calculations of a capitated

average amount of accepted cost per class of product or patient utilizing care. This mechanism installs a way of a permanent reduction of the prospective payments and consecutively increases the pressure to lower any of the variable costs per provided healthcare product and makes risk selection a favored incentive in Managed Care systems. The mechanism permanently demands to adjust decisions according to the pre-calculated product but not the variation of individuals.

Capitation, in which the provider is paid a fixed sum to care for the insured regardless of how much care the insured uses, is a typical example of this incentive payment system. It is systematically implemented as a fundamental construction of the Managed Care Organizations.

Many Managed Care Organizations also use a "gatekeeper" model, in which a patient's primary care nurse or (sometimes) physician must provide a triage and a referral or a prior approval procedure before the insured is accepted to receive healthcare. Both Managed Care Organizations and traditional insurers sometimes also make use of non-payment cost control mechanisms, such as requiring prior administrative approval or second opinions before covering high-cost procedures, which regularly raises questions on the independency of such approval mechanisms and organizations from the perspective of economic interests.

Meanwhile Managed Care encompasses many different types of organizations, payment mechanisms, review techniques and collaborations. Such organizations vary widely and include many more types than traditional Health Maintenance Organizations do. The evolution of MCOs results from incentives permanently to react to patients' dissatisfaction with new offers by aiming to meet specific groups' demands. This kind of market competition has developed a chaotic manifoldness of organization looking for uncovered market interests where competition is not established at that moment.

The most important MCOs are

- provider organizations with employed doctors
- groups of independent doctors contracting with MCOs
- networks of single and independent doctors
- regional networks of doctors sharing the regional market
- associations of hospitals and ambulatory working groups and networks of doctors

There are also associations guaranteeing the benefits but not providing them directly. They simply act as contractors and coordinators or management organi-

zations for the utilization of contracted benefits.

MCOs mostly try to unify three levels of value creation, namely

• taking directly and indirectly some of the insurer function by buying the risks from traditional insurers, from contracting employers or from other MCOs or by administering state-run health plans

• providing the contracted services and

• managing the total utilization process (marketing, acquisition, credentialing and contracting with subcontractors, investing, trading etc.)

A MCO is usually managed by a Chief Executive Officer, a Medical Executive Officer, a Financial Executive Officer and an Advertising Executive Officer. According to U.S. experiences, MCOs pro-actively administer about 100 different health plans but a single MCO mostly about five, but have to serve many more (an estimated of more than 90 on average) different benefit plans if sub-contracting for other MCOs.

The following examples of Managed Care Organizations are to illuminate the manifoldness.

see Capitation

see Product Medicine

see Referral

see Triage

Accountable Care Organization (ACO)

This is a type of a Managed Care provider organization that wants to keep the price for the services for a contracted population below the offers of competitors. ACO promises to provide comprehensive payment for comprehensive care. The expectation is to control cost and to enhance the quality and continuity of care for chronic diseases. ACO under bundled payment agreements is expected to support these objectives by overcoming fragmented funding.

The ACO offers care to a group of patients based on capitation and/or fee-for-service by sharing gains with the paying party. This type of organization offers benefits particularly to those having access to Medicare on a fee-for-service agreement. ASOs are a kind of a privately organized cooperative between providers and the paying party. That is why it is not really accountable to patients (as declared) but to the true consumer, the administration offices of Medicare or of employees insuring employers.

These organizations' core rules are:

1. ACOs offer primary healthcare but are accountable for all the care contracted under the average per capita cost (APCC) agreement and under the agreement of the specifically contracted quality of care. The assigned quality is to give an incentive not to decrease the APCC under this level of quality.

2. Payments are bound to quality improvements if costs are reduced.

3. The implementation of measurements to make sure that savings are due to the improvement of care.

The idea and hope behind is to use payment rules in a way that sets incentives to promote cooperation between doctors, to avoid "supplier induced demand" and to care for quality on the primary care level by avoiding unnecessary diagnostics and treatments or referrals.

ACOs try to overcome some problems of another Managed Care Organization, namely the HMOs, but particularly the followings:

1. Traditional HMOs are leaving the evaluation of quality and efficiency to the insurers. ACO gives the accountability to the providers, and allows doctors and nurses some more free professional decisions.

2. ACO allows direct and selective contracting without being framed by a particular health plan.

3. ACOs are flexible in their type of organization, such as Independent Practice Organizations (IPA) or Physicians-Hospital-Organizations (PHO).

The ACOs are a model that is to decrease costs up to a contracted level of quality in primary care. They are another attempt to keep the existing business mechanisms running—predominantly fee-for-service and capitation.

Accountable Health Partnership or Health Insurance Purchasing Cooperative

This type of MCO acts as a cooperative between the provider organization and the population of a region to avoid the dependency from the powerful private insurances. The stability of the MCO seems to be rather weak because of the lack of a stable financial basis if there are no strong and huge employers or networks of employers standing behind (According to ongoing reforms in the U.S., the Affordable Healthcare Act wants to support the evolution of this kind of cooperatives.)

Administrative Services Only (ASO)

ASO is a relationship according to the contract between an insurance

company and a group of providers with a contract for administrative services only. These services are usually billing, practice management, marketing and purchasing or contracting with networkers or sub-contractors. ASO does not take or share any risk for pro-active healthcare provision. It is a concept of outsourcing healthcare management.

Providers contracting for ASO might intend to include health plans management, contract for hospitals or some delivery networks for any other provider association or for global cross-border offers and cooperation etc.

Competitive Medical Plan (CMP)

CMP is another type of Managed Care Organizations, particularly for pensioners. The CMP is competitive compared with other healthcare and insurance providers and competes against Managed Care's particular rules of pricing, rewarding and supervises doctors' decision making. But CMP still shares the principles of Managed Care.

More generally, the CMP is the trial of hospitals and physicians to stay in power in deciding on the amount of applied healthcare and its costs, especially its charges. The mechanism causes a sharp competition among the providers by ensuring the care for the elder within the national budget's constraints. The CMP steps beyond common pre-payment and product schemes as the diagnosis related group's payments or ambulatory cost groups do. It intends to avoid permanent external cost-control.

Providers try to seize the opportunity to develop a CMP and intend to define its marketplace through specifying services, costs, premiums, and coverage especially for seniors.

The competition moves towards covering a whole region's elder people as contracted members of CPM. The CPN tries to establish an image of high effectiveness at low costs using advertisements and marketing tools extensively. It also wants to create a sense of ownership among the community's senior citizens by involving them in marketing and consumer service efforts, in some cases also by sharing surplus.

Group Model HMO, Group Network HMO, Group Practice Model HMO

This is a family of types of HMOs which contract with one or more inde-

pendent group practice. It provides services for its insured at one or more locations.

This type is also a form of healthcare plan gathering contracts with physicians who are organized as a partnership, as a professional corporation, or as other legal accepted associations. It can also refer to a HMO model in which the HMO contracts with one or more medical groups to provide services. In any case, the payer or the health plan rewards the medical group, which is, in turn, responsible for compensating all of the participating physicians. The medical group may also be responsible for paying or contracting with hospitals and other providers and will take the role of a fund holder.

Exclusive Provider Organization (EPO)

EPO is a form of a Managed Care Organization, in who patients are obliged to visit exclusively caregivers who are on the panel of the provider organization.

If a visit to an outside provider is made, the EPO will only offer limited or no coverage for the utilization. EPO is similar to PPO but it does not allow the utilization of benefits outside the EPO.

Health Maintenance Organization (HMO)

This is a (non-for-profit or for profit) provider organization that offers healthcare coverage according to the contracted list or plan of benefits offered or allowed on a prepaid basis.

The beginning of the HMOs was some kind of a revolution in the U.S. in 1973. For the first time in history, Americans became acquainted with a type of service with no fee-for-service regulations as it was known from the common indemnity insurances. These new organizations increased service quality and social effectiveness and have made HMOs be welcomed by the public. Due to its constantly expanding regulations, its harsh cost-containment policies, risk selection policies, the loss of the free choice of doctors, the practice of implementing mandatory triage techniques, group appointments for certain patients and many more controversial developments, there is meanwhile a widely spread dissatisfaction with HMOs.

The HMO contracts for hospital and/or physician services with explicitly in- and excluded healthcare providers and benefits. The coverage very often uses ca-

pitated premiums (plus varying co-payments and deductibles) for the pre-designated benefits for a specified period of time as contracted with the paying party.

The fundamental construction is as follows:

The HMOs are paid monthly premiums or capitated rates by the payers (the customers: private persons, groups of private persons, single employers or groups of employers, insurance companies of any kind, a government agency or any other third-party payer, for example a charity organization etc.). For the fixed amount of money, the HMO buys any risks to be covered according to the pre-designed coverage plan. The HMO must meet the federal rules of accreditation and all other regulations required by law. There are at least five models of HMOs such as

- the group model
- the individual practice association
- the network model
- the staff model
- hybrid model HMO (This is a combination of at least two Managed Care Organization's models that are molded into a single health plan. Since its characteristics do not uniformly fit only one type of model, it is called a hybrid.)

A HMO contracts with other providers, physicians, hospitals, and further healthcare professionals. The members of a HMO are obliged to use only contracted providers for any service according to plans. In general, it is also required that all services have to be approved by the HMO. For such a purpose, any HMO has its own utilization pathway and procedure guidance. As part of the HMOs' financial risk assessments, the HMOs adopt capitation payments with subcontractors but separate selected risks, also called carve-out. The HMO will also precede the method to other and any provider, provider group or provider network.

Nowadays, HMOs are seen as the most restrictive form of Managed Care Organizations because they reduce the services, providers and benefits at most. Besides interests in high profits by reducing financial risks (if for-profit HMO), that seems also to be a consequence of cost-containment strategies as they are run by powerful third-party-payers.

In the U.S. the Medicaid HMO (for people living below the Federal Poverty Level) and the Medicare HMO (for people insured by Medicare, the plan for any American citizen older than 65 years old) play an important role in providing

services. The HMOs are strictly controlled by the responsible governmental paying agencies.

The critiques on HMO practices have been the origin of the appearance of many more kinds of Managed Care Organizations among the U.S. systems since the early 1980s. But nowadays, all of them are under the umbrella of the Managed Care Industry.

A problem of special concern for the public is the practice of defensive medicine and the ongoing reduction of the traditional relationship between patients and doctors turn the relationship into a relationship between consumers and providers.

Independent(also Individual)Practice Association(IPA)or Organization(IPO)

This is a particularly organized mechanism of prepaid medical practice rather than facility based provider organization. It contracts with independent physicians who work in their own private practices, and which see fee-for-service patients as well as sub-contracted HMO-insured. They are paid by capitation for the HMO patients and by conventional reimbursement mechanisms for their fee-for-service patients, indemnity insurances etc.

Physicians contracting with the IPA must guarantee that the care provided to the patients will stay under a negotiated amount of money. As part of the agreement, the doctors allow the HMO to withhold a certain amount of the rewards (i.e., usually 20% per year). If by the end of the year the physician's cost for treatment stays under the negotiated amount, then the physician receives his entire "withhold fund". If the opposite is true, the HMO can then withhold any part of this amount, at its discretion, from the fund.

Essentially, the physicians are put "at risk" for keeping down the treatment cost caused by the IPA but are to be reimbursed by the HMO. This mechanism is the key to the financial viability.

Insurer HMO

This is a type of HMO whose primary purpose is to provide health insurance. This type of HMO contracts with independent providers for a healthcare network.

Insurer HMO will only successfully perform, if selecting the covered risks

very precisely or if gathering large numbers of contracts. Both of these objectives can easily turn out to be difficult if it is not contracting with powerful employers or networks of employers.

Integrated Delivery System

IDS is a primarily vertically constructed network of healthcare provider organizations. It integrates physicians, hospitals, and, usually but not always, also health plan businesses and health technology providers or pharmacies. In this way, IDS intends to establish a continuum of care, deliver seamless services and draw on net regions' ability to manage care under any reimbursement arrangements. It is also called a Vertically Integrated System (VIS).

Integrated hospital networks of several hospitals with outpatient clinics in a geographic network offering wide ranges of various healthcare services might be horizontally or vertically integrated or consolidated.

Vertically integrated healthcare refers to organization of healthcare provision whereby one provider organization controls or owns all stages of the services delivered but also integrates the distribution of supply or services.

In healthcare, vertical integration can be performed in many forms, but it generally implies that physicians, hospitals and health plans have combined their organizations or processes in some manner in order to increase efficiencies. It might be designed by integrated structures and processes intending to improve quality of care. The integration can be performed physically or only through data exchange.

Integrated delivery systems or healthcare networks are generally vertically integrated and is also seen critical for its tendency to cover regional markets and for avoiding or excluding competition that way. This ought to be of particular concern if healthcare is offered under for-profit conditions but limiting or even excluding competition through vertical integration of the market.

The designated practice is internationally popular and is also a matter of permanent concern for federal anti-trust agencies. There are also examples from countries developing special task forces to prevent or to investigate such practices if illegal.

IDS are often solely constructed to cover all the regional healthcare stakeholders to prevent from new competitors. In such cases, it is not an established organization but an informal network based on agreements that are to exchange

data and to comply with negotiated market interests and rules for cooperation and competition.

So-called hospital affiliations may be seen as a specific type of IDS. It describes a contractual relationship between a third-party-payer and one or more hospitals whereby the hospital provides all the inpatient benefits to be offered by the contract.

Hospital affiliation is a mechanism of selective contracting by the paying party and is in some countries illegal, among others for violating the national competition rules and anti-trust legislation.

Other countries are forcing such strategic affiliations as a method to foster competition and to reduce the number of hospitals. Another fundamental idea behind is to bring both insurance and provision into one hand or to transfer the risk of the insurance to the provider or, at least, to share the economic risks with the hospital.

Such affiliations are set up against the concept of the purchaser-provider-split and a mechanism to install managed care scenarios. The insurance's insured are obliged exclusively to use such affiliated hospitals and in return hospitals might be demanded to reduce the utilizations of benefits, budgets demanded or revenues charged.

For all of these purposes, IDSs often use highly sophisticated and advanced technologies for leadership, planning, product design and placement, marketing and trade. The collection and the exchange of data seem to play an important role and make IDS also a "data broker" inside and to third parties of interests. The vertically integrated IDS try to include third-party-payers and healthcare industries and are seen critically by national anti-trust-legislation and agencies. The rise of IDS signals the fast running corporatization of healthcare, aiming at the exclusion of competition. They are typically extremely powerful both financially and in lobbying with politics and are hard to be supervised.

Integrated Provider Network (IPN)

IPN gathers a group of hospitals, physicians and ancillary providers creating a system which provides comprehensive healthcare services through a coordinated, client-centered continuum that is designed to improve healthcare services in specified regional markets, sometimes also confusingly called an Integrated Service Network or an Integrated Delivery System (IDS) or an integrated

delivery and financing system, especially when the organization also offers an insurance plan. The idea behind is to provide full service by one hand especially to families and chronically ill or disabled people.

Integrated Services Network (ISN)

ISN is a horizontally integrated network. It is not obliged to guarantee benefits like the rules of HMO services are. An ISN offering a health plan must accept an agreement to the requirements of the state and federal government for health plans, insurance companies or HMOs. An ISN not owning a health plan has to guarantee the regulations which govern hospitals, clinics and physicians.

An ISN can be a financial or contractual arrangement between health providers (usually hospitals and doctors) that offer a comprehensive product of healthcare services through a legal entity which is operating separately from the ISN as a single Integrated Service Network. It principally provides a coordinated continuum of services and is held both clinically and fiscally accountable for the outcomes of the population served.

It might be confusing that some ISNs are called an Integrated Delivery System.

Management Services Organization (MSO)

MSOs are outsourced organizations which are to manage the contracts for hospitals and doctors under Managed Care policy.

Medical Services Organization (MSO)

MSO is an organized group of physicians joining in one entity but being able to contract with others for the utilization of additional services. The partners of a contract are hospitals, clinics or other outpatient entities

Physician-Hospital Organization (PHO)

PHO is a form of medical service provision by doctors and hospitals contracting with one or more HMOs. PHOs are collaboration between physicians and hospitals for some explicitly designed purposes.

Some models of integration include physician-hospital organization, management service organization, group practices, integrated provider organization and

medical foundation.

Physicians Practice Management Organization (PPMO)

PPMO is a management organization for doctors similar to MSO.

Provider Sponsored Organization (PSO)

This form of managed care explicitly integrates the function of a provider and an insurance giver. PSOs stay in a sharp competition with private insurance companies and depend on third-party-payers, especially employers. They may also be settled by powerful corporations or by networks of smaller enterprises. The aim often is to make the paying party independent from powerful insurances or HMOs.

Point-of-Service Plan (POS)

POS is an organized form of medical practice offering the insured persons regular Managed Care contracts, but allowing them to utilize services outside the POS under co-paid conditions. Insured individuals can vote also for fee-for-service if paying extra premiums.

POS integrates Indemnity Plans and Managed Care.

Preferred Provider Organization (PPO)

PPO is an organized form of medical care practice comprising cooperating and contracted hospitals and out-patient doctors' offices but offering benefit plans directly to employers who contract for their employees. PPOs are also contracting with traditional indemnity insurances on a discount basis (discounted fee for service). Co-payments of about 20% and additional deductibles are common.

Many insured individuals prefer PPOs for the advantage of some more rights to choose the doctors freely, but the doctors are still inside the PPO.

Social Health Maintenance Organization (SHMO)

SHMO is a type of health plan that provides the entire range of health services according to a given health plan (in the U.S. related to Medicare) plus other services like drug prescription and chronic care benefits, short-term nursing

home care, personal care services, and medical transportation, eyeglasses, hearing aids, and dental benefits. SHMO is complementing the basic benefits as guaranteed by HMOs. According to U.S. experiences, the economic basis of these types seems to be rather weak and even incentives are under critique[①].

Triage Center

Triage is traditionally an important tool in any kind of emergency coverage, of disaster management and medical care on war battle fields.

Nowadays, it is also used by Managed Care Organizations, health plans and provider entities, which are setting up programs or clinics called "triage centers" which are to "guard" or gatekeep the entrance to the provider organization and to line-up the way patients have to path through specialized diagnostics and therapies. Triage centers are implemented to steer patients away from costly care under the umbrella of capitation.

These centers serve as an extension of the utilization review process, as diversions from emergency room care or as a case management mechanism.

Triage centers may also perform by using the phone and the internet. That is why they are also called a pre-authorization center, crisis center, and call center or information line. A particular development relates to the development and establishment of software based on artificial intelligence approaches (AI) such as case based reasoning.

Managed Care Industry

The authors see it necessary to distinguish between managed care and the managed care industry rooting in that methodology but being different from managed care depending on its particular legal regulations and social-economic frames and prime intentions.

Today, the Managed Care Industry is one of the largest, in some countries even the largest industry, and we never mind obverse forecasts as, for example, given by Robinson in 2001: "After a turbulent decade of trial and error, that ex-

① Thomas K E, Gassoumis Z D, Wilber K H. Conversion diversion: participation in a social HMO reduces the likelihood of converting from short-stay to long-stay nursing facility placement. Journal of American Medical Directors Association, 2010, 11: 333～337.

periment can be characterized as an economic success but a political failure. The shift to consumerism is driven by a widespread skepticism of governmental, corporate, and professional dominance; unprecedented economic prosperity that reduces social tolerance for interference with individual autonomy; and the Internet technology revolution, which broadens access to information and facilitates the mass customization of insurance and delivery."①

Some of the most advanced analysts shared that opinion, but obviously failed, such as Reinhardt U. and Relman A.②.

The overall criticism with managed care and its industry is that a high proportion of Americans report problems with managed care plans, particularly reporting threatening and dramatic events in managed care. "*In addition, public concern is driven by fear that regardless of how well their plans perform today, care might not be available or paid for when they are very sick.*"③

The Managed Health Care industry comprises companies engaged in providing managed healthcare. The term reflects the corporatization of healthcare as perfectly analyzed by Paul Starr or JW Salmon already in the 1980s and the 1990s(Starr,1984;Salmon,1990,1994;Herzlinger,1997).

Although many analysts shared the opinion that MC would go down in the late 1990s and the early 2000s, and the managed industry is still extremely powerful even if being under severe attack by the public. But the industry is changing for many reasons and holds a huge amount of floating money in its accounts. The healthcare reforms in the homeland of the industry will show impact on stocks④.

The facts are simple to be understood: If healthcare services are ranging in its value from 10 to 10.000 US. dollars per capita per year or even more, this must be called big business, particularly if markets are for-profit driven in the larger parts of services. If this is not regulated strongly by public and social

---

① Robinson J C. The end of managed care. Journal of the American Medical Association, 2001, 285 (20): 2622～2628.

② Relman A. The decline and fall of managed care. http://www. hhnmag. com/hhnmag/jsp/articledisplay. jsp? dcrpath=AHA/NewsStory_Article/data/HHNMAG418&domain=HHNMAG, 2004-03-04.

③ Blendon R J, Brodie M, Benson J M, et al. Understanding the managed care backlash. Health Affairs, 1998, 17 (4): 80 ～ 94; Burton C V. Managed health care (a good idea gone wrong). http://www. burtonreport. com/infhealthcare/managedhlthcare. htm, 2009-07-11.

④ http://markets. on. nytimes. com/research/markets/usmarkets/industry. asp? industry = 56122&sector=56, 2013-01-27.

interests, medicine becomes an industry like other industries and will perform as mining, or producing and selling cars.

This healthcare industry has simple visions:

Gaining profits and inducing permanent growth globally

Integrating any level of value creation if profitable

Avoiding losses by limiting competition

Defining permanently new products and advertising them aggressively round the globe

Postponing economic risks and liability to somebody else

But there is (coming from the US experiences and Obama reforms) a growing concern and US Healthcare reforms will change the scenery of that industry①.

Analysts assume that the long lasting financial crisis will have an important impact on healthcare, because the growth does not depend on needs but on supplier induced demand but it needs to be reimbursed by the public or the employers or private individuals. The financial crises will have an impact on national budgets, the employer paid insurances will decline, and the privately insured could reduce spending on health. That could weaken the strong power of the few big market players and their ability to control the national markets in many ways. The counter reaction could go abroad and continue business as usual in the emerging countries but additionally by sending patients from their countries for treatment and nursing abroad to hospitals owned by international capital. A first step might be expected by encouraging international agencies such as World Bank to spend money to make healthcare in emerging countries a market driven for profit business for the use both by the emerging countries' citizens and by healthcare travelers or by forcing telemedicine.

① Rivard C, Rebay K. The 5 Mega-Trends That Are Changing the Face of Health Care. Boston: The Atlantic, 2012.

VI

Healthcare and Competition

General Considerations

Competition is the activity of at least two competitors seeking for advantages against each other on markets and its share. The concept is easy to be overseen if markets are dealing with materialized products which are not essential for surviving. But if it deals with essentials, such as access to air, water, basic supplies like food, clothing, housing, education, communication and essential services for children, the disabled, and illness suffering patients or older people, competition may come into conflict with the very fundamental human rights of living according to the UNO Charter Article 55.

Under this rule, access to healthcare is a fundamental human right and raises the question whether competition or its alternative-cooperation is the way to fulfill this right. The discussion around this question is most controversial particularly because of the evident experience that markets can only cover parts, in some countries a very small minority of people with access to necessary healthcare. For that reason, the economically highest developed market systems have also developed the most comprehensive national or social health services systems by making healthcare a public affair[①].

Despite given practical evidence and on the background of the fundamental

① Woolhandler S, Himmelstein D U. Competition in a publicly funded healthcare system. British Medical Journal, 2007, 335(7630): 1126～1129.

discussion on the failures of competition, there is an ongoing conflict if either competition or social responsibility of the public will do better in providing necessary, appropriate and efficient healthcare for everybody without any social discrimination.

Competition in the healthcare sector has to identify both the competitors and the particular advantages they are seeking for. But the discussion around competition is often incorrectly mixing its content with a particular trunk of that discussion which is the "market competition". Not any competition is a "market competition" and not any competition excludes cooperation. One should clearly distinguish if competition is seen as a method to reach social goals or if it is seen as the prime vision of humans' social life. The first point of view raises the question for the prime goals and visions, the second one needs to identify the prospective winners and the losers of competition for healthcare.

It is an ongoing debate whether, and under which frame-conditions and regulations market competition can become transferred to the particularities of providing and utilizing healthcare and nursing. This market competition is a particular but most important trunk of all the arguments far beyond the aspects of "ran-king" and "benchmarking" providers.

It obviously will make a difference if we take the public health perspective and macroeconomic concerns or microeconomic considerations, or the perspective of the patients, of the caregivers, of the provider organizations or of the third-party-payers for discussing competition. It will make a difference if the matter becomes discussed for increasing profits, for reducing losses, for improving access and quality or for optimizing infrastructures. The typical belief is that competition between providers would improve clinical outcomes, reduce costs and help the system function more efficiently①.

At the moment, there is nearly no study on the results of competition in healthcare in underdeveloped and in emerging countries available. Only some few of the so-called developed countries can provide studies on that subject, like recently done by a meta-analysis from the United Kingdom. The results are mixed and unclear but show more subjective patients' satisfaction but might with prob-

---

① The health foundation. Competition in healthcare. http://www.health.org.uk/public/cms/75/76/2601/1841/Research%20scan%20-%20competition%20in%20healthcare%20%28April%202011%29.pdf?realName=ZqZqdi.pdf, 2012-12-21.

lematic results regarding staff's satisfaction, team stability, risk selection procedures and outcomes and a successful development of infrastructure. The issue of competition in healthcare seems to be more of a matter of beliefs and ideologies or of interests than a matter resulting from evidence based policies.

Such frame-conditions might be given by legislation, by standardized health insurance rules or contracts. Therefore, any discussion on competition needs to consider the relationship between input and output, as well as vision and result. That is the key to understanding the particular problems around competition in healthcare. It needs primarily an understanding regarding some very few questions:

1. What are the goals of healthcare?
2. Who sets the objectives?
3. Who pays the bill?
4. What is the measured outcome?
5. Who gains profit from competition?

It will make a difference if competition is taken as a method to set the goals or to allocate resources and to access the quality of services. It will also make a big difference if competition is used in unsaturated or in saturated regional markets. It finally will make a difference if competition is the method to improve access or to provide healthcare for selected patients, or if it is to improve resource consumption or profits. The discussion on competition in healthcare is controversial but often simply a substitute for the discussion whether healthcare has to be guided by norms of equal access for everybody or not.

On saturated markets the providers will compete for purchasers, and on unsaturated markets the purchasers will compete for the providers' products. The concept is easy to be overseen if markets

- deal with tangible products which are frequent enough for establishing a chain of "warehouses"
- offer products which are independently manufactured from the purchaser's contribution and will further exist after being purchased
- find purchasers who are flexible to decide to buy a product or not
- constitute a way whereby purchasers and providers are independent and have equal access to the markets
- purchasers are flexible to decide to buy a product or not.

As to healthcare we will find settings which will fulfill some or all of these

conditions. But we will certainly also find settings where these conditions are hard to be covered. In general, one may conclude that the degree of necessity of care will inversely correlate with the advantages of competition.

If asking for the advantages of such competition, the given answers will be very uniform and always strike the following points:

- competition would be of universal advantage for patients
- competition would allow patients to choose providers
- competition would improve quality and efficiency
- competition would reduce costs
- competition would reduce bureaucracy

These beliefs are not really empirically well investigated. On the contrary, a recent meta-analysis of studies from the U.S and from Europe (mostly from the UK) paints an entirely different picture. This analysis concludes that evidence is rare and the topic is not really well-investigated, if there are studies on that subject, they are mostly from the U.S. system, and suggests these results of competition:

- clinical outcomes are likely to reduce quality
- access to necessary healthcare is mostly investigated as being reduced
- costs and efficiency may be improved on the providers' organization's side but with no effects for pricing and macro-economic issues
- satisfaction of the patients may increase
- professionalism becomes reported to decrease; this is particularly true for staff's stability and internal cooperation
- impact on the provider system is characterized by growing fragmentation by risk selection and by an increasing privatization and number of mergers

The concept of competition in healthcare refers to the assumption that the competing market interests of all the actors in healthcare could entirely or at least sufficiently become balanced among the triangle of payers, providers and patients if implementing a widely unregulated relationship between these key "market-players".

The fundamentals go back to Adam Smith (1723～1790). His ideology was that the very nature of any humans would only aim at maximizing profits. Accordingly, this assumed natural behavior would positively support the life of any of the individuals as long as individuals can select and trade goods on the markets. These markets would permanently profile prices and quantity of the goods.

But there are two pre-conditions for these assumptions to be considered gravely: One is

• any stakeholder on this market would hold the same power and the other is that

• none of the actors would be fully able to succeed against the others.

These assumptions include the condition that the number of the sellers of goods would always be large enough to avoid the dominance of a single provider. Only if this assumption can be set into action and become stabilized permanently, markets would be, according to the Smith's theorem, preferable for everybody.

But in terms of healthcare, the underlying assumptions are obviously wrong. Neither any of the actors holds the same power nor can competition hold the market's balance without external regulation. The lack of resources and providers especially in underserved regions is the normality but not the exception.

Competition makes losers and winners and there is no guarantee of a universal benefit for patients if one provider would compete against the others on unregulated markets. There is internationally no evidence that competition could help to minimize the inequality of access to healthcare and would improve quality under the condition of lacking in resources. There is also no evidence that competition would help to keep down the total healthcare system's cost.

Health economists speak of failures of competition on health markets and ask to introduce regulations and management for healthcare services as recently (2012) done by the "Affordable Healthcare Act" in the United States.

The regulation of competition on healthcare markets is to adapt the providers' behavior to the specific characteristics of these services, such as

• markets are ruled by the necessity to extend the offers actively, which might be dangerous for the third-party-payers and the patients as well

• markets tend to select not only needs and risks but also the bargaining power of single groups, which clearly contradicts the interests of the care-depending patients

• the need of healthcare and the economic power of the dependent has generally been seen as being reciprocal

• the interest in profit may severely contradict the needs of the public

• competition can terminate professional skills and can waste resources and investments

• the fundamental conditions for effective healthcare will make it indispen-

sable to increase regulations and to control permanently utilization, which will result in a vast bureaucracy.

All these aspects become multiplied due to the large number of potential competitors in the healthcare industry. If a society wants to care for public and common interests by competition, the society will come into conflicts with the common public interests. The consequence is the permanent extension of regulations to control the failures of competition. Interestingly, while the U.S. system is most market adopted on the one hand, it is globally one of the most regulated ones on the other.

The Nobel Prize winner for economics 2008, Paul Krugman, has made some notes on the issues which may be attached to remarkable importance not only for the U.S.:

"*This week yet another report emphasized just how bad a job the American system does at providing basic healthcare. A study by the Robert Wood Johnson Foundation estimates that 20 million working Americans are uninsured, in Texas, which has the worst record, more than 30 percent of the adults under 65 have no insurance.*

And lack of insurance leads to inadequate medical attention. Over a 12-month period, 41 percent of the uninsured were unable to see a doctor when needed because of cost; 56 percent had no personal doctor or healthcare provider.

Our system is desperately in need of reform. Yet it will be very hard to get useful reform, for two reasons: vested interests and ideology. …

The most striking inefficiency of our health system is our huge medical bureaucracy, which is mainly occupied in trying to get someone else to pay the bills. A good guess is that two million to three million Americans are employed by insurers and healthcare providers not to deliver healthcare, but to pass the buck to other people.

Yet any effort to reduce this waste would hurt powerful, well-organized interests, which have already demonstrated their power to block reform. …

We also have a big problem with ideology. … America is ruled by conservatives, and they have a private obsession: they believe that more privatization, not less, is always the answer. And their faith persists even when the evidence clearly points to a private sector gone badly. … I could cite many examples of this obsession at work. But a particularly good illustration of ideology-induced obliviousness is the 2004 Economic Report of the President, which devotes a

whole chapter to healthcare that can be read as a sort of conservative manifesto on the subject. The main message of that report is that U.S. healthcare is doing just fine. Never mind the huge expense, the low life expectancy, the high infant mortality; it's a market-based system, so it must be good."(Krugman, 2005)

The contrast between the "competition belief model" and reality is most remarkable. Readers should additionally understand that it clearly will make a difference if competition is proposed for developed or for just developing healthcare systems. But whatever the readers' position is, competition is a reality. Therefore, managers in the healthcare sector have to identify both the competitors and the particular advantages they are seeking for. Managers cannot decide on having competition or not, and they have to decide on behavior under given and ruling conditions. They have to know problems and have to develop strategies to do best for patients and for the provider's organization.

It is an ongoing debate if and under which frame-conditions and regulations, market competition can become transferred to the particularities of providing and utilizing healthcare and nursing. This market competition is a particular but most important trunk of all the arguments far beyond the aspects of "ranking" and "benchmarking" providers. Here the key problem is to avoid

- risk selection
- rationed access to necessary healthcare
- "medical arms race" and "supplier induced demand"
- over-and underutilization of healthcare

Discussing competition in healthcare, it will obviously make a difference if we take

- the public health perspective and macroeconomic concerns
- the microeconomic concerns of single providers
- the patients' perspective or the third-party payers' interests
- the major point of arguments around competition.

The discussion on competition is often simply a substitute for the discussion whether healthcare has to be guided by norms of equal access for anybody or by risk selection, by involving the public in norm-setting procedures or by leaving that to the providers' decision. Looking deeper into these matters, we also discover nearly any of the controversies around the management of healthcare. In this way, we learn that the controversies are simply masking the true

conflicts between

• seeking for Public Health based evidence in order to meet the needs of the public best under given resources (planning) versus

• the providers' necessities to refinance investments and (if required) to add or even to maximize profits.

The true conflict is not the race for the best offers but the race for fundamentally different views on the goals and the functioning of a healthcare system. The specific constellation within the triangle of patients' interests, of providers' intentions and the third-party-payers' prime goals gives the topic of "competition in healthcare" a fundamental importance for healthcare management. Different answers and positions will certainly split off the goals of management and the particular systems' functions.

The needs for healthcare are always inhomogeneously distributed within a nation's population. That is why competition in healthcare may have very different consequences for different social groups and social strata. It may show advantages for some and disadvantages for the others. A particular problem is the artificially constructed so-called "risk groups", made for a certain range of risk selective strategies or for strategies to offer and to apply care differently and unequally. Therefore, such concepts of grouping risks and the specific methodology to do so play a major role in competition and give epidemiology a key role in understanding competition. The in-or exclusion of those which are particularly depending on medical help has been a matter of concern and conflicts for centuries.

To avoid the danger of excluding a large proportion of a nation's population from access to help (likely to be followed by unwanted social-economic consequences) and to ensure the health markets' successful constant growth, some countries deny market competition in the case of healthcare utilization. Others promote the contrary, while others again try to find a balance between market competition and legal regulations (see regulated or managed competition). The latter prefers the concept of adjusting and regulating competition against a set of ruling social goals and tries to implement an independent agent to supervise goals of competition.

Those preferring free market rules for competition in providing prevention, healthcare and nursing or rehabilitation hypothesize the followings:

• any of the providers would be free in his decision to offer treatments and services and to select consumers

• the consumers would be free to pre-select the necessary and appropriate medical care and the providers they need according to knowledge, preference, purchasing power, price and quality (except emergencies)

• the medical and care professionals would be free to select the third-party-payer according to the offered health plans and conditions

• third-party-payers would be free to select the contracted caregivers and provider companies such as hospital chains

• providers would be free to select medical and nursing staff according to their entrepreneurial and business concept

• medical and nursing staff would be free to settle on their own risk or to select an employing provider organization

Some economists, mostly from the followers of the Nobel Prize winner Milton Friedman (1912～2006), postulate the mentioned assumptions as grounding the very and only basis of freedom which can exclusively be rooted in free market competition. They earmark medical services provided by free markets and their rules are endangering the very fundamentals of a free society.

But another Nobel Prize winner Kenneth Arrow focused on the crucial points of risk selection and the limited access to healthcare if shifting it to unregulated market rules. He clearly pointed out the disadvantages both for the people and for the macro-economics and the healthcare industries.

There is an extended and ongoing discussion among economists and researchers on healthcare systems and among the public on the "failures of competition" in the case of healthcare. The discussion follows the overwhelming empirical evidence of the social ineffectiveness of free market healthcare systems.

More basically and theoretically, competition is often hypothesized as being most fundamental for the evolution of any complex system. Even the evolution of biological systems becomes sometimes interpreted as being exclusively rooted in competition.

These allegations go back to interpretations of Charles Darwin's work on the evolution of biological systems[①]. Some interpret his findings and writings also as the grounding concept to understand societal and economic development. They are transferring the concept of natural selection to social life. Consequently, such

① Darwin C. On the Origin of Species by Means of Natural Selection, or the Preservation of Favored Races in the Struggle for Life. London: Murray, 1859.

views make limited access to healthcare a method of "natural selection". Such market rules which exclude people from access are assumed to be the method of true freedom and choice. The concept is also called Social Darwinism and has turned out to be very effective in overshadowing the minds of many people and of scientists, too. The late 19th and the first half of the 20th century have shown the disastrous results of this thinking and practice are the neglect of any scientific evidence and ethical principles.

The definition of health as given by the preamble of the WHO Charter can be taken as a direct answer to the Social Darwinism theorems as practiced by German politics between 1933 and 1945 pro-actively. The evolution of mankind results not from the survival of the "strongest" but from the ability to adapt the living of a population to the given natural conditions best and from the ability to cooperate in survival and development as well as to adapt the given environment to people's needs by cooperating. But this, indeed, needs cooperation and help from each other instead of competing against the weakest.

The general discussion takes the controversy on evolution through competition and/or cooperation a very serious matter[①].

"*Competition based on optimization plays a significant role in theories of the evolution of species and some theories, of the evolution of business or industrial structures. But evolution does not result in optimal selection of species or businesses for the future, and there is scope for doubt about what is being optimized by survivors in the evolutionary process.*"[②]

A large number of scientists stress especially the impact of cooperation and social coherence by providing the essentials of life for everybody. Social coherence within a nation is also empirically assessed as an advantage for a nation's prosperous socioeconomic development (Wilkinson, 1994, 2005). Especially education and healthcare provision are seen not only as an ethical matter but a precondition and aim for progress but not a burden or a "*black hole of economy*" as Milton Friedman does[③].

Nevertheless, a number of influential economists (mostly the so-called "neoliberalists") demand competition for the utilization of any health service and for

---

① Axelrod R, Hamilton W D. The evolution of cooperation. Science, 1981, 211: 1390～1396.

② http://ageconsearch.umn.edu/bitstream/123543/2/wp%2047.pdf.

③ Friedman M. How to cure healthcare? Hoover Institution, Stanford University, 2001.

developing healthcare systems in the emerging countries. Others again assume cooperation as the way of solving the fundamental problems in order to keep mankind's future safe.

But even most supporters of competition in healthcare provision want to limit competition on seeking for quality. They want to establish an umbrella of target-focused regulations and call that "managed or regulated competition". But that indeed needs some kind of saturated healthcare markets; if not, competition will always act against the weakest. For most of the time in history, it was seen against the ethics of the profession to offer treatment and nursing for reasons of profit making and beyond the borders of needs. This norm always found support since healthcare was mostly needed by the poorest, the disabled and the older and was paid by a mix of self-payments, donations, employers' benefits and tax-founded services. Medicine and healthcare were accepted especially as a service for the "losers" in economic competition and were spent to hold the social balance. It simply was a matter of charity to react actively to needs but not to compete for market shares in the healthcare businesses.

In some countries, these well-proven facts have been made to implement rules explicitly forbidding competition between providers and between public sick funds like in Germany, where competition in healthcare had been against law up to 1994. Since then, the German healthcare system has undergone a fundamental transformation in its social visions and concepts only through setting it under mechanisms of competition. One of the most important changes of the system is the implementation of risk selection as an unwanted but nevertheless guiding rule followed by implementing more and more bureaucracy to control the consequences like growing concern on corruption.

The traditional function of healthcare is changing internationally since healthcare industries are a remarkable and fast developing segment of most of the nations' economy. Healthcare spending is exceeding considerably many nations' economic growth, but it is also exceeding the income of most individuals and their families. The eminent economic role of healthcare will further extend and accelerate the transformation of the nations' healthcare systems globally. Therefore, healthcare not only needs obviously professionalized concepts of managing demands and supply but also needs to use modern management concepts and skills.

Nowadays, healthcare is very complex and handles enormous resources

which make it absolutely necessary to improve the management both of healthcare and of its supply through qualified entrepreneurial competence. This is true for any healthcare, independent if being offered by non-or for-profit-providers or if being paid by charitable funds, state run institutions or public or private insurances of any kind. But it is also true that successful competition needs effective cooperation.

Indeed, if the surrounding economy of healthcare is market driven only, care giving will be influenced by market competition in many ways. Some of the effects have to be controlled by supervision and control because they are basically rooted in the selective mechanisms of competition. Competition needs fundamentally risk and providers' portfolio selection. Both are tremendously problematic in healthcare as long as socially not discriminated accesses to necessary and appropriate care for all citizens are seen as top features of a nation's healthcare system. Competition is of enormous importance (1) because of forming the health services in visions, infrastructures and governance, and (2) because of deciding the relationship between private, public and/or social insurances.

Managing healthcare always raises the question whether to push competition in order to maximize financial outcomes or to develop policies to prevent people from the failures of competition. The reason is simple: the overwhelming majority of patients are not able to perform under competition successfully.

Some share the view that competition would not work under the frames of charity or of non-for-profit offers. These discussants see the shifting of healthcare to for-profit providers a shift to free markets. But it is clearly realized that even market systems have developed a tremendous diversity of regulations to control both primarily profit gaining concepts and competition.

It is helpful to differentiate the settings for the discussion at least into the following points:

1. If there is a public or governmental goal to guarantee access to healthcare for every citizen, access has to be independent from the individuals' income.

Consequently, medical care must be available for everybody but to a defined and universally accepted standard of necessity and appropriateness. The idea to improve access to healthcare through competition implies two main assumptions: one refers to a setting where patients compete for access to limited resources; the other sees the providers competing for patients if the offers surmount demand. The first assumption will regularly be followed by under-utilization and the

second one by over-utilization. If both over-and under-utilization are working in a system at the same time (as they regularly are), competition will have serious impacts on developing inadequate, ineffective and inefficient infrastructures of healthcare utilization. Most of the analysts and empirical studies stress universal access would need planning and pro-active regulation/management to control both under-and over-utilization. Currently, there is globally no evidence that competition could improve access to necessary and appropriate healthcare. On the contrary, when providing citizens with the opportunity to find help when they are ill, regulation and social governance are necessarily needed. This has to ensure that access to healthcare will be independent from competition and from the provider's effective resource allocation.

2. Effectiveness can only become measured if there is a goal or standard to be expected.

Whether a measure is effective or not does not depend on the degree of targets achievement. This raises the question on target setting in healthcare. The standards are coined both by the scientific evidences as currently available and by ethical or social norms as represented by national health politics and/or internationally by the WHO. Whether a measure is effective or not depends on these particular goals and objectives. It is common knowledge that the effectiveness of healthcare does not only depend on a single provider. Effectiveness depends also on the whole infrastructure for services in a region, on the social structure of the patients and on the distribution of available resources. Whether a healthcare system is effective or not has primarily to be measured on the nations' level. But competition intends selection. Selection can only work if either the patients or the third-party-payers are selecting the provider or the provider selects the patients and the third-party-payers. The introduction of competition aims definitely at selecting patients according to some prospectively selected goals and outcomes. Under these frames, the pre-estimation of risks, of utilization and of outcomes becomes a most sophisticated methodology of competition.

3. Referring to efficiency, the role of competition has to be seen differently on the macroeconomic and the microeconomic levels.

As the internationally known examples(and the U.S. ahead) show, competition in healthcare and health services is macro-economically most inefficient if measuring overall costs in relation to access and outcomes. But on the contrary, competition can be most efficient on a micro-economic level inside the provider

organization or the insurance company. As especially managed care organizations show, capitation techniques and prospective payment systems have made the preselection of risks a mainstream of current healthcare management. But it is also evident that competition easily endangers the effectiveness of staff members' cooperation and satisfaction at work inside a provider organization.

Unregulated competition fosters many unwanted or socially not acceptable effects in insuring individuals against health risks and in providing services. It excludes a remarkable proportion of people from access to services, if tax payers do not fill the gap. And what is more, in particular market competition makes the state an important market player.

Competition is a central matter of international healthcare management, too. What are the driving forces behind? Only four dimensions can be targeted by competition, namely

1. the fixed costs, namely the capital costs
2. the variable costs (mostly salary)
3. the selectively offered kinds of products
4. the quality of products

Each of these four arguments is most relevant to competition on global healthcare.

As developments go on, one may expect the lowering of variance of fixed costs internationally. Despite being far from this, variable costs are also equalizing in the longer run. If the driving force of evidence based medicine determines the quality standards of healthcare, it will be interesting to learn what competition will achieve.

Currently there are tremendous efforts undertaken to adapt healthcare to competition and to develop concepts to overcome the failures of competition at the same time internationally. One of the leading intentions is to implement rules to adjust competition only and exclusively to "quality" through implementing concepts of regulated or managed competition.

The international debate on all these subjects can be roughly summarized under five headlines which will be briefly discussed in the followings:

1. competition for access to healthcare
2. competition among providers
3. competition among insurers
4. competition on results

5.competition on values

Choice

In healthcare, "choice" is usually considered as an individual advantage regarding

- choice of a health insurance and its coverage plan
- the right to choose care providers
- shared decision making for services and treatments.

The issue "choice" focuses many of the arguments on how a nation's healthcare insurance and provision mechanisms are or should be constructed.

The discussion on the "right" of choice is biased by fundamental ideological positions. In some countries, the discussion plays a major role in supporting mandatory National Health Services and Social Health Insurance or voluntary Private Health Insurance (PHI). The discussion includes arguments that only Private Health Insurance would provide the freedom of choice for providers or treatments.

Whatever position the discussants will take, there are at least three questions that have to be answered:

1.Do all of the people have the resources for free choice and can they afford an insurance covering all their individual risks and needs prospectively?

2.Is it realistically possible to build up a service system, which offers all the citizens all the opportunities of evidence based prevention and medicine they want at any region and at any time?

3.Are patients independent consumers of decisions about treatments and are they free from "supplier induced demand"?

The right and ability of "choice"will stand symbolic for the contradicting position if free markets or public solidarity can do better in providing healthcare. Intentions to transform national healthcare systems this way have unavoidably to clarify what "choice" regarding healthcare coverage and provision means in reality. The main aspects may focus on three issues:

1.the free choice of third-party-payers to accept applicants or not

2.the free choice of third-party-payers to accept healthcare providers or not

3.the providers' free choice to accept and to select patients

4.the providers' free choice to contract with third-party-payers

5. the individuals' free choice to apply for health insurance

6. the individuals' free choice of a healthcare provider

In real life, the construction of "free choice" is widely unrealistic:

• The overwhelming majority of people in the globe do not have the free choice to buy insurance or not. They simply cannot. And PHI is not interested in giving the freedom of choice: The concept of businesses is a risk selection.

• In countries like Social or Public Health, insurance providers do whatever they can in order to limit the free choice of health insurances to contract with providers even if they are accredited and licensed.

• In most of the advanced health services systems, providers are not allowed (or only under defined circumstances) to reject patients.

• In most of the regions round the world, the economically highest advanced ones included, healthcare becomes not offered in a way that patients can always select the assumed "best" offer out of a variety of offers. That would need saturated or even oversaturated markets in all the provided medical and nursing specialties. This is far from reality and none of the actors is really to come to that point. On the contrary, here political activities are to limit choice by reducing offers or by extending them internationally.

• While it is possible to choose a pair of shoes out of one hundred offered on a market, there is regularly no chance to choose a treatment provider for kidney transplantation out of one hundred competing treatment sellers. But there are many cases reported where "choice" is accompanied with corruption for finding access to transplantation.

It is hardly possible to discuss "choice" in the context of proven international studies, because there are none. According to the authors' unsystematic experience, we conclude the following:

1. Under the frame of Social Health Insurance, the choice of health insurance is given if a variety of different SHIs can be chosen like in Germany. But except a margin of benefits, the benefit plans are equal for each of the insured and independent from income or premium. In systems with SHI, the insured are mostly allowed to choose providers and it is explicitly wanted by law that patients and doctors share decision making on treatments. That is why policy and regulation focus on avoiding supplier induced demand. Decision making on particular treatments is regularly regulated by "necessity", "appropriateness" and "efficiency". Access to "Complementary and Alternative Medicine" scientific evidence is also

mostly allowed.

2. National Health Services have uniform health plans or leave decisions on benefit plans to regionalized community decisions. The choice of providers is differently regulated and may depend on availability. Individuals are often demanded to subscribe for a chosen primary care doctor for a defined time interval and are asked to re-subscribe after time interval has passed. Shared decision making is usually seen as the standard of evidence based medicine, and is also to open ways if patients reject this medicine because of preferring Complementary and Alternative Medicine.

3. Under "traditional" PHI, there is a variety of privately purchased for-profit health plans, but they are losing market shares at least in economically advanced countries. Part of the policy is to limit choice by either excluding covered benefits (risk selection) or by regulating access by co-payments and deductibles.

4. Under the Managed Care mechanisms, choice is mostly rather restricted both for patients and for providers due to the frames of contracts and related prospective payment mechanism.

The "choice" is typically at the highest under fee-for-service rules. But this leaves the risk of reimbursement to the patients and does not provide the opportunity of choice to those not able to pay for choice.

The covered arguments may show that healthcare managers are typically in duty to manage choice for healthcare under the umbrella from a nation's legislation and the frames of a contract. Patients are primarily not limited in free choices by contract but either by the patients' or the healthcare systems' lacking resources. The unregulated (unmanaged) free choice of healthcare implies a consumer's being entirely independent in making decisions. But none of the nations would need a healthcare system if all its citizens had all the economic and social privileges and requirements fundamental for free market choice.

Looking into matters of choice, it becomes clear that it is simply a statement in competition for some insurance companies and providers advantage. That is the ultimate reason why internationally advanced Health services systems have regulations to direct choice at the border of individual and social interest.

see Complementary and Alternative Medicine
see Consumer
see Evidence based Medicine
see Failures of Competition

see Integrated Care
see Managed Care
see Patient
see Primary Care
see Risk Selection

Competition for Access to Services

Competition for access can be discussed under two different scenarios:

1. Both the objective needs and the subjective demands for healthcare exceed the offers and the resources available. That will be the case in unsaturated markets or their segments.

2. Offers and resources of healthcare exceed (at least partly) both the needs and the demands on saturated markets.

In the first scenario, it regularly happens that those individuals most depending on healthcare will be the losers if forced to compete for access to necessary and appropriate care. They are permanently in need of particular healthcare management and advocacy in order to avoid under-utilization. Here healthcare management is to improve access and outcomes, while competition harms the underprivileged ones.

In the second scenario, competition is assumed to reduce offers through setting providers under competition regarding pricing, access to contracts or demanded outcomes. A common method is a "same price policy" for any of the classified products and for any provider. The examples are the case-classification schemes such as the Diagnosis Related Groups. But here marketing becomes a new healthcare business and is mostly to increase demand and utilization beyond necessity, appropriateness, and economic rationality. Here healthcare management is to compete for the provider's success. Management and competition is seen successful, if providers grow up in market share against others. But as examples show, this will not reduce the total offers, but (1) will make provider chains bigger, (2) will result in concentrating offers in large centers, followed by underserving unattractive regions and will (3) increase supplier induced demands and marketing. As examples from some Countries show the issue of corruption becomes also a matter of growing concern.

Healthcare systems being under competition for access tend to split into dif-

ferent systems for different social groups of patients and consumers. This splitting develops towards one system for individually charging patients, another system for tax-paid services for those depending on subsidies. Also charity-based access gets growing importance.

For some who particularly support market philosophies, competition for access to care is also a kind of wanted social competition. The assumption is that particularly low class people would be endangered by moral hazard which should be prevented by competition for access. Those systems' philosophy and culture are rooted in market competition rather than in solidarity, equity and justice. Particularly recent transformations in some of the economically developed countries give illuminating examples.

see Case Classification Schemes
see Marketing for Healthcare
see Over-utilization
see Under-utilization

Competition between Providers

The common view sees competition among providers as the ultimate road to improve effectiveness, efficiency and quality of healthcare by profiling infrastructures, provision and utilization, and outcomes in healthcare. Unfortunately, the empirical evidence is both rare and if some studies exist they do not really support this assumption.

But most of the public health experts share the opinion that a minimum of at least seven regulations have to be set if implementing competition among providers, that is

- universal access
- universal coverage
- universal norms for accessible benefits
- free choice of doctors and facilities by patients
- purchaser-provider-split
- no provider selection by third-party-payers
- strong anti-corruption policy

If any of the providers will act under these preconditions, the overall assumption supposes competition primarily to maximize productivity and quality.

But analysts also argue competition would primarily set incentives to increase reimbursements by some selected offers and neglecting economic unattractive ones. Empirical evidence proves that true. It is also evident that competition among providers endangers quality because of mechanisms around cost shifting incentives. In order to regulate this danger, the number of regulations increases tremendously and causes costly bureaucracy. But particularly the competition through strong risk and portfolio selecting practices is under controversial discussion.

The assessment might be different on the microeconomic level of the provider organizations. Here competition may be of

1. structural advantage (by optimizing the providers' infrastructures).

2. process advantage (by optimizing processes of service utilization, such as clinical pathways).

3. portfolio advantage (by optimizing the providers' portfolios of offered services and treatments)

4. quality advantage (by optimizing the effectiveness of offered services).

see Quality

see Risk Selection

Competition between Insurers

Insurers have three mechanisms to compete with each other:

- contracting risks selectively
- competing for high volumes
- competing by offering additional services (offering "choice")

Each of the mechanisms holds the potential of setting one insurer above another. Selective contracting of covered risks competes through lower prices against social health insurances prices, which compete through average premiums that cover a wide range of risks of the "average" population. Under competition mechanisms, insurances try to select insures either earning more than the average or being healthier than the average. This selection policy competes aggressively against the ultimate concept of public and social insurance.

The competition of for-profit insurances for high volumes aims to have a high volume of potentially good earning and healthy people. This number is regularly limited. Because of rising costs, if these consumers become older private in-

surance may show a dramatic increase of premiums for the insured people. If as it is in some countries (for example in Germany), these people are not allowed to return to Social Health Insurance. The competition for young and good earning people might became an disaster both for the insurance companies and the consumers if those people become retirees.

Most experts share the opinion that competition among public insurances would first of all need to limit universal coverage and access and to allow risk selection policies. But there are some trials to also put social insurances under competition. The typical mechanism is to allow to use socialized money for marketing and to also allow coverage of those benefits which are not proven for evidence, which are not necessary and which are not appropriate.

Unregulated competition in healthcare will foster socially and legally unwanted effects, but will most of all exclude a growing proportion of people from access to services. This competition regularly increases tax-spending for healthcare coverage. In systems based on tax-payment, competition makes the state an important market player and the legal regulator at the same time. It is obviously problematic to make an actor on markets also the supervisor or the sponsor. The U.S. is always seen as the striking example for the consequences of market competition with its expanding bureaucracy (taking 30% and more of the premiums and revenues in some insurances), with its ineffectiveness and with its inefficiency on a macro-level.

see Capitation
see Choice
see Failures of Competition
see Managed Competition

Competition for Results

This is another type of the many concepts to manage healthcare through competition(Porter, Teisberg, 2005). The concept basically assumes it fundamental to drive healthcare to (selectively) wanted results.

Doing so needs to clarify

- what a "wanted outcome" is
- how outcomes can become specifically related to the provider's activities
- how follow-up patients' health can last longer than the time period

of treatment

• how one can avoid incentives to pre-select patients according to the likelihood of making wanted outcomes true

• who sets the criteria for measuring "wanted results" and

• how one can standardize results in relation to the patients' specific health conditions

In practice, the "producers", the payers/consumers, the patients or independent sponsors will have different views and interests. Linking measured outcomes to single "producers" is one of the fundamental problems. The response to medical treatment may vary widely even if correctly performed. Measuring and comparing outcomes for purposes of competition might easily lead to tremendous bureaucracy and analytical efforts and also to risk selection and increase the number of unnecessary treatments. Even if setting the right targets, such as reducing the over-prescription of antibiotics, the results for competition might be very uncertain.

The concept needs to be run, for example, by

• planning the numbers of cases per unit of time, per professional's qualification consumed, per team, per facility or department

• calculating gain per cost unit

• selecting patients and cases in order to profile portfolios

• grouping of pre-classified, selected and contracted products and expected outcome per risk group of patients

• measuring long-time outcomes related to patients' characteristics and endpoint measures

The assessment of healthcare results basically needs to measure against a standard and demands transparently to compare results for the public. The problem is obvious: Standardization is a way to reduce variance and variability, while comparisons need open access to data. Both aspects encountered conflicts and limitations for pushing incentives for risk selection and for in-transparency as well. There are always many ways to reach an "average".

Managers should also understand that competition on results will foster mechanisms to increase the number of cases through competition (hunting for patients) and/or through lowering the norms for therapeutic interventions. The healthier the patients being treated are the less is the likelihood of unwanted results, complains and side-effects.

The authors share doubts that competition on results could work sufficiently and with acceptable costs. But there are certainly exceptions for particular indications and aims.

Failures of Competition(FoC)

These failures refer to a number of arguments used in the debate on the distributing of essential goods and services such as water, air, food, education, housing or, as discussed here, health and medical care. The most discussed failures of competition in healthcare can be summarized as follows:

1. Healthcare does not meet the characteristics of typical market economy due to the so-called uno-actu-principle.

The principle works if the demand for a service and the provision of a service occur at the same time and if diagnostics and medical intervention are in one hand or responsibility. The patient is predominantly not capable to prove and test the demand and quality of particular treatments in advance or to take time to do so. This limits the chance to make independent market decisions like consumers in other fields when buying goods and services would do.

2. The occurrence of a health condition is (regularly) uncertain (see K. Arrow), not predictable for a single person and not any health condition can become identified as a disease.

Diseases are regularly not foreseeable for single individuals but only for groups of people in terms of likelihoods. (There are exceptions, if diseases are fully determined by genetic conditions.) The likelihood that a population's individuals would fall ill is always 100%, but the structure of conditions behind differs regarding the manifoldness of diseases that people are likely to suffer from. The total costs for healthcare are not primarily depending on an individual's disease but on the patterns of the total population's morbidity. According to roemer's Law, traditional healthcare sets doctors into the position to decide on the amount of medical procedures that are necessary and appropriate.

This makes revenues depend on their decision-making at the same time. This problem may become much more important, if doctors' decisions are ruled by the financial interests of employing provider organizations.

3. If a country's goal is to offer healthcare coverage to its whole population, competitive for-profit insurance industries have to be noticed as being socially

most ineffective and inefficient.

While market systems are regularly efficient and productive on the micro-level of the provider's economy, competition might help them to compete against other providers. Competition can help to make providers' interests come true. But winners existentially need losers or their efforts will be wasted. In developed healthcare systems, that may help to reduce unnecessary offers. That might endanger public and macroeconomic objectives in developing healthcare systems.

4. Considering traditional aims of healthcare, the market figure of the "customer" is hard to be constructed without deregulating the legal protection of patients.

The consumer is typically a third-party-payer but not the patient. This failure might set the interests of providers and insurances sharply against the patients' interests because of neglecting patients' interests. For this reason, some healthcare systems forbid or strongly regulate any competition under SHI or PHI.

5. In nearly any of the health services systems, consumers and patients are distinct from each other, since the providers' consumers are regularly the state, public sick funds or private insurances.

All these potential costumers declare to perform as the patient's advocate despite of their potentially competing interests. There is no guarantee that making the patient a consumer would set patients' interests prior to the competitors' goals. Integrating both the functions under the competing interests of a new type of provider, the for-profit managed care organizations with no purchaser-provider-split, might show dramatic consequences of competition for the patient.

6. Markets and market competition need pre-defined products and prices.

From the point of view of health sciences, the opportunity to classify all the medicine in terms of pre-designed products is limited and might reduce the individual variance of needs inadequately. Especially in out-patient-care, rehabilitation and in permanent care, the raising of product medicine and care might be inadequate and problematic. Here, the incentive of competition can be more powerful than the interest to keep the rules of evidence based medicine and patients' interests.

7. Under the frames of competition, it is seen unrealistic to guarantee the independency of professionals' decision-making and the sovereignty of patients.

In evidence based medicine, the independent and shared decision-making with

patients is a predominant condition, so interests of competition might violate this condition in many ways and directions particularly if competition provides incentives for over-and under-utilization or even corruption.

8. Competition sets massive incentives for risk selection and for establishing different levels of quality depending on the specific environment for competition. Competition regularly forces the implementation of a vast bureaucracy of regulation and control.

Analysts see advantages of competition restricted to some few highly prevalent elective operations, to some standardized diagnostics and to providing pharmaceutical products and supply industries. The overall concern sees competition forcing allocation strategies which neglect all of those services which cannot become offered efficiently under market conditions. This would easily split the market into fractions of services according to market interests either resulting in uncontrollable costs and in needs for healthcare neglected by markets but left to the public. Since necessary treatments and services are often unattractive for gaining profits, markets would select the profitable segment, while the unattractive segment remains to tax-payers' concern.

see International Health Services Systems
see Managed Care Organizations
see Managed Competition
see Patient
see purchaser-provider-split
see Responsibility
see Roemer's Law

Managed Competition

This particular concept was first published by Alan Enthoven in 1978 and was originally called "regulated competition". It was the developer's vision to propose a U.S. National Health Insurance Scheme covering any American citizen mandatorily.

It might be worth noticing that Enthoven is not a health economist by origin. He originally was "*an Assistant Secretary to Robert McNamara, Secretary of Defense in the Kennedy/Johnson administration. Enthoven's key position in the Pentagon, with the responsibility for reviewing the effectiveness of the*

American military forces, provided ample demonstration to him that the American military were incapable of managing themselves ... Enthoven's unique selling point did not appear until 1980, *when he was Professor of Public Management at Stanford University, with his maverick promotion of the Consumer Choice Health Plan to President Carter as one market-based means for establishing national health insurance*"①.

The intention was to provide U.S. citizens with a mandatory health insurance under market conditions. But Managed Competition became not a success in spending universal coverage as it was projected to do. But it was one of the driving forces for developing Managed Care and to change healthcare systems in many of the European countries towards market competition instead.

The concept has been internationally most influential but in the country it was designed for it was not. It could neither succeed in improving access for all the Americans nor could it solve the problem of uncontrollably spiraling costs. Especially the cost-containment incentives as proposed by using the Prospective Payment System and implementing product schemes for healthcare (see Product Medicine) were not limiting costs but were finally exceeding them above what is globally known.

Managed competition explicitly intends to overcome the disadvantages of the self-responsibility of individuals and families for health risk coverage such as the disadvantage of

- the high proportion of the non-and underinsured
- the mechanisms of risk selection by unregulated market competition
- the uncontrollable cost, low effectiveness and low macro-economic efficiency of the U.S. healthcare industry
- the wide spread of dissatisfaction with health coverage in the U.S.

"*This concept is a market-based policy of controlled competition among insurance carriers. It calls for the establishment of giant Health Insurance Purchasing Cooperatives (HIPCs) in every region. Its role is to bargain and to coordinate the coverage of healthcare. Made up of employers and individual consumers, these HIPCs are given the leverage and the purchasing power, thus, ensuring the mechanisms of a robust competition among healthcare plans.*

---

① Rayner G. The"new mandarins"and the monetarisation of the NHS. *In*: Iliffe S, Munro J. Healthy Choices: Future Options for the NHS. London: Lawrence & Wishart, 1997.

It provides incentives for the insurance companies, as well as physicians and other healthcare providers, to enhance quality, widen access, manage costs and increase benefits."(Zeman, 1993)

According to the developer, the concept was also designed to overcome the strict opposition of about the half of the U.S. population against any of the tax-paid benefits and social subsidies for the underprivileged and the poor.

For this purpose, the model tries to combine a market scheme with implemented rules in order to regulate or to manage the market. It is explicitly to regulate competition. To make this vision true, a "sponsor" has to take responsibility to supervise and to regulate competition, to monitor and to avoid risk selection, to evaluate the system's performance and permanently to readjust the rules, particularly the methods for rewarding healthcare. In particular, the sponsor and the HIPCs are seen responsible for the followings:

- the definition of the basic benefit packages equal for everybody as a basic insurance and through universally defining necessary and appropriate coverage
- the contracting of providers selectively
- monitoring and supervising access, necessities, appropriateness and quality
- the constant readjustment of methods to reimburse the providers
- ensuring the right to change providers
- implementing and controlling co-payments
- the unselected access to health insurance for everybody

The sponsor is responsible for defining and collecting the premiums and for distributing the money according to the mixture of risks covered by any of the particular insurances within the cooperative. Standardized risk adjustment models are used to guarantee the equivalence between risks to be covered and the revenues. Enthoven sees managed care offered by giant provider organizations of any type covering a region totally (in order to avoid competition between insurances) the precondition for managed competition.

Analyzing the fundamentals of medical services, Enthoven concluded seven aspects limiting competition in healthcare provision. These limitations are the followings:

1. Doctors and hospitals decide the necessity of a treatment and its utilization in one hand. The providers are widely uncontrollable and in power to decide their own profits (see Roemer's Law).

2. The traditional systems are independent from needs and only driven by doctors' interests in over-utilization and lacking interest in prevention.

3. The traditional organization of services combined with unregulated competition lowers the interests in the integration of different professional competencies.

4. Hospitals compete not through quality of appropriate services but through "medical arms race".

5. Hospitals show no interests in lowering costs because their profits do not depend on economic rationality of services provided.

6. It is hard for doctors with single offices to integrate principles of effectiveness and efficiency.

7. The ownership about the patient's data does not allow universal market transparency.

To solve these problems, Enthoven proposed

- to develop comprehensively integrated insurance and provider organizations
- to foster integration through pushing the interests in profit as the most effective incentive
- to replace an unregulated market concept through implementing regulars but leaving the right of a free choice to the consumers.

His concept of a regulated market consequently focuses on the following aspects:

- the integration of professional and financial responsibilities (Prospective Payment Systems, Capitation)
- population orientated instead of individual medicine
- the integration of in-patient, out-patient and home care through total capitation
- establishing multi-specialized group practices of employed doctors
- transparency about any patient's data for all the stakeholders

Part of the concept is the belief in moral hazard as most important for regulating healthcare.

In particular, he proposed rules for managed competition not primarily to foster competition but to regulate and to manage competition. The argument by Enthoven was that the U.S. dilemmas in healthcare utilization would be mostly due to unregulated competition, which would make it indispensable to manage

these disadvantages actively through

- the guaranty of a basic insurance for everybody
- the free choice of the provider by the insurer or the government
- the permanent supervision of services' quality and quantity
- avoiding risk selection as one of the most important objectives of unregulated competition
- the permanent change of reimbursement rules
- incentives not to go and see the doctors, if not really necessary
- a single payer system and the distribution of resources according to the risk profile of the contracted population
- the yearly new and free selection of the insurance by the insured people

The discussion around the concepts divides the experts along the following questions:

1. Will managed competition foster a problematic corporatization of health services with giant Integrated Delivery Trusts, integrated both horizontally and vertically?

2. Will managed competition lead into the integration of both insurances and providers?

3. Will managed competition set for-profit-organizations prior to non-for-profit-organizations?

4. Will managed competition terminate single physicians' offices?

5. Will managed competition be able to balance such objectives like effectiveness and efficiency in a way that access to services is guaranteed for everybody independent of the place of living?

Enthoven's concept failed in implementing universal access to healthcare and to control unregulated competition in the U. S. But it was most successful in transforming some European healthcare systems towards implementing elements of managed care particularly in the UK, the Netherlands, France or Germany. Any of these countries already had mandatory health coverage for its citizens. Thus, the introduction of managed competition did not result in something these countries had not provided. It was only implementing competition against solidar-

ity[①].

This had been part of the main drive of neo-liberal deregulation policy in the 1990s up to beginning of the economic crises in 2008.

The ultimate goal of those in favor of deregulation politics was to spread Americans' preferences to Europe, which are seen in people's self-responsibility for healthcare and in having unregulated market economy also for any of the social affairs, education or the protection of environment. This might explain why managed competition was not effective in the U. S. but has shown tremendous impacts on many of the international healthcare systems, especially the European healthcare system.

see Choice
see Health Insurance Systems
see Managed Care
see Moral Hazard
see Diagnoses Related Groups
see Product Medicine
see Prospective Payment Systems
see U.S. Health Service System

Market-power of Providers and Consumers

This topic refers to the fact that the power of the market players should always be balanced according to theory. But this condition hardly becomes true in reality.

Paying attention to the true market power of the providers, it was traditionally seen most critical to adapt healthcare to market conditions for some few reasons such as

- the provider is in the nearly uncontrollable position to decide on the kind and the amount of medical services provided
- the power of providers raises the intention of third-party-payers to limit and to control and even to ration benefits against the interests of patients

---

① Niehoff J U. The German health services system under transformation. Meeting of the International Association for Health Policy, 2003; Iliffe S. The Stockholm Manifesto. 14th IAHP-Europe Conference Thessaloniki, 2005.

• the individual's freedom could become damaged if consumption of medical goods is dependent from income

The shift from the power of the providers to the market power of the consumers (these are the third-party-payers) is obvious in many countries and in all of the Managed Care Industry. Yet, the regulating power of the consumers is seen most critical by the providers. The reasons mentioned are

• the regulation of the providers' offers will lead to explicit or implicit rationing

• the dependency of the patients might encourage third-party-payers to design benefit plans according to market conditions and to a "two or a third class medicine" but indicating different social chances for getting sufficient healthcare

• the third-party-payer would develop mechanisms in order to control, to direct and to limit the access to services and its best quality

• the third-party payer would be interested in under-utilization by determining the norms of necessary and appropriate healthcare

Some additional arguments are discussed regarding the problem of the macroeconomic inefficiency of competition on "consumer markets". An argument by P. Krugman strikes the points and may also be seen as an issue of international healthcare management:

"*I'm not an opponent of markets. On the contrary, I've spent a lot of my career defending their virtues. But the fact is that the free market doesn't work for health insurance, and never did. … All we ever had was a patchwork, semi-private system supported by large government's subsidies. That system is now failing. A rigid belief that markets are always superior to government programs—a belief that ignores basic economics as well as experience—stand in the way of rational thinking about what should replace it.*"(Krugman, 2005a)

Product Medicine

The (not yet established) term refers to an important and fast running development and practice made by the following features:

• offering, contracting and advertising for the delivering of healthcare and medical care in terms of highly standardized and closed therapeutic concepts

• making the healthcare a production process which might have subproducts and subcontracts

• profiling the providers' offers through a list of a designed portfolio with in-and exclusions mostly focused selectively on some few diseases with

- high prevalence or on
- selected diagnostics and on
- therapeutic methods

• profiling the offers according to the shared preferences of a very selected group of patients under fee-for-service rules

• standardizing the content of healthcare prospectively as contracted by third-party-payers

Such products may refer to

• products of risk coverage advertised by health insurance industry,

• products of offered care by single providers or provider organizations to third-party-payers and

• products of care and treatments offered to patients and to customers.

These products are prospectively designed and classified as "cases" by case-classification-schemes, such as the "Diagnosis Related Groups" or the "Diagnosis and Treatment Combinations", while traditional medicine is oriented at individuals. The conflict between an individual oriented medicine and a medicine treating an individual as a "case" goes already back to history and is part of the developing understanding of what medicine is and what doctors and nurses do. Consequently, changing that attitude back to far history will provoke a lot of controversies.

The discussions' background among doctors and nurses is manifold. The question is how to come to shared decisions and how to standardize diagnostic and treatment procedures, while not treating diseases but individuals. At the moment, it is unclear how one can combine the philosophy of selling healthcare products with the very principles of evidence based medicine and its condition of shared decision making.

In an economic environment, the question is how to minimize the variance of utilization by implementing prospectively designed products which people or paying parties can compare and selectively contract, buy, sell and pay for. To implement "product medicine" is much more than accepting standardized procedures in surgery or some other specialized medicine. This development is closely in line with the move from social and public responsibility for providing health and medical care and their insurance towards the privatization. The arguments seeking

for justifying this transition assume that

- specific healthcare products are in the producers' consensus and are frequent enough for establishing an infrastructure for trading
- the margin of profit can be calculated for each of the products and that this margin would only depend on the production process but would be independent from the patients' features
- the consumers are flexible to choose products or not
- the consumers will find wanted offers just in time and at location of residence
- the product will further exist after shopping

These assumptions might come true in some surroundings, such as the wellness industry or some selected chronic conditions. But in out-patient care, in emergency or under the epidemiologic reality of the huge number of people suffering from seldom diseases, these assumptions are not likely to become confirmed.

Analogous difficulties might occur if considering that countries are differently populated and may show very different patterns of healthcare needs. One may also accept that conditions in developing healthcare systems and rather developed ones will contain very varying conditions which cannot become covered by such simple reference from car industries or others.

One of the several major arguments around the failures of competition in the case of medical services has always been the unwanted or the impossible classification of healthcare in terms of pre-defined and selectively purchasing of products. The many trials to develop real "products" are preconditioning, if healthcare is forced to develop in a surrounding of markets and competition. Here the product is classified according to specific medical problems, therapeutic responses and wanted outcomes. This gives the opportunity for

- selective and prospective prizing and contracting
- external supervision of contracting and utilizing
- payment for performance
- offers, which are independent from location and time
- preselecting providers and
- selective insurance for included and excluded products.

The implementation of such a product medicine is globally challenging the self-understanding of the serving professionals, which is going to change the cul-

ture of medicine and insure its possible benefits.

Reference Pricing is a method of implementing product medicine. This is to fix maximum prices for third-party-payers for similar services or products.

It is also the methodology for designing products in healthcare, because reference pricing will ultimately foster the standardization of care and treatments and lower the variance of benefits. It is often used for pricing drugs and supply.

If the healthcare systems go this way, it will be of tremendous impact both on quality and on economics. Whatever the assessment of the outcomes will show, the development in question will have impacts on any of the existing health services systems and consequently for the insurance systems, too. The reason is quite simple: Standardization in terms of product medicine can only succeed if the products designed, contracted, bought and sold are frequent and depersonalized and if the system is adapted to market rules.

This can obviously be done for a relatively small number of diseases, but it directs healthcare into splitting off into at least two different systems. One is settled around some few highly prevalent cases easy to be standardized in order to increase efficiency, while the other contains mostly the very costly and economically unattractive ones. One may guess which part the for-profit insurers and providers are interested in and what part will be left to the public services. That is why the increase of frequent treatments and high prevalent products will be fundamental for the raise of product medicine and its particular economy.

There are only some few opportunities enabling the increase of the products' prevalence. These are

- extending the region covered by a provider, possibly far beyond the country's borders
- changing the concepts of treatment towards intervening preventively
- implementing what some call "medical arms race", and competing for the best doctors but rewarding them for the numbers produced
- giving incentives to do treatments repeatedly or
- providing unnecessary diagnostics and treatments.

The growing importance of "product medicine" is driven by a range of economic interests with unclear consequences for quality. This unclearness does not merely strike a single case but will have consequences on "provider induced demands" (see Roemer's Law) and the sharp tendency towards overutilization.

The authors assume the raise of the product medicine a running process. But

managers should seriously consider not only the short running pros but also the long-term impacts on the systems of delivery, research, education and training but most of all on overall costs and prices. The product medicine will have very different impacts in terms of microeconomic and of macroeconomic considerations.

Observers should consider that particularly for high prevalent reasons of utilization and under the condition of well-developed healthcare systems, some of the case-classification systems are functioning properly. At the moment, the influence of telemedicine on product designs seems also not well investigated yet.

see Case Classification Schemes

see Failures of competition

see Payment by Performance

see Roemer's Law

Value-based Competition

It refers to a (mostly critically discussed) concept by *Porter and Teisberg* (2006) developed to move the U.S. healthcare system to better outcomes and better efficiency through "value-based competition" or "competition on results". It is one of the many trials to reform U.S. healthcare, but nevertheless worth knowing internationally. The authors wonder about the failures of competition while they do not appear in other industries. They propose to implement a kind of competition focused on what the authors see as "value"and what is characterized by

- competition on the level of specific diseases and conditions (that means on the level of cases, not on the level of individuals)
- distinctive strategies by payers and providers
- incentives to increase value rather than costs
- information on providers' experiences, outcomes and prices
- consumer choice

To get along with this idea, the value-based competition wants to avoid the failures of any of the other concepts of competition, but in particular the failures of managed care and its incentives driving directly to under-treatment, to constantly spreading bureaucracy, to expanding administrative control of doctors decision-making and replacing the professional responsibility by somebody else but also focusing on the practice of rationing any services.

For the given reasons, the authors set 8 principles ahead of competition,

that is

- value for patients, instead of cost cutting
- competition for best results
- competition not only on outcome but on the full cycle of services
- high-quality should be made less costly
- value must be driven by providers experience and learning on the medical condition level
- competition should be organized on a national or regional level, not on an local level
- value-based competition must be supported by widely available outcome reports
- increasing value through innovations must be rewarded

Looking deeper into the concept, it does not ask any of the questions Enthoven or others have asked about developing or implementing the concept of managed competition. That concept was explicitly made to overcome non-and under-insurance, or the problem of lacking access and the failures of competition.

To get along with the concept of value-based competition, the authors develop their ideas on what "value" represents and how one can adopt pricing principles:

"*In true value-based competition, prices should be based on health value rather than effort, the complexity of the service, or overall costs. … Ideally, providers would someday set their own prices based on value, rather than be presented with the amount of reimbursement. … The principles of value-based competition make it clear that the most powerful reward of all is patients. If health plan encourage and support competition to attract patients based on results in addressing medical conditions, this will not only enable excellent providers to improve value further but will also drive substandard providers to either improve or lose business.*" (Porter and Teisberg, 2006)

Looking back to all the history of healthcare systems, the proposal raises the question whether an individualized and provider centered interpretation of what quality is will really solve all the problems and will heal the systems' failures. At least providers will not criticize the proposal.

see Competition on Results
see Managed Care
see Managed Competition
see The Failures of Competition

VII

Healthcare, Kinds of Provision and Facilities

General Considerations

Healthcare management focuses both on financing and on providing health services and on the particular relationship between the paying and the providing party. On the providers' side, any offer needs a setting for any of the different offers and related facilities. These frames for professionalized healthcare have to meet a wide range of demands, such as patients' needs, functional requirements of particular services and staff's anticipations①.

In general, it is internationally accepted that all the systems functioning in primary care need to be established in a way that people are enabled to reach professionals near residential or working places nearby. Despite some systems of a multi-tier hospital system, any of the more developed ones will have regulated relationship and cooperation between primary care and hospitals. The traditional tools are referrals and the exchange of patients' data including pre-and post-hospital diagnoses and treatments as well as recommendations for further treatment, rehabilitation and nursery.

These principal healthcare organizations are changing and further developing, but vary internationally. Some of the key-developments are:

---

① Griffiths L. Making connections: studies of the social organization of healthcare. Sociology of Health & Illness, 2003, 25(3): 155～171.

1. Primary care extends internationally but by implementing some more comprehensive responsibilities for coordinating all of the specialized care, rehabilitation and permanent care for disabled and elder people.

2. There are tremendous tendencies to shift traditional services of hospitals to out-patient care by settling a growing number of specialized doctors in single practices and small clinics, but offering specialized treatment, including surgery and consultancy for primary care.

3. While in the past, diagnostics and treatments were in one doctor's hands, the separation of responsibilities for diagnostics and treatment between several professionals becomes regular.

4. The delegation of doctors' tasks to highly qualified nurses and even the substitution and delegation of traditional tasks is a running process but in some countries under hard attacks.

5. Hospitals try to integrate into large delivery systems, including out-patient services, intermediate care, rehabilitation and permanent care.

The implementation of competition among provider organizations seems to result in three major organizational consequences (1) in weakening primary care, (2) in the fragmentation of services and (3) in increased mergers into large associations of providers.

The implementation of case-classification schemes and prospective payment systems is changing any of the traditional characteristics of healthcare and its organizational basis as given by the so-called Managed Care Industry, which is obviously very attractive to a number of particular interest groups.

Any of these developments is deeply influenced by national legislation and, as experiences from Europe and the USA show, by powerful lobbying.

These large international varieties do obviously hamper the process of compromising on definitions for healthcare facilities and their relating purposes internationally. There is also no compromised standard as to what type of a facility and organization meets the needs best.

Managers working in the internationally will easily find out the national context of what is understood under a particular national healthcare organization and facility. Some countries have strictly defined everything, while others have not. These definitions are mostly influenced by stakeholders' interests, by the methods of reimbursement and by social and regional frame-conditions. But this definition can also depend on legal demands as to how one can apply modern, ef-

fective and efficient healthcare best. But managers should also realize traditional understandings of what healthcare and its facilities are projected for and adopt facilities to users and their understanding and interpretation.

This context provides incentives to develop certain infrastructures and facilities but others do not. For managers, it is of strategic concern to keep pace with the organizational requirements of modern medicine. These necessities demand first of all to adapt to infrastructures of tomorrow's healthcare and its socially compromised missions and functions. A view towards future always points awareness primarily to the dynamics of healthcare rather than to defining terms. Especially the understanding of today's out-and in-patient care and rehabilitation varies widely and faces tremendous changes. Experts expect changes in the use of hospitals, of day-clinics, of out-patient facilities or even of tomorrow's home care. There are treatments becoming transferred from traditional out-patient to in-patient services and the other way round. That is the same with professionalized care, self-help and self-medication. Even the understanding of a particular profession's tasks is changing and the specialization in healthcare is not only facing the professions but also the organizational infrastructure(Lee et al.,2009).

This following compendium's chapter will only summarize terms regarding the organizational infrastructure of healthcare wanting to point some general aspects of the relations between function, facilities and organizational infrastructures(Lee et al. ,2009).

Acute Care

This is a function and pattern of care (inpatient or outpatient) in which that a patient is diagnosed and treated

• for an acute occurring episode of treatment (the demand might be simple or severe or provided professionally or non-professionally)

• for dramatic changes of health conditions in the case of pre-existing diseases

• for an accidentally discovered severe diseases that a patient did not know about at that time

• for the first and immediate treatment of injuries or of vital problems (emergency)

Unlike chronic care, acute care is often necessary for only a short time, and

it is often an emergency case. In the case of acute care, treatments cannot become planned and postponed. It regularly needs to provide infrastructures and staff at day and night and all the year round with low thresholds for access. Acute care will be mostly done by specialized professionals using sophisticated diagnostic and treatment supply and devices for consultation or referral to specialized facilities.

The entrance to acute care is usually an out-patient facility like doctors' or nurses' offices or smaller clinics and/or particular emergency services.

An emergency care is a special trunk of acute care and is usually done in specialized emergencies but belonging to a hospital. Those hospitals will usually have specialized emergency management. Consequently, managing the transfer of the patient is part of acute care.

In some countries and regions, emergency care usually has to be available without delay by law, or with only legally defined minutes of delay. Therefore, especially in less populated regions and countries, acute care needs particular organizational frames to guarantee access to medical service in a defined time-window.

Some systems are regulated in a way that uses "gate-keepers" like family doctors or general practitioners mandatory as a triage mechanism. This is to prevent hospitals from inappropriate and unnecessary utilization of hospitals.

Today's and tomorrow's advanced information systems and technologies have the potential to change any understanding of what acute care is but will also change the way of managing it.

Managers should well understand that acute care also points out another aspect. In any country's population, there is a remarkable fraction of people who decide not to go to the doctors if suffering from an acute health condition or cannot go because of lacking of access. Here acute care will often use traditional experiences and self-healing procedures which are also to be summarized under acute care. It might be reasonable to provide settings for this self-help, particularly if a nation's healthcare system is lacking resources.

In well-developed healthcare systems, we find a discussion regarding the evidence for provider induced overuse of healthcare services. Here we find a growing discussion regarding the misuse of resources which is also risky for patients. Here the argument is that some self-help in the case of acute conditions would be fitting for complementing necessary professional healthcare.

see Triage

Ambulatory Care

This refers to any medical care, both acute and chronic care, offered as an outpatient service by facilities like single doctors' offices, policlinics or by ambulatories. Even treatments in day-clinics might be seen as ambulatory care.

More and more medical procedures can be offered by avoiding hospital care and through taking facilities for ambulatory care prior to others. Ambulatory care can offer specialized and selected diagnostics, treatments, rehabilitation and nursing or may primarily offer general care, family medicine, defensive and simple medicine. Also the care in the case of chronic conditions has regularly been done by ambulatory care. The usual requirement of ambulatory care is the integrated netting with all the infrastructure of health services for patients of a defined region.

It is most important to understand that the effectiveness and efficiency of a healthcare system depends much more on the well-functioning of the ambulatory care than on any other type of facility. This is particularly true for the effectiveness and efficiency of hospital care which importantly depends on its cooperation with ambulant care partners.

Examples for out-patient facilities:

- physicians' offices
- day clinics
- hospital emergency departments
- diagnostic centers
- urgent care centers
- rehabilitation centers
- community health center
- school health centers
- workers' ambulatories
- dental care units
- physic-therapeutics offices
- mother and child care units
- permanent care units
- pharmacies

Boutique Hospital

This is a type of a hospital providing limited service. It is designed to perform one medical specialty such as orthopedic, eye surgery, cardiac and dental care for especially selected portfolios, individuals and social groups.

Such boutique hospitals are also common in medical tourism offers using strict selection of providers and patients sometimes close to hotels at favored locations for traveling.

These kinds of hospitals are usually very profitable because of its risk selection behavior and its ability to strictly standardize its performance. For other types of hospitals, the risk selective nature of boutique hospital may of tremendous influence on the efficiency of all the others.

These hospitals are an interesting example for the difference between microeconomic and macroeconomic efficiency by improving gains which are, however, against the interests of the majority.

see Medical Tourism
see Product Medicine

Autonomy

Autonomy signals one of the prior tasks of healthcare, namely to safeguard patients' autonomy and to help people to regain it. This is the final reason for prevention, medical care, rehabilitation and even for long-term care. More than that, respecting individuals' autonomy is an ethical principle for any of the healthcare professions and healthcare providing organizations. For sick people, medical services are to overcome dependency from others or from the limited physical or mental capabilities. For disabled people, rehabilitation and nursing are to lower handicaps and to improve participation and autonomous activities.

Both insurers and providers are asked to respect the rights of their members or patients to make decisions regarding their lives and the acceptance of medical interventions. Here the difficulty can occur if autonomous decision-making often depends on knowledge, motivation and resources. This coins the provision of understandable information, of supporting motivation and of helping with any of the resources necessary for a fundamental and effective healthcare. Healthcare is

not about "repairing" people but about cooperation which might be ongoing for the entire individual's further live.

That is why the outcome of a treatment or care can also be measured in terms of autonomy and independency regained. That makes autonomy an important outcome measure.

It is always a goal to assist or to entirely replace the measured loss of autonomy but also to focus on activities enabling a person to hold levels of autonomy and to prevent from further losses.

A particular aspect of autonomous decision-making coins the question of the ownership of a person's medical record. Internationally it is generally accepted that these records are fully owned by patients if not made anonymously or the agreement of the patient is not documented.

In healthcare management, autonomy is also coined by the relationship between insurers' or provider organizations' or owners' advices and the managers' independency in decision making.

Call Center

In the context of healthcare management, the term is differently used. It can be

- an information center providing support by experts for doctors, for example regarding emergencies or intoxication
- an emergency advisory in under-populated or underserved regions to support self-help or first aid or professional nurses
- a mandatory call center for insurant of a managed care health plan to avoid unnecessary doctors' visits, to approve access to the health plan's benefits or to guide patients to a sufficient provider through passing a telephone or other electronic triage.

In many Managed Care Organizations with prospective payment rules or global budgets, it may turn out difficult or even impossible to see a doctor without crossing the barrier of a call center that performs as a kind of a gatekeeper and a triage center.

see Emergency
see Global Budgeting
see Managed Care Organizations

see Prospective Payment Systems
see Triage

Care Homes

These homes provide care in a residential setting where a number of people permanently stay but depend on having access to different levels of care, such as help with washing, dressing, activity, communication or giving medication.

It can also provide specialized care by qualified nurses on duty twenty-four hours a day to carry out all the nursing tasks and the tasks they are allowed to do by rules of delegation.

Some care homes provide specific care, for example in case of dementia, psychiatric or severe cerebral conditions. Homes providing care in the case of terminal illness may be also called palliative care homes.

see Activities of Daily Living
see Delegation
see Palliative Care

Clinic

The term refers to a facility where patients are admitted for treatment by a group of physicians practicing medicine together and sharing the same facility. It is often but not necessarily associated with a hospital.

Clinics are devoted to the diagnosis and care of outpatients but may also have some few bets, if an overnight stay is indispensable. But clinics are sometimes also licensed as hospitals.

Some countries do not distinguish between hospitals and clinics. Here a hospital may also be called a clinic and vice versa.

Communication

Briefly, communication is any exchange of information both verbally and non-verbally and is any intended or unintended behavior.

Effective and quality focused healthcare is depending on communication on a large scale. Content, style and comprehensibility of the interaction is most im-

portant for effective and result-driven healthcare, including the skills to adapt the same objectives of communication to different personalities and social contexts.

Some assess communication in healthcare as often not pro-actively being done but just happening. This is why communication attitudes and skills are the focus of management and clinical governance permanently and with high priority. It is or has to be on top of a facility's or organization's governance.

Facial expression, body language, used terms, tone, timing, sympathy, regret or eye contact are very complex expressions of relationship, meanings, goals, trust and acceptance. These entire characteristic might be given more often accidentally than purposely. This makes feedback and the pro-actively looking for feedback the most important matter of communication in healthcare. There are numberless reports on patient-staff-contacts having failed its goals because of disastrous communication.

Nearly any of the team-members will communicate differently but will also differently become understood by the patient and vice versa. Especially nurses are often seen and used as interpreters of doctors' words and remarks. This gives the interaction of nurses and doctors a fundamental importance for effective communication with patients.

Communication might be informal but it often is and has to be guided by legal requirements, such as contractual conditions which might often not understandable even for professionals. It might be helpful to use professional assistance to cover any of the communication to be made in order to ensure that information

- is given
- is appropriate
- is understood and
- is discussed to clarify unclear aspects

It also might be helpful to ensure the documentation or the assignment of some of the indispensable communication. But signing a paper will never (socially and legally) replace direct communication between patients and the care giving staff. And of course, communication is not only for transferring some necessary information. It is part of treatment in many cases. It may fundamentally help with supporting self-management and motivation, with educating relatives in how to cope with care. If not accomplishing the challenges of communication, healthcare will often not afford anticipated results.

Problems with communication are not only a patient's problems. Also staff

may misunderstand health complaints, questions or feedback to therapeutic cooperation anticipated. It is, in any case, a matter of major concern to make communication an aspect of governance.

But regarding communication, there is another aspect of major importance, namely the interaction within an organization and the employed medical staff. This interaction is explicitly a challenge for managers. Managers not being skilled to communicate with staff and/or the facility's superior authority will have permanent problems mastering daily duties.

Especially for internationally acting managers or facilities offering cross-border services, communication is on top of the agenda of managers' tasks.

Compliance and Adherence

Compliance is often used to describe the degree to which a patient follows medical staff's explanations, transfer of knowledge, advices and recommendations. It can also become interpreted as the anticipated part of a patient's contribution to recovery. Some see the demand for compliance an autocratic style of the patient-doctor-relationship contrasting adherence.

But the term compliance also refers to an expected patient's behavior that is earmarked as a more passive and non pro-active role under treatment. Compliance describes the asymmetry of the doctor's and the patient's role regarding knowledge, control, respect and decision-making and the paying party's demands. In contrast, compliance and adherence are used to coin the pro-active role of a patient under treatment. The concept sees the patient more as a partner or even a consumer but not a patient under "top-down-rules". The term's importance not only varies widely between individuals but also between the particular reasons for seeking healthcare.

Most commonly, in practice it mostly refers to medication compliance, but can also mean the execution of recommended self-directed physiotherapy exercises, or attending counseling or other courses of therapy and changing life styles preventively.

It is estimated that about half and more of the patients would not follow doctors' advises for whatever reason. Some value this matter a severe problem for outcome driven healthcare and liability while others sarcastically see non-compliance the reason for positive outcomes in some cases, particularly in some

drug prescription practices. These arguments go back to reports about large numbers of causes of death assumed to be related to malpractices of drug prescriptions and to be risky far above the number of deadly traffic accidents. Even for advanced healthcare systems, there is an estimated mortality rate up to 50 cases of death per 100.000 citizens per year resulting from patients' blind compliance with doctors' advices or due to unguided self-medication.

Compliance is also interpreted as the way to avoid possible embarrassments, or to show the patient's gratefulness for a doctor's treatment or a nurse's care. There are practices mentioning what put patients under pressure to sign drug or behavior compliance protocols as a method of disease management programs and by rejecting coverage if not. The argument used is both to improve effectiveness and to lower liability but is certainly also a very problematic style of communication.

In any case, strict demands for compliance may intervene into a patient's personality. It is often performed paternalistically and may be motivated to limit the variance of individuals under treatment and is therefore under critique.

In practice, problems may occur if doctors and nurses demand compliance from patients from lower social strata and with low intellectual capabilities and from patients covered by—from the doctor's view—unattractive insurances. But the same provider may play the game of adherence for the others. But any way, there might be settings for therapy in which the strict demand of compliance is the only way to apply treatments effectively.

The most important causes for poor compliance include:

- patients' age and forgetfulness
- poor communication and differences in language and understanding
- different interpretations of the patient's health conditions
- lack in comprehensibility, meaningfulness and manageability in case of chronic illness
- costs of drugs if not covered by plan, co-payments and deductibles
- perceived lack of effects or side-effects
- physical, mental or social and religious contradictions to complying

The problem can be seen both serious and overestimated, depending on health conditions.

Nevertheless, it seems to be likely that compliance can be improved if one can explain the benefits and adverse effects of a drug and cooperate with the pa-

tients but not command them. But it obviously often occurs that doctors are not taking time for explanation or patients do not understand what they are recommended to do.

see Communication

see Shared-Decision-Making

For-profit Healthcare Organizations

These are healthcare providing entities seeking for profits.

Looking back in history, the particular evolution of the for-profit healthcare organizations is a rather recent one. Their rise follows the extension of healthcare paid by individuals or third-party-payers under fee-for-service or prospective payment systems. For-profit-provider's success regularly depends on risk and portfolio selection and on the existence of a public or a non-for-profit sector serving for people and cases not promising profits.

The working principles are, for example,

- selective offers and portfolios
- selling products according to payers' demands
- strong internal cost-containment policies
- focusing on diagnostic tests and simple medicine
- subcontracting depending on providers
- consequent clinical governance
- integrated value chains

For-profit organizations are often but strictly and selectively devoted to the consumers' demands and desires but not so much on public health needs.

If a country's reimbursement policy does not distinguish between for-and non-for-profit providers, they are both obliged to act under the same financial frame. In this case, the only way to generate profits is strict risk selection and cost-control on variable costs. This makes it understandable why many countries report substantial deficits in for profit hospitals. But they also put non-for-profit providers under severe pressure to take the same road or to suffer permanently from the consequences of competition. The regular consequences are complaints about the quality.

Group Practice

This relates to a group of persons licensed to practice medicine or nursing, including some treatments or care and the assembling of their offered qualification as the group's responsibility. These professionals are often sharing investments, reimbursements and financial risks.

Home Care

Home care is a professionally performed nursing in the patients' home setting. The reasons for such services will usually be different.

One reason for this is that sick people too healthy for hospital care cannot be adequately cared for by attending outpatient facilities. This type of home care is to replace or to shorten hospital care and will mostly be done by professional nurses staying in permanent contact with a doctor.

Another reason for home care can be giving assistance and support to a person permanently in need of getting along with daily routines because of disability. This help is to lower or to compensate for handicaps. In order to standardize these needs, some countries use the concept of the activities of daily living (ADL Index) as developed by S. Katz, a measurement that originally became developed to assess the results of rehabilitation. The Barthel-Index is another concept to measure the needs of care and there exist some more indices like the Functional Independent Measure (FIM).

The first reason for home care is usually the aim to avoid hospitalization and to reduce costs.

The second reason is related to the perspective of the growing proportion of elder people in many populations. Here, home care can often be seen as the best way to guarantee the independence and the autonomy of elder people as long as possible. But this care is indeed related to the different cultures and traditions of family and community life. Not only the changes in reproduction behavior in many populations but also the change of family life and migration patterns make a tendency that a rapidly growing number of elder people will depend on professional care performed by none family members. These professionals perform care and may also help families with advises, skill training and supervision.

see Activities of Daily Living
see Barthel Index
see Functional Independent Measure
see Intermediate Care

Hospital

This is a particular institution that provides inpatient diagnostic and therapeutic services for certain medical conditions, both surgical and non-surgical, regularly intended and provided as acute care.

The kind of healthcare provided by hospital is regulated by defined diseases, measurements of severity and procedures not to apply under out-patient conditions in many countries. But in most of the countries, hospitals also provide some outpatient services, like emergency care or sophisticated diagnostics or some kind of highly specialized treatment not necessarily in need of an overnight hospital stay, for example in case of cancer.

The function and the effectiveness of a hospital mostly depend on the quality of pre-and post-hospital care and depend on the quality of out-patient care and the functioning of the referral system. The cooperation between both these infrastructures is the key both for the effectiveness of a treatment plan and the efficiency of the total care process.

Hospitals may also be classified according to the length of stay (short-term or long-term) as teaching or non-teaching hospital, according to major types of services (general, basic, surgery. psychiatric, tuberculosis and other specialties, such as maternity, pediatric or ear, nose and throat), or according to the type of ownership or control (federal, state, or local government; for-profit and non-profit).

In the international understanding, a hospital has often but not in any case to be distinguished from clinics, and it is the same in other countries. It should also be understood that in many countries rehabilitation hospitals are not allowed to perform acute care and treatments.

In some countries, providers of wellness or cosmetic surgery are also allowed to call their institutions hospitals.

Intermediate Care

This type of care is offered by nursing homes and by home care services as a post-hospital service. It is targeted at

- avoiding unnecessary days at hospitals for economic reasonability
- improving independence and autonomy in a recovery interval but as part of the recovery plan
- activating disabled people by specialized non-hospital staff, which is also called "early-rehabilitation".

Such facilities often settle close to hospitals, especially if hospitals are reimbursed by prospectively budgeted global payments. Intermediate care in some countries is also called "rehabilitation" which shows the sometimes floating borders between hospital care and rehabilitation and the uncertainty about how to define acute care against other types of care exactly.

Depending on ownership, intermediate care can also become used for shifting financial risks from the hospital to other types of facilities.

see Activities of Daily Living
see Rehabilitation
see Permanent Care

Long-term Care (LTC)

This is a kind of healthcare, personal care and social services required by persons who have partly or fully lost, or never acquired, the functional capacity to perform daily life's activities in their specific social settings.

Long-term care is often necessary

- in later stages of a chronic illness,
- in case of congenital or
- in case of disablements due to accidents.

One of the difficult decisions to be made either by the clients in question, their families or by legal authorities is to provide care for those individuals in a specialized institution or at home. The answer mostly doesn't depend on the severity of disablement but on the particular social setting. That is why the change or improvement of the setting has to be seen as part of professionalized long-term

care.

The term is often used more narrowly and in reference to long-term professionalized institutional care such as care provided in nursing homes or in closed psychiatric hospitals. But long-term care can also be provided at home, in or by a supporting community, or in various types of facilities, including nursing homes and assisted living facilities.

Long term care often raises difficult ethical questions because of the long term expenses exceeding the financial capacity of the majority of people and families. It is also accompanied by dramatic physic, mental and social burdens for the caregivers and intervenes deeply into all aspects of a family's life.

There are cases where it might be impossible to care for those in need at home and embedded in the family. Typical reasons are the necessarily required specialized equipment and personal or particular social reasons. It might also be possible that families will not leave long-term care for family members to others. Here the depending persons might miss what is necessary and appropriate. Caring family members are often overloaded with the tasks and are lacking competencies as to how to perform care. In these cases, providers may decide to offer assistants long-term care both to help with those being patients and to support the family caregivers not only with knowledge and experiences but also emotional support.

Some countries have subsidies and insurances to share the financial risks of long-term-care, while others do not. In such cases, long-term care might be closely connected to poverty and exclusively depend on charity and donations.

Mobile Clinics

This is a facility concept capable of providing healthcare at nearly every level, but mostly providing primary care.

Mobile clinics are usually part of military forces or will be used for offering first-aid medicine in disasters. But there is also a growing awareness of the potentials of mobile clinics for serving people in under-populated regions. Nowadays, mobile clinics are often combined with sophisticated techniques of data transfer and telemedicine. They are a chance to provide modern and specialized healthcare distant from a high level medical center. Due to advanced mobile technologies, semi-mobile clinics can also become used to facilitate, maintain and process both primary care and highly specialized medical care.

The particular concepts will usually be very different according to region and cultural environments. Special kinds of mobile clinics are flying clinics or "flying doctors".

see Telemedicine

Non-for-profit Healthcare Organizations

These are types of healthcare provider entities not intending and allowed to seek for profits. These organizations have been the origin of health services round the globe and have labeled healthcare a unique profession beyond the race for profits (accept care for the very rich).

Today's non-for-profit healthcare organizations are settled in different kinds of organizational frames not only as public but also as private organizations, as unincorporated association, as a club, a cooperative or as a charity association or a self-help organization. To give an example, most U.S. hospital providers are privately settled but non-for-profit. It is an often occurring misunderstanding that private would mean for-profit while public would mean non-for-profit.

To understand the particular setting of a non-for-profit healthcare organization, one has to consider

- the payment rules between providers and the third-party-payers (consumers)
- the legal or contractual norm-setting mechanisms regarding the necessity, the appropriateness and the quality of healthcare utilization.

In some countries with advanced healthcare, the only difference between for-and non-for-profit healthcare organizations is that the one is allowed to make profits, the other one not but both are working under a regime of equal price policy.

Out-patient

This is a person who asks for healthcare services without a hospital admission. Users of any healthcare facility and any hospital that accept them are out-patients.

In many countries hospitals do also offer out-patient care but in other countries they never do or only do for some clearly defined and legally accepted cases that are not allowed.

One of the evident advances of modern medicine is the extending capability to treat patients outside a hospital. Some experts even expect a future where traditional hospital will play only a very minor role while out-patients' treatments are the regular cases also in most of the indications accepted for hospital treatment currently. To make the advantages of out-patient care a reality, the organizational frame of healthcare has to be constantly adapted to the newly occurring opportunities and the developing social preconditions.

Internationally, hospitals try to develop outpatient care in places which are closely netted to hospitals. These offers are

- to give access to more advanced medicine particularly access to care in case of a seldom disease or procedure as a consultancy service,
- to integrate care for patients that depend both on repeating episodes of hospital stays and of ambulant care or
- to closely guide out-patients to hospital stays for economic reasons.

Out-patients may find access to nearly any of the medical specialties while other countries prefer general practitioners, family doctors or primary healthcare nurses for outpatient services exclusively. An example for the first case is Germany; an example for the second case is the United Kingdom. Whatever solution is preferred, each of the ways to provide out-patient services shows an enormous impact on the infrastructure of the nation's entire organizational healthcare and its economics.

Out-patient care is challenging healthcare management. The less integrated an organizational infrastructure is, the more likely are losses in effectiveness and efficiency. But adapting a diversified healthcare system to an integrated one mostly depends on time-consuming information and communication. The lack of informational transparency for patients and providers is one of the most crucial points for managing out-patient care.

see Hospital
see Quality of Healthcare

Palliative Care

Palliative care is commonly defined as "*the continuing active total care of patients and their families, at a time when the medical expectation is no longer cure. Palliative care responds to physical, psychological, social and spiritual*

needs, and extends to support in bereavement. The goal of palliative care is the highest possible quality of life for both patient and family."

In many populations that undergo comprehensive patterns of demographic transition, palliative care is the only offer for dying in dignity.

Under some patterns of health tourism, especially if elder or disabled people are moving to foreign destinations for the rest of their life, the offer of palliative care might turn out to become an important challenge for healthcare management.

Personalized Medicine (PM)

This is a concept which promises to adopt treatments based on patients like an individual key to an individual lock. PM is often touted as a new strategy of modern therapies, stating personalized medicine the application of "*the right drug and dosage at the right time for the right patient*" and the breakthrough of a new market strategy by sellers of "experimental therapies".

Currently, PM is selling an idea rather than a success story and could not yet be translated into clinically relevant applications. Any of the steps

- finding the right individual remedy
- deciding on the right individual dosage
- fixing the right individual time for application and
- adopting this concept to the right patient

are hard to be outlined for medical practices under realistic or today's conditions. It still remains a concept for an uncertain future speculating for economic gains, but might turn out to be a tremendous burden for the healthcare payers.

The challenge is to predict an individual's disease occurrence and progression and to deal with the predicted progress with efficacious, effective and efficient treatment. The concept challenges the evidence based medicine's methodology and will make it difficult to design and to conduct today's standard of clinical studies to evaluate results statistically.

While pharmaceutical business companies obviously have been downscaled visions, some diagnostic companies and therapeutic "hope sellers" in healthcare practice have not but seem to stay still active and focus much more on international travel medicine rather than on the national healthcare systems.

But indeed, the introduction and penetration of treatments closely related to

permanent prospective (individual) bio-marking needs to test patients permanently and produces trillions and trillions of data, making individuals totally transparent for more than medical purposes. Particularly insurances and employers may have an interest in this data storages and the implementation of the new profession of data-brokers. This trend will obviously continue and deeply influence the whole management process of healthcare and its financing as a new but often crossborder business model. One of the most important aspects is the interlinking both of personalized medicine and informed-based medicine, which is necessary to enabling personalized medicine to do well.

see Diagnostic

see Evidence based Medicine

see Experimental Therapy

see Medical Tourism

Policlinic

This is originally a kind of community medicine offering services to the public. In the 20th century, it became a symbol for a non-for-profit state or community or employer run facility with employed doctors and teams, often seen competing single doctors' offices.

Meanwhile, the policlinic, intending to act as a *polyclinic*, integrates general and medical specialties, represents the complexity of medical specialties available for out-patients services but sometimes also includes some few short-stay beds. This type of facility can also work as a department of or an alternative to hospitals.

Both the aspects of overcoming or limiting the priority of out-patient services by single doctors' offices and readjusting the perspectives of ambulant care and the relation to hospital care will make policlinics or polyclinics a facility of the healthcare of tomorrow.

see Community Medicine

see Dispensaries

Public Health Service or Public Health Authority

This is a state agency and is established by law in many countries. It is to

monitor, to analyze, to assess, to control and to advice individuals, groups, communities and businesses to keep the health promotion and protection legislation in action.

In some countries, it is also given the authority to license healthcare facilities and to supervise them.

The regulations, the tasks and the legal background differ widely in the international world. More or less regularly these authorities are responsible for

- communal hygiene
- supervising and executing health protection policies
- supervising and licensing healthcare professions and facilities
- giving expertise on health problems in a region to the government and to the public
- advocating for disadvantaged and mentally ill people
- investigating needs for healthcare provision particularly the needs of a region and its people.

Referral

The referral is an expert's decision of sending a patient from one specialist to another for seeking interdisciplinary cooperation. But it might also be done only to pass the financial risks on to somebody else under global budget agreements. For this reason, there are usually specific rules for referrals which may be set both by provider organizations or third-party-payers.

Normally, a referral needs a written order from the referring doctor including a standardized set of information on the patient's health condition. These referrals have to be kept very confidential because they include personal data.

In contrast to the referral's practice, doctors may also move to see the patient or doctors may use technologies to transfer data and conclusions instead.

In systems with a diversity of third-party payers and provider organizations under manifold contractual frames, it usually needs a referral policy and guidance to tackle referrals economically. This can turn out to be a particular significant management concern under rules of prospective payment systems and under subcontracted fee-for-service providers. In this case, prior approval and a preestimate of costs will often be demanded.

Referrals are only effective and efficient if they are part of a healthcare coordinating culture (not to mix up with the economic approaches of integrated care). Here the existence of a primary care culture is most important for the coordination within the multidisciplinary of current medicine. Coordination by referrals is one of the fundamental challenges if aiming at the provision of "modern medicine". But referrals are not only the consequence of modern medicine, they are also its precondition. That is why any advanced health care system fundamentally needs referrals and their regulation.

Interestingly, there are discussions that referrals would violate interests in competition, particularly under capitation rules and fee-for-services. These discussions stress the view that patients are consumers and should be the purchasing part on free markets and be responsible for their buying and the coordination of what they want to buy. In this situation, referrals are the symbol for the different approaches of public or market healthcare systems, but are deeply influencing the professionals' self-understanding and actions.

Experiences with kick-back payments in case of referral are fraud; but they are obviously widespread①.

Rehabilitation Hospitals and Rehabilitation Clinics

These are types of institutions providing inpatient and outpatient rehabilitation. The target is to help and to motivate people to learn how to get along with the consequences of chronic illness or disability mentally, physically and socially. Particularly rehabilitation for children can make it necessary to closely integrate family members into the process.

In many systems rehabilitation is also used to professionalize and to economize hospital care through shortening the length of stay.

see Length of Stay
see Rehabilitation

Skilled Nursing Facilities

This is a type of facility whereby particularly trained and accredited nurses

① http://www.managedcaremag.com/archives/9710/9710.fraud.shtml, 2009-05-12.

offer some kind of primary healthcare. These nurses work under rules of delegation or are licensed to substitute traditional doctors' responsibilities.

Function and tasks vary widely according to national frame-conditions, but will usually include

- prevention
- advocacy for patients
- triage procedures
- simple medicine
- intermediate care, nursing and permanent care
- mother and child care
- long-term care for chronically ill, disabled and elder people
- advising communities and families in handling problems of hygiene
- social and family support

Advanced skilled nursing facilities might be closely adopted or actually integrated into high performance hospitals for the goal of offering integrated service delivery.

see Delegation
see Nursing
see Primary Healthcare
see Substitution

Secondary Care

The term is not really well defined and universally understood. Some see it also a care offered by medical specialists, but refusing contacts with patients if not having passed through a triage procedure. Secondary care might be any care provided by specialists after seeing a primary care provider and after being referred to a higher level of qualification inside a contracted provider organization.

In some countries, such as the United Kingdom, the healthcare system is systematically settled as a two-tier system with primary care and secondary care. Here patients are obliged to have a first contact at a primary healthcare unit that performs as triage for gate-keeping.

The methodology is especially in favor of managed care entities prospectively paid for budgeted cases or capitated insurant. Secondary care performing specialists can use so-called allied health professionals or physicians' assistance respon-

sible for primary treatments, managing triage and referrals to the specialists.

see Gatekeeper

see International Classification of Primary Care (ICPC)

see Primary Care

see Tertiary Care

see Triage

Self-Care or Self-Help

This is a kind of healthcare applied by individuals themselves. It can be distinguished according to the recourses used, such as

- individual competencies and skills
- family and community support or organizations
- gathering individuals experiencing the same and mostly permanent health conditions

Self-care may be awaited

- to treat by self-medication
- to support compliance with treatments
- to exchange experiences as to how to get along with treatments, chronic conditions and disability
- to support motivation and learning in case of chronic diseases, mental illness and of disability
- to change risky behaviors with the support of others.

Self-care is a topic not only for patients, but also for families, a neighborhood or a community. Regarding self-help, professionals should not defeat but support it and help to enable and enhance individuals to do well with self-help. Professionals often can also learn a lot from the experiences of self-help activities.

Self-care also plays a favored role in countries and among people lacking access to professional care. This can be essential for coverage but should become also supported by doctors and nurses.

Under catastrophic conditions, self-care and self-help are a chance for emergency care but also an opportunity to foster solidarity and all the community's responsibility.

see Health Promotion

see Long-term Care

see Rehabilitation

Specialized Care and Specialization

Specialized Care is driven by

• the advances in medicine needing particular knowledge and competencies to perform treatment and care or to handle new methodologies or by

• pro-active managerial enforcements of adopting Fordism to perform product medicine.

Both of them are of tremendous but entirely different consequences for health services and management.

If specialization is driven by advances of medicine, it must be followed by cooperation and coordination of all its specialized parts. It is the extension of chances, opportunities and demands and will demand higher qualification of any of the professionals involved.

That will be different if performing product medicine. Here the concept is to reduce a single professional's comprehensiveness by limiting allowed treatments and procedures and flexibility for other medical treatments. This kind of development makes it necessary to raise volumes for each of the specialized skills and foster overutilization by lowering norms for interventions

The first kind of specialization is the result of scientific advances; it is the professions' enrichment, and the second kind follows management approaches to increase numbers and to profile financial gains; it is the profession's turndown.

Tertiary Care

Tertiary care has two different meanings. Following up the philosophy of primary and of secondary care, tertiary care offers consultative competencies to primary care and secondary care specialists.

The second meaning is the assembly of the most advanced and sophisticated medicine and therefore it is only available at some very few locations.

For small countries, medical tourism will regularly be the only chance to get access to that tertiary care.

see International Classification of Primary Care (ICPC)

see Medical Tourism

see Primary Care
see Secondary Care

Triage

Triage is a medical management procedure originally designed for war battlefield, catastrophic medicine and emergencies or mastering epidemics. It is used in order to assess the urgency of help relative to each of the patients and by which patients are sorted or classified according to the type and urgency and the intensity of their conditions or even the likelihood of survival.

In catastrophic medicine, it is the process in which a large group of patients are sorted so that care can be concentrated on those who are likely to survive. The grouping might be made according to the followings

- expectant
- emergence
- observation
- waiting(walking wounded)
- dismiss (walking wounded)

But many countries have developed and established their own procedures for severe disasters.

Especially in regions with a high probability of severe disasters, healthcare managers are highly recommended to have a triage plan also for the facility they are responsible for.

It is also seen as a process in which a group of regular patients is sorted according to the need for care. The kind of health condition or injury, the severity of the problem, and the particular facilities available will design the process. In case of emergencies, it is the professionally implemented task of paramedics in some countries.

Some facilities may have a hospital triage nurse or a so-called "hospitality", especially qualified for the given responsibility. A special inpatient hospital triage system may additionally perform as a guide through the hospital's clinical pathways.

Since triage concepts become more sophisticated, triage guidance is also evolving into both software and hardware decision support products for the use by caregivers both in hospitals (preferably emergency hospitals) and some types

of managed care organizations.

Under the philosophy of managed care, triage became a rather sophisticated procedure to maximize and create the most efficient use of resources of medical personnel and facilities but it also means to save resources, especially if already being paid prospectively via capitation. In this surrounding, triage often works as a kind of risk selection both on the insurer's side and on the provider's side. Here it is to group individuals according to person-classification schemes into risk groups for the practice of capitation.

It is also the method to sort patients according to their particular health plans or to find out if a health condition is above or below the cutting point of rationing policies.

Triage procedures may be used as a sophisticated standard within sparely populated or (for instant rural) underserved regions to provide primary care by primary care nurses, using intelligent software and IT connecting with distant medical centers. Here triage will be both very effective and efficient.

One of the best designed and tested examples is the Manchester Triage System used in many countries for emergencies①.

For whatever purpose, triage needs standardized procedures and criteria and experienced decision making. The procedure can fail its objectives by under-triage and over-triage as well. Triage is based on assumptions or standards which may meet the individual case or not. If using triage regularly, outcomes should be systematically analyzed in terms of probability and in terms of a positive or a negative predictive value.

Under the frame of catastrophic medicine, triage is doubtless to be accepted both legally and ethically. But the occurring problems will be totally different if triage is used as a guard to limit access under the frame of insurance contracts and if it is not explicitly specified in the contract or under permanent supervision.

see Access
see Managed Care
see Person-Classification Schemes
see Risk Group

---

① Cokke M W, Jinks S. Does the Manchester triage system detect the critically ill? Journal of Accident & Emergency Medicine, 1999, 16: 179～181; van der Wulp I, van Baar M E, Schrijvers A J P. Reliability and validity of the Manchester triage system in a general emergency department patient population in the Netherlands: results of a simulation study. Emergency Medicine Journal, 2006, 23(12): 906～910.

see Risk Selection

Triage Providers

These are especially trained medical experts working for provider organizations and contracted to classify sick or injured persons by the kind and the severity of a health condition or the urgency of needed help.

When providers or insurance companies manage triage by telephone, the service may be performed by a pre-authorization center, a crisis center, a call center or trough information helplines.

Providers may also manage triage in emergency rooms, walk-in centers, disaster scenes or outreach centers.

Today's triage procedures often are based on sophisticated methodologies providing standardized evidence-related methods and using information technologies of many kinds. These methodologies are hardly or never independently supervised and approved. Many of them are products seeking for consumers or are primarily constructed to meet a provider's particular interest.

But healthcare managers should be aware of the fact that triage will become one of the very important tools providing tomorrow's healthcare beyond the traditional use for emergency or disaster medicine.

see Triage

VIII

General Issues of Healthcare Management (HCM)

General Considerations

There is no internationally compromised understanding of what Healthcare Management is. The interpretation is closely related to the particular national frames and infrastructures of health services, of the health insurances policy and of their grounding politics. HCM works under nationally varying legal conditions and political concepts. These concepts may change much faster than the services system can. But also in reverse, the providing systems may change faster than the systems' frames do. Both changes will lead to internal tensions. That, indeed, may turn out a particular problem for successful healthcare management, namely to manage change prospectively.

Healthcare systems need both stability and permanent adaptation to changing conditions, as rooted in changing political and economic frames, new scientific opportunities and new occurring people's needs and demands. The resources for healthcare are regularly tremendous but short in relation to demand. Traditionally it was the duty of administrators to handle these problems sandwiched between given frames and the medical staffs' demands. These administrators had to know how they can do things. But there is an internationally fast developing new kind of leadership in healthcare provision, namely the rise of healthcare management. This new type of profession includes all the

qualifications of an administrator but adds the particular abilities needed to direct a healthcare organization pro-actively and self-responsible towards a given set of objectives. The new generation of managers in healthcare wants to take some more responsibilities for providing healthcare than former administrators did. But that necessarily also needs to take some more risks and to change traditional relationships between medical staff and administrators. The need of differently profiled qualification is one of the many aspects to be considered.

But the most important issue is that the fundamental focus of managing healthcare is not only a facility, an organization or entrepreneurial interests. Healthcare management means managing access for needy persons and appropriate outcomes of all the processes of utilization. Managers enable medical staff to do their profession.

Internationally the challenge of managing care is skyrocketing. Assuming that the demand of personal working in the healthcare industries globally would be the same as in Germany, the number of staff would rise up to about 350 to 400 million people. What is more, assuming that internationally the per capita spending for health care would rise up to the average of the EU with its about 2200 Euro per capita, the spending would rise up to about 15.5 trillion Euros per year. That is far beyond what car industries produce and sell. We see and accept the many reasons to criticize this comparison and we do not want to advertise for this amount of spending. We are simply mentioning that fact to describe the tremendous challenge for managing necessary healthcare and its management.

This doubtlessly makes healthcare management a professional field in its own. But in any case, the crucial points are always the same. These are

- the norm-setting frame for accepted needs and coverage
- the relation of competition and cooperation providing healthcare for a region's population and
- the interaction of management and staff, particularly the medical staff.

To give a comprehensive definition of HCM and of its practical tasks, we would define HCM as follows:

HCM is the professionalized leadership, management, and administration of any of the healthcare facilities, facility networks, healthcare systems and healthcare insurances. It is the management of given visions and missions by transforming them into detailed objectives.

HCM is to bring together the necessary competencies of specialists of how

to optimize the infrastructures and processes of care provision and the pre-set economic and legal frame-conditions to meet people's needs and demands best..

HCM includes the tasks of the strategic and practical conceptualization of care and services, human and financial resource planning, organizing, facilitating, maintaining, administering, processing, monitoring and evaluating healthcare. The practical task is to provide the institutions and their staffs the best conditions possible for offering the targeted and contracted services, such as prevention, diagnostics, treatments, rehabilitation, care and nursing to the public and mostly the third-party-payers.

HCM follows the best available knowledge and expertise of the management sciences in order to put into practice the standards of the medical and of the health sciences; it is strongly committed to unifying both leadership and co-operation with staff.

The healthcare management profession has been extending in recent years and is still developing. The profession's mission is

- to provide healthcare under any of the given conditions
- to guarantee access
- to balance costs and rewards
- to provide resources and supply for healthcare
- to manage personnel
- to keep pace with changes in demand, resources and scientific basis

Healthcare Management is particularly committed to

- the strategic agenda of national social and public health services policies
- strategic management approaches towards the healthcare of tomorrow
- the definition of healthcare products and pathways to conduct them effectively and efficiently
- the interaction and communication with patients, health plan members and insurants, third-party-payers and providers
- the management of human resources and workplaces
- managing contracted quality and clinical governance
- managing healthcare organizations and their behavior
- managing resources

HCM deals with services for and with people. The outcome of these services regularly depends on the cooperation of all of those people involved, including the patients. This is why HCM manages services for individuals in need of profes-

sional help not to fall ill, to recover, to rehabilitate or to compensate lost capabilities necessary to master their daily life, or to limit the handicaps to do so.

HCM professionals are to show competences and skills at least in the following areas:

1. HCM professionals have to understand what it means to provide professional health services for and cooperate with a patient.

2. HCM professionals have to be able to realize and to interpret changes in the service's (economic, legal, social or scientific) frame-conditions and the consequences for organizing offers, facilities and provision both practically and strategically.

3. HCM professionals are educationally armed to lead, to develop networked provider's human resources, as well as to cooperate with other organizations.

4. HCM professionals are to understand the methods and techniques to administer such services and to lead them towards effectiveness and efficiency.

5. HCM professionals need a deep understanding of not only the interaction between the different kinds of health services, their scientific and cultural background but also its technical and macro-and microeconomic surroundings.

6. HCM professionals have to be equipped to realize and to assess risks for the provider organization and its facilities and to communicate such risks.

7. HCM professionals have a fundamental understanding of what the contracted quality of healthcare services includes, how to measure and how to assess quality.

8. HCM professionals understand the cooperating and competing providers' environment and are able to draw practical consequences.

9. HCM professionals always understand their leadership as a service to their users.

Some of the management skills regarding leadership and administration are facing, for example, the following objectives:

- planning and managing resources
- developing structures and organizations
- processing facilities and organizations
- managing assets and financial risks
- building teams
- communication and mentoring
- care and service management

- product and portfolio management
- accounting and financial resources management
- personal and qualification management
- management of acquisition
- quality management and controlling

To do so successfully, HCM Professionals should be educated in strategies of project management, utilization management, leadership of staff and developing human resources, in balancing effectiveness and efficiency, in negotiating contracts, in handling reimbursement methods and in investment planning. The broad variety of tasks has made it impossible to continue the way in which traditional health and medical care providers operate, namely as their own facility manager. But it is a matter of controversial discussion if HCM is an added competence to doctors and nurses or if it should become a profession on its own.

Some argue that not only healthcare but also its management should be exclusively performed by physicians and nurses. That is why these people would need additional training and further education in HCM. But others stress the contrary. The authors share neither the one nor the other opinion. Our experience is that profound professional competency and the ability to cooperate with others create skills in many directions. We know successful managers come from any field of prime academic degree. The true problem always is to realize problems, to communicate them, to bring competencies together and to encourage others to solve occurring problems. To succeed in healthcare management, it needs skills and personality rather than the struggle for a prime profile of education or successful management in all aspects.

What healthcare managers need to understand are the business particularities, which are the followings:

1. Healthcare can regularly only become provided if the patient is attendant. Even in the case of telemedicine, both the patient and the doctors must be attendant. (Exceptions are some diagnostics, documentation, writing medical expertise, etc.)

2. A certain scale of wanted outcomes will only occur as long as healthcare becomes permanently provided.

3. Positive outcomes in healthcare delivery need the cooperation of any of the professionals involved in the patients treatment, also including the complementary providers of products and devices.

4. Any outcome of healthcare that a patient is likely to expect can also vary under the guideline of evidence based medicine. Healthcare cannot become "pre-manufactured"; it cannot become stored and distributed according to demands and independently from an existing patient. (But some supply can, for example prostheses.)

5. The result of healthcare will only exist as long as the "user" is a patient and as long as he is alive. Consequently, there is not necessarily a direct relation between the planned outcome, resource consumption and quality.

6. The chances to rationalize healthcare are generally limited if characteristics like universal access, individuality, interaction between professional staff and patient, respect, dignity, motivation and compliance are seen essential for quality. Replacing personal contacts through technical solutions or through reducing the time spent for communication or through reducing the team members' average qualification are seen unwanted. Especially the extending labor division needs more personal contacts and communication both between staff members and with the patient.

7. Regularly, it is difficult to guarantee certain outcomes and to take the entire liability for a pre-defined and wanted product.

8. The quality of healthcare profoundly depends on evaluation, contact, staff stability, response and personal interaction.

Not only people's health also providers of healthcare and related services or insurances are under risks permanently. But the understanding of what a risk or a chance is might be experienced differently. This makes it necessary to adjust and to regulate risks under the nations' missions to provide health and medical care for people. To bring together or to compromise contradicting interests needs regulations by an authority, if there is a party involved being weak or a patient. Such regulations are both frames for management and its tools.

Globally, those rules vary widely but use some common mechanisms even if differently applied to a nation's conditions. There is a range of ruling conditions, such as global agreements for global financial markets and rating policies, which will reduce these variances in future.

Any healthcare system driven by aims is and has to be regulated. That is true both for still developing and for already more advanced systems or for market and non-market mechanism in providing healthcare. The regulations are to keep healthcare systems socially and medically effective, its resource con-

sumption efficient and its resource allocation focused on targets. The general methods of regulation focus on the healthcare systems' proper functioning according to its mission, but particularly on

- providing coverage
- organizing access
- prioritizing and rationing benefits determined by norms regarding necessity, appropriateness and quality
- guaranteeing the nations' bills of patients' rights
- developing professionalism
- financing and billing healthcare and
- frame-setting that enables and permanently improves professionals' cooperation and coordination of care.

Both non-market and market systems try to perform by compromising on common social values shared by nations. That needs commonly accepted social functions of economic approaches. But while followers of de-regulated economies deny regulation other than by the "will of the markets", supporters of a non-profit approach providing the standards of necessary healthcare are focusing on social values. The controversy regularly ends in the alternative: either adapting individuals' behavior to the markets' will or the markets to the individuals'. This indeed makes a tremendous difference for healthcare management and its regulatory policy.

Both these concepts face controversial discussions rooted in different kinds of values and interests. One of the permanently stressed arguments is that none-market systems, like most the European ones are, would lack incentives to improve effectiveness, quality and efficiency. In contrast, de-regulated market systems are said to foster the individuals' freedom and self-responsibility but would also particularly push quality and efficiency. Unfortunately, these assumptions are globally not in-line with empirical evidence but are matters of ineradicable ideologies. It is reversibly and empirically proven that less regulated systems lack universal access, efficiency and quality

Others again want to combine both market competition and regulation by regulating markets more or less. The most known example is the concept of regulated competition, also called "managed competition", as proposed by A. Enthoven for the U.S. first in 1978. This proposal failed in the United States but has been influential in transforming some European countries' healthcare sys-

tems.

Therefore, whatever a nation's preference is, healthcare managers do never act in airless space. The profession's performance is packed into numberless legal and contractual frames. And both nationally and internationally acting managers should be very aware of the wide range of more or less sophisticated regulations and risk adjustment policies.

All these regulations together constitute a nation's health services system. The characteristics of any of the healthcare systems are the result of history, traditions, political visions, of conflicting but also of compromised interests which are regulated by many formalized and, sometimes much more effective and informal norms. These norms may be modified by general economic conditions, by the population's needs and cultural acceptance and by social structures. These conditions are the macro-frame for managing healthcare. Additionally, the system's functioning will be regulated by many of the internal mechanisms which are guiding the particular organization's governance and policy.

Both regulation and risk adjustment are primarily the payer's power, which also will give the payer the rights to control and to supervise healthcare delivery. The techniques and mechanisms of regulation are closely interlinked with the role of risk adjustments important both for the economic results of the provider organization and the respective nature of financing and insuring healthcare. Getting along with the methods of regulation, either internally or externally accomplished, is one of the prior objectives of healthcare management.

If the "purchaser-provider-split" is established within a system, the payer of services is the providers' consumer. This party holds the interest to control and to supervise the use of budgets externally or to contract particular products defined by content, price and volume or to select bidding providers. In many countries, both the purchaser and the provider will be obliged to accept the supervision of their behavior against insurants and the patients through particularly established federal agencies or other independent organizations. Experiences allow for that part of a modern healthcare system's attitudes.

If the "purchaser-provider-split" is not established within a system, the insurance company might be interested in owning also infrastructures of provision, while providers might want to guarantee healthcare against directly contracted and pre-paid services.

If the insured population is the insurance fund's owner itself, this group will

also share collectively responsibilities of owners, but regularly represented by contracted professional managers. In this case, it is the insurant's fundamental right to supervise and to regulate the system from a collective consumer's perspective, as it is, for example, still the case in Germany.

Under the frame of an integrated purchaser-provider model, the provider has its own interest in assessing risks and in regulating the budgets for healthcare. If healthcare is instituted that way, it will share the incentive of performing established supervision and audit procedures internally. To protect patients from likely dilemmas of such "integrated care", many countries have developed organizations and charters to protect patients from these policies.

The difficulties in finding the balance between all the stakeholders are obvious in any of the systems. But anyway, each of the systems will have its regulation policy and some mechanisms of risk assessment, supervision and permanent evaluation. If not, it will fail in many of its objectives.

There is a huge basket of methods used to regulate healthcare provision, each focusing the set of objectives towards which healthcare is expected to perform. These objectives may be outlined by law and/or by contract. But generally, without analyzing and compromising on the objectives, there is no chance to regulate services. In the end, also preferred methods of risk assessment depend on objectives, since the used methods do potentially influence and even constitute the mission of healthcare, or provide the chances to set the mission into practice.

Regulation or management policies are the only key to quality driven, effective and efficient healthcare and are to perform the system's goals and their particular objectives like

- access to healthcare
- effectiveness, quality and efficiency of utilization
- norm-setting for providers' and insurers' policies and behaviors
- regulating the relationship between purchasers and providers
- changing and developing benefits
- managing costs, prices and reimbursements
- licensing and certification policies, supervision and liability requirements for healthcare professionals

The institutional actors and their emphasis and power on regulation and underlying goals are most important for performing healthcare. The mechanism of norm-setting, the purchasing process, the allocation of resources, the content of

the compulsory data flow from providers to purchasers are typically subjects of legal or contractual regulations in the global healthcare systems if instituted.

Three models will classify all the principal regulation models, such as

1. the integration of purchasers and providers, in which the healthcare professionals are directly employed by the paying party

2. the purchaser-provider-split models, where providers offer services at their own entrepreneurial risk but are licensed and contracted by all or selectively by some of the third-party-payers

3. the concept of private providers offering services on a fee-for service basis with patients' out-of-pocket payments that might be reimbursed under insurance as bought and contracted or reimbursed by government.

The particularly chosen model determines any of the regulatory frames. It also constitutes all of the complex networks and relationships among all of the stakeholders.

Each of the global systems will have to adjust itself to the regulatory frame and has to balance the budgets and the resources, if the regulation of healthcare explicitly issues the financial risks for healthcare. Internationally, these adjustments are done by numberless schemes and concepts, often not open for the public but owned by either providers or insurance companies.

Neither all of the specified regulations nor all the adjustments can be compiled and outlined by this compendium. Therefore, the authors' decision is simply to address fundamental topics but not as a guide through it but as a guide towards it. Readers are highly recommended to make this general topic their own special concern if acting either in a national or in an international provider organization.

The selected terms refer to a preset of standards for all the interactions between providers, third-party-payers, the insurance's insurant and the patients, the deliverers of health technology and supply, of pharmaceuticals etc. All these regulations are to meet the requirements of medical services for individuals or groups like

- ensuring access and financing
- guaranteeing standards of quality, including advocacy for patients' rights
- licensing professionals and accrediting provider organizations
- supervising incentives set by providers and insurance companies if effective against the ethics of health services and their legal standards

The most common mechanisms and methods to regulate health services are the followings:

- regulation by a set of a nation's constituted mission
- regulation by law
- regulation by planning
- regulation by competition
- regulation by contracts and negotiations
- regulation by microeconomic techniques (mostly internally performed)
- regulation by rationing
- regulation by guidelines and standards for the practice of medicine
- regulation by incentives and different concepts to reimburse healthcare
- regulation by quality assurance
- regulation by ethical principles
- regulation by prioritized benefits including and excluding achievements explicitly
- regulation by pathways
- regulation by co-payments and deductibles
- regulation by waiting lists for elective operations
- regulation by monitoring doctors' decision-making etc.

The general conflict around health services and their regulation is fundamentally described by the so-called Roemer's Law (see Roemer's Law), the first investigator and describer of what is by some also called "supplier induced demand".

Grouping regulations, readers may find it helpful to distinguish

1.legal regulations

2.contractual regulations

3.professional regulations and

4.financial regulations

Finally, any of the regulation methods is likely to lead to conflicts between the parties involved, particularly the providers, the paying parties and the patients. Managers have clearly to realize that there is no chance to avoid such conflicts. The only opportunity they have is to decide (if in power to do so) what kind of conflicts they prefer, what alliances may help to get along with problems and what kind of mechanism could be installed to handle or to negotiate on conflicts successfully. But managers are part of for what and by whom they are con-

tracted, self-contracting as provider and owner of a facility included.

Balanced Score Card (BSC)

BSC is a performance management tool on strategic goals as well as a strategic management system. The BSC is advertised as the "*the road map to success*"①.

The dimensions of BCS regularly integrate financial returns, the predefined outcomes of business, the related process of production/services and the accepted input for reaching goals. The key concept is the precise selection of the essentials to gain the particularly wanted success and the linking of means and objectives. The BSC includes the established process of permanent controlling and evaluating the strategic parameters.

BSC is discussed as being adoptable in the management of a healthcare provider organization, such as a hospital or a managed care organization. But that would need to transform from traditional processing and operating of healthcare to a new kind of mission. BSC needs to develop a scorecard with measurable indicators (Key-Performance-Indicators) for following up any of the essential results towards the strategic goals. The card is a tool to bring managers' mission to reality and might be used as a change management instrument which is to balance all the strategic scores relevant in processing the strategic goals.

The underlying rationale is that managers should balance three perspectives:

- the perspective of the patient's needs, demands and concerns
- the internal processes and interactions and
- the needs for change through constant learning according to the innovations anticipated.

As ever in active management, the prime task in adopting BSC is balancing the strategic outcomes and the operational and required inputs, which might be called the "score card". It necessarily starts with a strategic mission and becomes broken down to targets and to objectives. Preconditioning for BSC is to include all the providers' staff and teams. The aim is to widen the view of the managers, the administrators and the staff for understanding the comprehensive targets and

---

① Kaplan R S, Norton D P, Robert S. Putting the balanced score card to work. The Economic Impact of Knowledge, 1998, 315～324.

functioning of the provider organization, its structure and needs for further development and change. Therefore, it might turn out that the selection of performance indicators for change and the specified calculation of input resources will be the most important step towards future. In healthcare, it is close to portfolio and risk selection but not necessarily the same.

Single hospitals and chains ought to become encouraged to measure any of the outcomes and to balance them against the needs for input like costs, process performance, market share and penetration, long-term personal and skills deployment, research, networking with partners, sharing responsibilities etc. and revenues. One of the key elements is that providers can freely decide on prices in an environment of competition.

Change Management in Healthcare Provision

Any system needs stability and shows a tendency permanently to do "business as usual". But any of the indispensable inputs to provide healthcare, such as demand, needs, education, experience, regulation, staff, supply, devices etc. are under permanent change. Consequently, healthcare management is not only coined and challenged through ongoing or even through irregular changes; it is to force change pro-actively in order to reach best standards of quality. Such changes may meet

- vision, mission, goals and objectives
- norms and legislation
- budgets and reimbursements
- needed personal and qualification
- the conception of health and illness within the public and the demands by patients
- new methods of prevention, treatments, rehabilitation and nursing
- demographic and epidemiologic transitions or new epidemic situations

The more comprehensive or complex an organization is, the more critical might it be to manage change. The key problem is always either to stay in a waiting position for commands or to look for needs to change pro-actively. Both behaviors may make trouble or might be successful. Pro-active changes often provoke a lot of internal conflicts and internal counter-tactics. Some managers may have also learned a behavior to wait for top-down commands, but will also ma-

nage in that way. The challenge is to integrate change both horizontally and vertically and to find alliances in aims and ways.

Internationally, there are experiences showing that change might need external mentoring regularly not only to prevent conflicts but also to integrate staff and to help with communication.

Delegation

Regarding healthcare and its management, this earmarks the transfer of clearly defined tasks from a particularly licensed professional to another staff member but not explicitly licensed for that task. Here the accountability for the outcomes, including liability belonging further to the professional in charge. Staff members addressed to carry out delegated duties must be proven in the particular transferred qualification und must be supervised in performance. But it should also meet standards that the duty receiving team members must have the right to reject the demand to carry out actions somebody else is in responsibility for.

Delegation and its legal regulation play an extending role

- in multidisciplinary healthcare teams and
- in serving people in less populated or traditionally underserved regions or
- under some economic pressures

Besides requirements of effective labor-division, economic reasons are also pushing "delegation", particularly to those with a "cheaper" qualification.

Delegation is also an issue around telemedicine and primary care conducted by professional nurses in certain demographic and social settings.

Managers are recommended to support these movements but under strongly legally regulated conditions. Such decisions and following actions must completely become supervised, permanently evaluated and documented as a managerial standard of delegation. The border between delegation and substitution of tasks must be entirely clear.

The typical problem of delegating duties in healthcare and treatment is to compromise on professional tasks of doctors and nurses and to draw the lines of responsibilities precisely. But the same problem may occur between institutions or healthcare organizations such as out-patient centers and hospitals or between medical specialties.

Internationally, not any doctor or provider is allowed to do any diagnostics

or treatment. That can make delegation very sensitive in relation to legal frames. That is the same with specialized professional nurses and other less specialized nurses.

With increasing labor division, delegation is a permanent matter of daily practice and can become an issue of conflict if all the team members are not really integrated and if delegation is not a topic of permanent evaluation and open discussions.

Particularly rewarding care by fee-for-service initiates conflicts with delegation if used to reduce variable costs by shifting tasks to less qualified staff members.

see Liability
see Nursing
see Reimbursing Healthcare
see Substitution

Decentralization

This coins discussions and political movements in some countries to transfer the public authority from the legislative body and its executive infrastructure to other types and forms of decision-making, responsibility and regulation. Regarding health policies and insuring healthcare, decentralization points out some very important but conflicting aspects, such as

- shifting the administrative and norm-setting rules for ensuring, financing and regulating healthcare from federal bodies to regional or local responsibilities or to private agencies but involving the local communities and its citizens in decision making on priorities, resource allocation, organizational models and some more
- giving locals and communities the financial responsibility to provide healthcare according to the community's opportunities, social compromises and values (often especially regarding healthcare for refugees, migrants and the poor)
- passing the norms for licensing professionals in healthcare and for setting standards for professional education to voluntary, and for-profit or non-for-profit private or public organizations or even conducted as commercial activities
- making treatments an individual decision independent from scientific

standards of evidence based medicine and systematic health technology assessment

see Evidence based Medicine
see Health Technology Assessment
see Responsibility for Health Insurance

Healthcare Value Chain Management

This concept refers to value chain management developed by car industries but discussed to adopt it to healthcare provision①.

The transfer to the healthcare sector follows the idea that similar to car industries "big would be wonderful". That could be done by netting any of the regional care providers of product procurement and delivery into one value chain. Any of those participating in the process of healthcare for a single disease or a portfolio of diseases by offering diagnostics, treatments, nursing, rehabilitation or permanent primary care in case of chronic diseases or by delivering supply are netted into a standardized chain defined by products, clinical pathways, time, qualification and facility. Any of the contributors to the "product" is servant of the other ones. The management of the chain is some kind of a disease management through crossing the borders of fragmented healthcare but might also be seen as an integrated delivery system.

The key is the coordinated exchange of information. The work with the healthcare value chain concept needs a thorough examination of the healthcare chain and the relation among any of the provider's staff, the cooperators (hospital or outpatient facilities, pharmacists, nursing even the patient and his family or the community).

The management can include not only the provider and supply deliverer but also the purchaser, but also the third-party-payer in somewhat of a giant strategic alliance. As examples show, the discussed integration can positively influence both effectiveness and microeconomic efficiency.

But two problems often occur: firstly conflicts with the national anti-trust legislation may come down the road and secondly with macro-economic inefficien-

---

① Burns L. The Health Care Value Chain: Producers, Purchasers, and Providers. San Francisco: Jossey-Bass, 2002.

cies, healthcare structures might be multiplied rather than coordinated if profiling value chains for single diseases. According to the authors' experiences, disease-centered healthcare management concepts are hard to keep working in practice if not building their own organizational infrastructures. But these easily lead into huge bureaucracy. But for disease-specialized providers, it certainly is an interesting concept of managing healthcare.

The concept attracts both third-party-payers and providers, but might need to limit the free-choice of doctors and to terminate the purchaser-provider split.

see Choice
see Disease Management Programs
see Free Choice of Doctors
see Healthcare Value Chain
see Horizontal Integration
see Integrated Delivery Systems
see Provider-Purchaser-Split
see Vertical Integration

Healthcare Industry

The Healthcare industry incorporates several sectors dedicated to providing services and products designed and sold to improve the health of individuals.

According to market classifications of industries, the healthcare industry includes healthcare provision, production and delivery of equipment and services, pharmaceutical industries, biotechnology and life sciences. The particular sectors associated with these groups are biotechnology, diagnostic substances, medical data storage and delivery, drug delivery, drug manufacturers, hospitals, medical and rehabilitative equipment and instruments, diagnostic laboratories, nursing homes, home healthcare and providers of healthcare plans and insurances.

Looking at the family of industry classifications, at least three are worth mentioning:

1. the International Standard Industry Classification (ISIC), where "Human Health and Social Work Activities" are coded with Q 86 to 88. According to this, classification healthcare generally comprises hospital activities, medical and dental practice activities, and many other human health related activities. It also codes classes of all activities for human health not performed by hospitals or by

medical doctors or dentists. This involves activities performed by or under the supervision of nurses, midwives, physiotherapists, scientific or diagnostic laboratories, pathology clinics, ambulances, nursing homes, or other para-medical practitioners in the field of optometry, hydrotherapy, medical massage, occupational therapy, logopaedia, chiropody, homeopathy, chiropractic, acupuncture, etc.

2. The North American Industry Classification System (NAICS) is also most influential. According to the classification, the code number 62 "Healthcare and Social Assistance" is used to classify, to measure and to compare all the different kinds of industries within a country or between countries. NAICS has replaced earlier classifications systems like the Standard Classification System(SCS).

3. A third group of classification is more or less adapted to the interests of single nations but adopting mostly the above mentioned ones.

The term "healthcare industry" also refers to another development most important for the delivery systems of the future. This is the intention to transform traditional medicine into a kind of industrial production. But the change towards performing hospitals like an industrial production process changes the traditional culture of medicine and deeply changes the self-understanding of all the medical professions involved.

A healthcare provision similar to industrial production processes needs (1) the definition of the product, (2) the highest possible reduction of the variance of the products and (3) at least a large number of similar cases/products in order to be economically successful. But only a relatively small number of diseases show prevalence high enough to meet the necessity of processing medical care like a production process. There is no doubt that the awareness of this trend is to prevent from

• a massive risk selection through sorting out the majority of occurring diseases because of being seldom

• a tremendous concentration policy of hospitals possibly leading to a tremendous medical tourism industry but excluding many of the lower middle class and the under classes from access to services and

• initiating to "produce" cases through changing and lowering the norms for aggressive treatments and extending the proportion of unnecessarily "produced" cases which can make treatments more risky than beneficial but push the vast industry of diagnostics and screenings and its profitability

Critiques argue the industrialization could lead to uncontrollable costs for third-party-payers, to widening tensions between competing hospital chains and also to an exclusion of many people from access to modern medicine.

In any case, these developments (1) will definitely push the argument to establish international rules for universal healthcare policies, (2) will foster public and state run providers towards standardization but (3) will also force the establishment of regulations possibly causing a vast regulatory bureaucracy.

Healthcare Organization Management (HOM)

The offer and utilization need particular provider organizations. All of a nation's healthcare system will be finally designed by the variety of existing organizational frames. The management of all of these organizations may vary widely in tasks and concerns but can also become summarized by a number of common goals. This tremendous field of activities is coined through the following dimensions:

Context Criteria, such as

- health politics
- legal frames
- professional responsibilities, rules of licensing and accreditation
- financing mechanisms and allocation policies
- the cultural and scientific understanding of healthcare
- the rules of utilization and delivery
- the implementation and supervision of standards and legal norms
- liability rules in case of mistreatments
- technologies and innovation

Organization and Facility settings, such as

- single doctor's offices
- group practices
- networks
- clinics
- inpatients day-surgery

- ambulatories
- policlinics
- rehabilitation centers, clinics and hospitals
- primary care
- acute care
- mental care
- chronic care
- community nursing
- pharmacies
- permanent nursing
- hospice care
- wellness hotels

Practice of Management

- developing provider's governance
- managing facilities by leadership and administration
- managing the institution's micro-economics and accounting
- strategic planning
- commissioning and contracting
- controlling and ensuring permanent performance measures
- managing human resources
- enabling teamwork
- balancing competition and partnership
- changing management
- resource management
- ensuring frames for the teams' effectiveness
- guidance and evaluation (evidence based management)

International Healthcare Management

This closely refers to the compendium's title. In the following the authors are taking the opportunity to express their general opinion regarding this issue. The internationalization rather than the globalization of healthcare provision is a reality not a vision. There is not a very clear opinion about what "internationalization" and what "globalization" means. The term internationalization might sum-

marize the growing interdependency of any nation on earth but by respecting their traditions, culture and moving towards future, in the authors' eyes. Globalization could mean making any nation depend on the same rules and governance as made by the most powerful ones particularly by deregulating international relations for the interest of business making instead.

This movement strikes a number of aspects seriously to be kept in mind but doubtlessly facing tomorrow's healthcare management. Healthcare offers are obviously splitting into two but maybe three different markets: the first one is treating sick individuals who utilize services abroad. The second one offers disabled people permanent care and the third one sells wellness as a luxury good.

These developments are facing some problems that managers have to consider carefully:

1. Many countries and a large proportion of its citizens may suffer from lacking opportunities to get the help and the support they need. Healthcare utilization and management for the disadvantaged and the poor will definitely become and stay an issue of serious humanitarian concern internationally. In some countries' cases, it is to keep nations alive and it might be preconditioning for economic progression, social peacekeeping and fundamental humanitarian values.

2. There are some fundamental problems of healthcare provision necessarily being a matter of international cooperation and regulation, for example norm-setting, accreditation policies, trading with pharmaceuticals, devices or transplantation materials.

3. It is obviously a problem to organize the international exchange of knowledge and competencies focusing on healthcare and its provision. Especially the exchange of education and knowledge will become a matter of tremendous importance.

4. The increase of life expectancy makes traditional concepts of healing not the only driving force for medical care. At least a relatively large scale of many hundreds of diseases that can seldom and hardly be cured are challenging healthcare management especially in countries with a small population. It becomes more and more difficult to provide expertise and specialized investments in such countries and makes the cross-border utilization of modern medicine indispensable.

5. The specialization in medicine and care raises the question as to how to manage and bring together the best competencies from different spots round the globe. Patients can move to providers, providers to the patients or patients and

doctors can alternatively simply be netted via technical tools internationally.

6. The traditional split of medicine and production has (at least selectively) to be overcome in order to keep pace with the scientific achievements of the future. This makes the permanent interaction of providers and producers of remedies indispensable. This also may influence the investment strategies of internationally acting industries and investors, and of integrating production and delivery.

7. A growing number of elder people with spiraling demands for permanent care may decide to leave their home countries permanently and to ask for support, assistance and nursing in a country chosen actively for the remaining lifetime.

8. The raise of healthcare management as part of an international business faces and even challenges the problems of norm-setting for healthcare, of licensing professionals, of accrediting providers and of the liability from an international perspective.

The field of international healthcare currently has many names. And each of them reflects different views and concerns of the discussants, like medical tourism, medical travel, health tourism, international or global healthcare, cross-border healthcare or health service outsourcing. Accordingly, the management of international healthcare is going to move forward to an international profession, too.

If so, International Healthcare Management will become a subject for teaching, for researching and practicing healthcare management as an autonomous profession.

But there is also a growing number of global investors going into international markets through investments into healthcare industries and operating them or through opting for one of the manifold PPP models with governmental or public agencies or by selling expertise and concepts only.

In our view, International Healthcare Management is to manage the access and the utilization of healthcare by either providing the expertise of healthcare for patients coming from abroad or by seeking for healthcare professionals internationally or and by planning, equipping, constructing, operating and also transferring healthcare facilities into other ownerships internationally.

In this situation, International Healthcare Management includes the transfer of

- Expertise
- Information
- Medical Products
- Healthcare Professionals
- Medical Education & Research
- Patients
- Capital Investment
- Humanitarian Aid

From our perspective, there are at least three striking arguments making International Healthcare Management a challenge:

1. A number of countries will never have the chance to develop medicine to its highest level of science because of its small population. Such countries definitely need to send patients with a wide range of diseases and illness permanently abroad. That alone has tremendous consequences for decision-making and managing the process, culturally, medically, financially and legally as well.

2. Many countries are developing healthcare as an offer to wealthy individuals, at least being wealthy relative to its current national standards. Intensive advertising is seeking for customers buying a wide range of health services. These changes and the competition for foreigners need not only internationally skilled managers but also particularly educated and skilled staff educated in providing such services.

3. Many countries are investing huge sums in order to develop medical services to high and highest standards. According to our reflection and insights into the Arabic region and some parts of Asia as well, many of these investments are suffering from insufficient healthcare management and do not result in the outcomes wanted. We see a need not only to exchange goods but much more to exchange comprehensive concepts of managing their best and rational use.

To go a little deeper into the global fields of healthcare management, we would briefly like to outline some key points but without further discussion here.

1: There will be no International Healthcare Management without exchanging expertise globally.

Most important fields settling healthcare management as an international activity are

- the global exchange of best practices in healthcare and related services
- the establishment of modern, but adoptable managerial tools taken from

best managerial practices

• the ensuring of operational consistency

• the cross-border standardization of treatments, care and all its management of rational utilization

• the settlement of international accreditation bodies

• the portability of technology and heightened clinical acumen

• the execution of international management practice but to be tailored locally

2: The access to information is the oxygen of international healthcare management.

International Healthcare Management needs necessarily access to information in various fields and the finding of solutions for difficult problems like

• disseminating knowledge via health informatics and universal access to the library of best available medical knowledge like the Cochrane Library

• international outsourcing of e-health services

• accessible electronic medical records

• Tele-Medicine / Remote Medicine

• Picture Archive Communication Systems (PACS)

• Remote Robotic Surgery

• ensuring patients' confidentiality at all times

3: The production and distribution of medical products becomes both the driver and the limit of managing healthcare internationally.

Around this point we find numberless hopes, concerns and discussions, like

• major pharmaceutical companies setting up internationally (R&D, production, logistic facilities)

• spiraling R&D costs cushioned by increasing marginal benefits

• medical equipment companies maintaining direct control of regional offices

• protectionism, bureaucracy which hampers market penetration

• transparency, independency at regulatory agencies, liability rights

• international arbitrary role of Health Technology Assessment Agencies (HTA) to offer common unbiased platform

4: The availability of professionals will become a true challenge for international healthcare management to a dramatic extent.

Healthcare professionals are becoming the soft soap of internationalizing healthcare provision but accompanied with difficult solutions, like

- leading experts visiting international locations temporarily
- charitable donations e.g. Air Hospitals
- private "Reverse" Health Tourism
- acquisition of Foreign Healthcare Professionals (long-term)
- inter-cultural communication skills
- the design of educational programs
- primary brain drain
- secondary brain drain and high turnover

5: Education and research are the master keys for international healthcare.

Those who are not able to internationalize provision cannot keep pace with global healthcare. This is most challenging

- medical colleges and universities
- nursing and allied health professionals
- post-graduate fellowship programs
- universal recognition of specialty degrees
- international congresses, symposiums & work-shops
- multi-center clinical research studies
- spreading the practice of that medicine just accepted based on best sciences

6: Patients are seeking international healthcare to an increasing extent.

The concept of Health Tourism is nothing new, but the preferences and the numbers are changing. Drivers of Health Tourism are

- the necessity of access to healthcare not available in the patient's home country
- the search for higher experiences and advanced techniques
- the competition for lower variable costs and prices
- access to experimental medicine
- permanent care for disabled people
- bypassing a nation's legal and ethical barriers
- the attractiveness of wellness, cosmetics or alternative medicine

7: Global capital investments are forcing international healthcare management. But throwing money at healthcare is not the final solution.

- There are many striking arguments around this formation like
- the increase in Health Expenditures despite Economic Downturn
- the healthcare costs are typically increasing faster than Inflation
- a number of governments want to offload social-medical burdens to

private sectors

• paving the way for private foreign healthcare providers to enter into Private Public Partnership (PPP) or BOT-models (Build-Operate-Transfer) at international locations

• the pros and the cons of deregulation and free-market policies

• healthcare's being seen as a social responsibility may conflict with business ventures

• 8: Humanitarian aid necessarily needs international healthcare management at highest standards.

• In this regard, we see mostly two key challenges:

a: the global health delivery to the poor (global access to healthcare, 10 million children die needlessly every year, vicious circle of "poverty", fighting corruption, ensuring complex systems deliver and the inclusion of healthcare into social-economic progress)

b: healthcare disaster management (disaster preparedness, advanced crises management, global large scale acute logistics, loco-regional networks of experts, initial response capabilities)

Looking into the international scene, we cannot deny complains about some problematic mechanisms, like

• the accreditation and the supervision of scientific and ethical standards

• the contracting with the paying party and the correctness of billing

• the legal standards, the national behavior in case of medical malpractice and liability rights

• the management of pre-and post-hospital treatments and care

• the safety and privacy of patients' data, but also

• the respect for the patient's rights and culture

In our view, this is definitely a challenge for healthcare management and should become a subject of international activities in research, teaching and practice. Healthcare management needs more than simply a course at a business school teaching accounting and other tools on how to profile financial gains. Effective international healthcare management needs deep insights into the particularities of services to humans, the national conditions and objectives, the mechanisms of managing cross-border utilization or how to respect national cultures, ethical traditions, legal frames and reimbursement schemes pro-actively.

Globalization will push international healthcare unavoidably and create the

profession of internationally active healthcare managers. These managers have, according to our view, to bring together

• the changing needs for a nation's healthcare under the influence of the national socio-economic and demographic transition

• the growing labor division in medicine, health services and in handling its supply and technologies as a sole achievement of differently educated and skilled staff

• the globalization of demands and the offers of a vast global industry

• the offer of necessary and appropriate healthcare to everybody being needy in spite of limited opportunities to pay for access

• the growth of healthcare provision as part of social-economic progress and the socio-economic developments within any of the nations around the globe.

Accreditation rules and measures aiming at lowering the variance of quality across the globe are a particular matter of concern. Such policies might raise a number of risks and ethical issues which can make accreditation of medical care providers controversial. Also, some destinations might turn out to be hazardous for medical tourists and make medical tourism a risky adventure. International healthcare has to make these problems a priority and it is not enough to leave them to the tourism industries. This clearly is a political issue of high priority. Whoever wants to teach International Healthcare Management as an academic profession has to focus predominantly on licensing and accrediting healthcare. Here we need internationally accepted standards and transparency.

Also in the European community it is obviously still difficult to regulate at least parts of the movements.

In any case, these developments will firstly push the argument to establish international rules for universal healthcare policies, and will secondly influence public and state run providers and their facility's governance. Thirdly, these movements will foster the establishment of many mechanisms to regulate and to control international services and industries. To some extent, international healthcare management is by no means only a subject for teaching. It definitely is also a field for research and consultancy.

The much extended field of managing healthcare will certainly run towards specialization, for example in order to manage

• the provision and utilization of what is necessary and appropriate to meet the demands and wishes of patients, and of the contracting third-party-payers

• the methods and mechanisms to reimburse services

• all the teams providing healthcare or more specifically prevention, medical care and rehabilitation or nursing

• the administration of a care facility and its human, financial and technical resources

• the planning, equipping, contracting and operating of healthcare facilities

• the financing and the refinancing of investments into care facilities

• the design, the advertising and the purchasing of healthcare insurance plans.

If healthcare management wants to act internationally, it has clearly to analyze and to understand what the national frame of service really is. There cannot be any successful international management in this field without a profound understanding of a nation's healthcare system.

The importance both of internationalizing health services and of professionalizing its management raises the question on universal characteristics of what international healthcare management is designed by or should be designed for.

It might be universally acceptable to set the followings as a standard of what international healthcare managers are expected to be educated in, despite differently outlined and focused according to national standards

• public health basics of healthcare

• basics on international healthcare financing systems

• the organizational structure of service provision and the related types of facilities

• strategic developments in the frame conditions of medical services

• fundamentals of healthcare and health services economics

• finance, accounting, hospital controlling, risk assessment

• human resource management

• communication, team building, project management, negotiation skills, staff appraisal

• making business plans

• management of medical devices and pharmaceutical management

• quality and process management

• strategic and investment management

• national laws, accreditation standards and policies

• ethics of management

- information technology management
- facility management
- product management and its international classification schemes
- marketing and promotion

The healthcare manager of tomorrow needs to be seriously committed to the very fundamentals of the particular nature of the subject to be managed. And if a country or an investing corporation is interested in acting internationally, it needs a clearly focused competence on international healthcare management①.

Legal Regulations

Legal regulations will mostly include norms for the behavior of insurance companies and providers in relation to each other and towards the patients. It is mostly accepted that the patient is the depending part set free of particular responsibilities against insurance companies and providers. This is different for the relationship of the insurances' insurant if beyond contracts set by the government, the framing legislation in some kind of a social or specific healthcare act or a patient's bill of rights.

Liability and illegal practices such as over-billing, corruption or kick-backs and other "under-the-counter" payments are typically part of legal regulation. The same is true for licensing and accrediting professionals or organizations and institutions. Also education and further graduation are often closely regulated by law.

Some selected particular subjects of regulation are:

Justice of Equity

This comprises the ethical principle of particularly social insurance funds or state run health plans. It usually states equal rights for getting access to healthcare depending on need but not on income or the ability to pay.

Another interpretation of the justice of equity is the regulation for equity as being part of some particular designed offers of managed care organizations. Here, equity offers the allocation of resources in a way that distributes benefits

① Alansari W. Breinlinger-O'Reilly J. Niehoff J-U. International healthcare management—a profession of growing importance. Gesundheitswesen, 2011, 73: 121～123.

and burdens among the members equally but still equivalent to the premiums paid collectively. It may also refer to a policy of providing equal treatments in any case of equal needs but independently from payments under budgeted rules.

Churning

Churning coins the problematic and in some countries also the illegal practice of a provider to see a patient more often than medically appropriate. It is primarily to increase revenue through an increased number of visits or services.

Churning can also occur if performance-based reimbursement systems emphasize on rewarding productivity and on rewarding a provider for seeing a high volume of patients whether through fee-for-service or through an appraisal system that pays a bonus for such "productivity").

Many of the regulations installed (like pre-paid services) are to avoid churning practices.

Churning may make sense if the visit is not due to medical but due to mental or social problems.

Fraud

In healthcare, most commonly it refers to hospitals and doctors which are suspected of charging fees for services which have not been provided. The mechanism is usually the incorrect recording of health conditions and medical procedures done to increase revenues or hamper examination.

In this context, it is often the misuse of services against contracted health plans as well as the manipulation of utilization reviews, the misuse of internal knowledge and resources for personal interests or the manipulation of billing. Also the trading with patients' medical records without permission may be seen as a case of fraud under some countries' legislation.

Fraud will also refer to non-fulfillment of obligations (for example regarding prospectively paid benefits in capitated Managed Care).

The "offender" may be a service provider, the hospital itself or the company's management. But the board of directors may have to take full responsibility if detected, for example by task forces for fraud prevention and detection often established by third-party-payers or governments employing particularly trained criminalists and profilers for such purposes.

Authorization

This is the written or unwritten permission to utilize healthcare under the umbrella of a particular law or contract. In healthcare, authorization also refers

- to the *authorization to disclose* private information
- to the *authorization to treat*
- to the *authorization to bill and to pay*

Pre-authorization will be required by many insurance companies and particularly under managed care. In the case of pre-authorization, the caregiver or even the provider organization requires the approval prior to the performance of treatment or care.

It can also mean that an employed doctor has to ask the management of a hospital for the authorization that the treatment can be done under existing internal cost-containment rules. Especially in provider organizations operating with prospective payment systems, authorization is a fundamental issue.

Authorization may also be related to the patient's allowance to store and to use his/her data for other reasons than for its own medical treatments.

Under some legislation, any intervention by a doctor or other health professionals into the patient's physical integrity fulfills the element of assault which is only exempted of punishment if authorized by the patient or in case of emergency hypothetical authorized.

Liability

Any healthcare raises questions for a nation's liability law, but in international healthcare it is a matter of broader concern. It is of profound importance for healthcare managers to clarify questions of liability as part of clinical governance, especially if acting internationally, including insurance policies.

It should be understood that each of those involved in liability claims have different interests with possibly tremendous risks of litigation. It is indispensable to take liability prospectively a major subject of providers' governance and management.

Most of the conflicts arise by

- occurring side-effects
- unwanted results which are unforeseeable or not caused by the interven-

tion

• irregular outcomes due to mal-practice, for example because of lacking knowledge, little experience and low skills, of missing or inadequate resources and supply, irresponsibility of staff members, lack of nursing and accuracy etc.

• complications caused by missing cooperation and compliance from the patient's side or other reasons not caused by the provider

The apprehensibility for liability litigations are supposed to have tremendous influence on providers' behavior in many countries, especially causing costly overuse of diagnostic testing, of avoiding high-risk treatment plans, of transferring patients to others only to avoid or at least to share responsibilities. This kind of non-decision-making, of postponing treatments and of multiplying the consumption of services and recourses to make somebody else responsible is seen as a major reason for wasting a high proportion of resources. Instead of using resources for all the patients' benefits, there also seems to exist a "for-profit-liability-industry" in some countries①.

The fear for litigations seems not primarily not to be correlated to liability in general, but to the nation's rules to decide on resulting fines. While some countries' courts compensate liability claims with outstanding sums, others seem to avoid any liability especially in case of medical tourism.

The liability regularities are also seen as a cause for risk selection against high-risk patients or against pre-estimated high-cost cases. There is some reported evidence that such avoidance strategies are used differently in frequency in for-profit and in non-for-profit provider organizations.

There are also reports that liability insurances explicitly demand such avoidance strategies as the precondition for insuring providers.

Norms for Healthcare Management

There is no official or globally accepted standard of healthcare managers' behavior. But any of the professionals should share some similar responsibilities for managing healthcare particularly if acting internationally.

Healthcare Managers are to share the following principles:

1. Healthcare can only be done for, on and with individuals. This makes

---

① Baiker K, Elliott S F, Chandra A. Malpractice liability costs and the practice of medicine in the medicare program. Health Affairs. 2007, 26(3): 841～852.

healthcare and its outcome the result of cooperation between all the ones involved directly and indirectly but based on the respect for patients. Management is part of the process and managers are part of the staffs' responsibilities.

2. Healthcare needs standardization. This is challenging medical evidence, ethical values and legal regulations. The making of standards is regularly limiting the variance of the treatments but is not to deny the patients' individuality.

3. Access to healthcare and the necessity and appropriateness of medical interventions are basic issues for the quality of healthcare. The ruling norms can never become differentiated among patients. Variations are only acceptable above the basic standards which have to be defined by guidelines based on evidence based medicine and grounded in universally accepted ethical standards.

4. The services offered have to respect the varying personality and individuality of the patients, their wishes and beliefs.

5. Most of the necessary healthcare exceeds the financial opportunities of most patients. That regularly makes the third-party-payer the consumer and gives "advocacy" an important function in healthcare. For that reason, providers and purchasers should always be split up in order to avoid wrong leading incentives.

6. The outcome of healthcare also depends (to a varying extent) on the patient, her/his sense of coherence and her/his general physical, mental and social status, including aspects like meaningfulness and self-manageability. Consequently, outcomes cannot (except severe mistakes) easily become referred back to single actors in all of the healthcare pathways in a simple way. Quality is the result of a team but mostly includes the patient.

7. It always has to be recognized that in most of the countries with developed healthcare systems, healthcare is highly and densely regulated by law. Also emerging countries and their healthcare markets are developing such regulations. And they definitely have to do so. It is essential to offer healthcare according to national legislation and the highest standards of ethical rules.

8. The extending international activities of healthcare provision are changing the cultural frame for healthcare and related services. If treatments and care are offered internationally, it is unacceptable only to do so for the reason to avoid higher legal and ethical standards for healthcare in the patient's home country.

These rules make the handling of norms and of regulations for access und utilization the key for the understanding of healthcare management's tasks. In

detail, the most striking aspects are

- determining the measures contracted either by the patient or the third-party-payer explicitly
- guaranteeing the delivery of what has been contracted
- netting the individual's wishes and cultural values with the contracted norms
- professionalizing the product offered
- profiling the provision of healthcare by taking into account the estimate of volumes, the structure of demand and the means of care to be assumed strategically.

Sex Discrimination Act

This refers to many nations' legislation to set legal standards against gender discrimination and is a central concern of any manager. If a country has such rules, then they must be followed strictly, if not, they should be part of the provider's management. This is both because of their relevance for treating female patients and for the fact that many, often most of the health professionals are women.

Patients' Rights

The understandings of patients' rights have developed and continue to develop with the change of medicine and its opportunities.

They are based on the "*Universal Declaration of Human Rights and Dignity and Equality of all Human Beings*". The increasing awareness of patients' rights is influencing the management of applying medicine. There is no internationally shared total agreement on a Charter of Patients' Rights, but there are many internationally proven documents and nationally accepted conventions mostly focusing on

- the nature of the patient-doctor-relationship
- the rights of patients against insurances and providers
- the rights for patients' data to be kept confidentially
- the rights of self-determination
- the conventions on biomedicine, genomics and humans rights

Any healthcare manager working nationally is highly recommended to

respect the legal basis and also the cultural background of patients' rights. This is especially true if working internationally.

Medical Debt

Medical debt refers to debts incurred by individuals due to unpaid outpatient and inpatient healthcare costs, insurance premiums, fee-for-service claims, deductibles, co-payments, auxiliary means, pharmaceuticals etc.

People regularly do not plan to fall ill or to hurt themselves in order to get treatments, thus healthcare remedies are often both unforeseeable and unavoidable like natural catastrophes. That is why developed countries ensure access to necessary healthcare by a range of concepts. Therefore, medical debt is seen as a phenomenon of less developed social security in a country. In general, the less developed a country the higher is the proportion of out-of-pocket payments and vice versa.

Among economically developed countries, medical debt is an especially notable phenomenon in the U.S. According to official reports, medical debt has been found the primary cause of individual bankruptcy as defined by U.S. law, chapter 7. A 2007 survey had found about 70 million Americans either have severe difficulties paying for medical treatment or have medical debts. A study has also found about 63% of U.S. adults with medical debt avoided any further medical treatment, despite of being in severe necessity①.

Medical debts are obviously also a growing problem in European countries, such as Germany.

Professionals' Regulations

Professionals' regulations are describing and regulating the requirements to become fulfilled before being allowed to perform professional healthcare. These requirements vary widely internationally but are described in the right way as follows.

Healthcare professionals need a university or medical school-degree. This

---

① Kauffman H. Medical debt huge bankruptcy. http://www.cbsnews.com/stories/2009/06/05/earlyshow/health/main5064981.shtml, 2010-12-31.

will mostly need five to six years for physicians or about three years for nurses and midwives. Besides the degree, professionals mostly need a particular public admission (approbation) for practicing. In case of some severe misbehavior, government can terminate the allowance but is not in power to withdraw the professionals' degree. Regarding physicians, some systems may demand mandatory or voluntary and further qualification of about four or five years before being allowed to settle without further supervision by other professionals. But some systems also demand to renew this allowance regularly.

Many countries have lists about which countries' degrees and further qualifications are accepted for settlement in case of immigration but may also add some more demands such as languages functions and proofing of the candidates' skills in handling daily routine requirements and specific knowledge about the healthcare system's functioning.

Risk Management

Any regulation around financing and rewarding healthcare is a top issue for healthcare management and can also be seen as a part of risk management. In the following the authors want to strike some very few and selective aspects, particularly those closely associated with management approaches of medical care.

Coding

The term coins the mechanism of defining and identifying each of the particular hospitals' services by transcribing required information from a patient's medical file into a code under the regulations of the given concept of coding. Coding needs a pre-set of universal definition, the recognition of the diagnoses having been treated, the condition's severity, the procedures performed and the level of care if they are part of the billing agreements.

The coding is typically a function of the billing process. In most advanced health systems, fraud investigators look closely at the medical record documentation, which finally result in codes and investigations for consistency. Lack of quality of documentation and using the coding procedures can earmark a result as "up-coded" which is considered fraud. But inexperienced coding practices may also occur in "down-coding".

In some countries, exists a national certification for the coding

professionals, also called "coders". Accreditation is expected to raise standards of quality for the coding procedures. Some also discuss to leave coding to independent agencies. Many or at least some see coding a fundamental task of the physicians and the nurses cooperating with the patient and see the procedure touching questions of liability or part of the mechanisms to reward doctors.

Risk

The term refers to the likelihood of a loss while a gain is usually called a chance. In other words, a risk is the likelihood for the occurrence of an incident qualified as being unwanted. The same incidence may be assessed totally different if changing the context and the kind of interest. Thus a risk can become assessed both being a chance and a risk. Smoking is a risk for smokers but surely a chance for shareholders of the tobacco industries.

The likelihood to fall ill is a risk for individuals and insurances but a chance for providers of healthcare. If something is a risk or a chance simply depends on circumstances.

Regarding healthcare

• the risk to fall ill and the chance to avoid the incident has to be considered for preventive actions by investigating the stakeholder's interests

• the risk of a financial loss is an issue for the health insurance and challenges strategies to minimize or to avoid this risk by risk selection even if politically unwanted or not allowed

• the risk can occur under healthcare provision as an unwanted side-effect or as an outcome or a loss under pre-paid services

The key function of determining something a risk is coined through the prediction of the outcome of interest, of the resources consumed or the likelihood of liability litigations.

In Epidemiology, it has necessarily to be understood that the definition of risks has to consider a function of exposure and time and that risks (regarding health matters) are regularly extremely unequally distributed among the target population, which always raises the concern on risk selection by insurers' and by providers' policy.

Risk Adjuster

This is a measure used to adjust healthcare insurances for a group of insu-

rants in order to compensate for contracted healthcare spending which is calculated to be below or above what is measured the expectable average. Such adjusters are necessarily used if insurers compete not through benefits but through risk selection and low premiums.

Risk Adjustment Models (RAM)

RAMs compile a number of models used to calculate risks for a health insurance and for a managed care contract. These models can basically become classified as person-classification schemes or case-classification schemes. The first one is used for prospective calculations per capita, the other one for prospective and retrospective calculations per case.

RAMs are aiming at

- measuring and assessing risks
- classifying related responsibilities
- estimating morbidity, mortality, lethality, fatality, invalidity or work incapacity
- pre-estimating costs per person or per case
- pre-estimating utilization episodes

by adhering additional factors like age, gender, ethnic, social class, pre-existing conditions, education, profession, life style parameters, region and many more.

Risk Analysis

This samples procedures of measuring and monitoring risks of any kind for different but regularly prospective purposes. The analysis will be of major relevance for seeking economic success in any business both of the insurer's and the provider's side.

Risk Assessment

This assessment anticipates the costs of providing healthcare to insurants by grouping them according to utilization history and patterns, age, gender, health status, utilization attitudes, living and working conditions, region and many other attributes.

The general problem in question is if insurances are classifying insurants ac-

cording to particular factors which are to indicate different risks (which is the case within most the private insurances) or if a health insurance is calculating the average risk of a total population (which is the case within social and public health funds). Technically speaking, the difference is solely made by the variance adjusted and accepted around the average mean.

The controversial discussion on both of the adjustments' classifiers can never find a right or a wrong solution without defining the fundamental goals of insuring people. If the aim is to provide benefits equivalent to the individuals' different incomes, risk assessment for each of the groups would be unavoidable.

But if the aim focuses on a nation's social change in favor of social coherence and equal chances for any and avoiding discrimination in the access to healthcare, assessing for the individual equivalence of premiums and benefits would be against the mission.

For these reasons, some countries have developed highly sophisticated methodologies of assessing risks while others, like France, Germany or the U.K. have not.

Risk-Benefit-Ratio

It is the relative gap between a risk and a benefit. Depending on interest and definition, these ratios can vary widely.

Informing patients about the ratio is required as an essential for caregivers. But the interpretation needs particular expertise. The final outcome is decision-making on that risk being assessed as acceptable.

Risk Corridor

This refers to a financial arrangement between a payer of healthcare services and a provider that determines the under and the upper limit of acceptable risks if providing healthcare.

Risk corridors are to protect the provider from unacceptable costs for individual beneficiaries. For this aim, the risk corridor institutes a "stop-loss protection".

It is one of the important issues for healthcare managers to negotiate on risk corridors and might be part of contracted or demanded conformation with guidelines.

Risk Management

Risk management is to limit the provider's organization exposure to risks by taking action on the probability of risk occurrence, its impact or likely consequences.

But in healthcare actions, it is also to limit the patient's exposure to harms likely to be caused by effects of prevention, diagnostic, treatment and nursing.

The main fields of healthcare managers' concern are usually

- to identify people at risk
- to assess risk of healthcare methods
- to decide on acceptable risks for the provider organization's outcome

Risk management needs pro-and re-active management concepts, systems of monitoring and communicating risks and transparency relating to what is causing risks.

In reference to accepted standards risk management has to follow up these steps

- establishing the context
- identifying the risks
- risk analysis
- risk evaluation
- risk treatment
- risk monitoring and reviewing
- risk communication and consulting

Managers should always consider if handling risks would be merely a matter of strict control and ruling or if the management is recommended to integrate staff into risk control based on trust and cooperation.

Management decisions may also be made for gaining the chance of future effective development and purposely promoting the pro-active taking of risks. Some may also call such decisions "taking a chance".

Risk Pool

Any insurance is a risk pool. The pooling can be defined by the variance of the risks accepted under a pool's policy. The variance depends on the willingness and motivation of those sharing the pool's risks and the acceptance of some or

any unequally distributed risks.

The more selective a risk pool's is the less adoptable is the pool if facing unforeseeable changes and events and vice versa.

More generally speaking, characteristics of a risk pool can be used as the indicators of a nation's attitude towards public responsibility and solidarity, and towards self-responsibility and individualism.

Strategic Management

Strategic management in healthcare is to enable a provider organization to achieve visions. The strategic vision includes the outlining, the implementation and the processing of the organization's ultimate goals.

It will regularly use tactics to achieve the vision and the mission but strategic and tactical management have to be seen as something different in execution. While strategic management will demand high consistency and long-term decision-making, tactical management focuses on short-term conditions. Particularly for-profit providers may have problems with strategic management, if depending on short-running or changing shareholders financial interests. Some analysts describe strategic management being one of the very fundamental differences between non-for-profit and for-profit healthcare providers.

The keys to developing strategic management for a healthcare institution are

• the formulation of an accepted long-term strategy based on demand analyses (for example, considering demography, population's health status measures and assessment, cultural attitudes in using healthcare), on the self-assessment of financial, professional and human resources, and the structure and behavior of competing providers

• the setting of the objectives that are concurrent with the analysis

• the design of a strategic plan focused on realizing objectives.

Essentials in strategic management in healthcare are the

• power to formulate health policies on how to interact with all of the healthcare providers and the health insurance systems

• regulatory concept for setting goals and objectives into reality

• balance between the public and the private actors' interests through cooperation and competition

• performance and information policy

Strategic management in healthcare focuses on two different approaches, that is

• on entrepreneurial approaches and processing (regarding resource allocation, internal regulation using economic tools, competitive behavior, economic rationality prior to any other rationality etc.) and

• on the public approach (public health rationality, national target setting, social coherence and peace keeping, equity for access to services, ethical norms etc.)

Most important is the concept for strategic leadership in managing healthcare. This will be closely related to the decision that which of the above mentioned approaches will meet the interests best (either the entrepreneurial or the public approaches).

The discussion around strategic management and planning is of particular importance regarding long-term investments and personal development. Here the conflict between short-running interests and strategic planning and development for the needs of patients might turn out a conflict of cultures.

In this regard, there is a discussion to replace the traditional principal-agent-theory (or better theorem) by the stewardship-theorem. While the first one argues public interests have to be protected through separating CEO's functions from those supervising the CEO. Donaldson and Davis reported on evidence that "*shareholder interests are maximized by shared incumbency of these roles*".

But both these theorems set the shareholders' interest on top of any other approach to perform healthcare and make shareholders the system's essential. But most international systems are not run by shareholders. They are run by public, community or government. Therefore, considerations on principal-agent or stewardship do not really answer the question of best management models. That simply depends on the fundamental approaches and ownership behind.

Thus the true question always is if public interests and their governing bodies or the investor's interests are ruling the strategic management of visions.

see Balanced Score Card

see SWOT Analysis

IX

Quality of Healthcare

General Considerations

People usually speak of quality if something desired or if necessarily needed meets expectations. That describes "quality" being a relation. In other words:

1. Quality assessment in healthcare depends on expectations. These expectations are part of a contract and it has to be explicitly outlined if kind or content of quality is wanted and contracted or demanded by law.

2. Regarding healthcare, there are two views depending on the systems' nature: the first one expects quality to be quality equal for everybody in need of necessary services. The second one accepts characteristics of quality as being different for different target groups depending on price and potentials to pay for, mostly for "extras".

3. Concerns on quality might be issues for assessing insurance or provision.

4. Focusing on quality needs permanent quality assessment by the paying party using criteria as contracted.

5. The criteria of quality might be profoundly different in different health services and insurance systems.

The top quality parameters depend on the level of development of health services system and are hard to be compared internationally. This is particularly true for still developing and developed health services systems. But in general one may accept the following criteria:

For *health insurance systems* the following criteria should become accepted

as being fundamental:

- free, universal and affordable access to insurance as a human right but not as a wanted social privilege
- strict rules of anti-discrimination policies
- advocacy of the insurers' rights and interests
- the split of the insurers' and the providers' interests
- public transparency regarding the use of premiums

For *health providers and provider organizations*, the following criteria should become accepted as being fundamental:

- strict avoidance of over-and under-utilization, of mal-practice and of policies against
- the pro-active coordination of care as a primary care provider's key function
- advocacy of the patients' rights and interests
- the independency of care from financial interests
- the full documentation of provided treatments, the patients' full access to their own data and the security of patients' data against third-parties interests
- patients' legal protection in case of failures or adverse events

Quality of healthcare has some particular aspects of the typical split between "being a patient" and the paying parties' interests. It is also a particular problem that accountability of certain features of quality of single "producers" can turn out to be difficult. Additionally, it has to be kept in mind that matters of quality are also to be seen in the triangle of provider-third-party-payer-patient relationship.

While it seems relatively easy to find and to compromise on a general understanding or vision of what quality should be, it might be difficult and conflicting to determine and to assess features and their individual accountability. The consequence is a greater or minor variation of objectives and priorities accepted as relating to issues of quality of healthcare. It also makes a difference if quality is considered a single patient's experience, the average of a provider's organization outcomes or a national healthcare system's functioning.

"*Quality of care is the level of attainment of health system's intrinsic goals for health improvement and responsiveness to legitimate expectations of*

the population."①

The compendium's authors doubt this description will answer patients' questions, but it might help providers and managers of healthcare establish some guidance.

A very practical view was given by the UK's Department of Health in 1997:

Quality of care is

- doing the right things (what)
- to the right people (to whom)
- at the right time (when)
- doing things right first time

This view restricts the debate on the providers side, and reflects the specific frame of a state-run National Health Services System. Looking through the huge amount of literature discussing matters of quality, there seems to exist a common understanding of what issues in particular are related to quality. The following gives a selection of criteria that are accepted universally or at least by a majority. These criteria are

- access to necessary and appropriate healthcare
- equity and justice in provision
- care according to universally accepted standards of evidence
- timeliness if necessary
- shared-decision making with the patients based on informed consent
- responsiveness in behavior and personal communication
- focusing on outcome rather than on maximizing procedures and revenues
- fulfilling legal and ethical requirements
- correctness and respect
- patients' data safety
- proven qualification of caregivers
- effectiveness in team cooperation
- individual service and friendly treating
- pro-active continuity in case management
- cooperation and coordination within the system
- established critical event and failure management
- hygienic and technical safety

---

① WHO. The World Health Report, 2000.

The deeper one goes into the matters the broader the aspects to be covered appear. But in general, the key aspects of quality are regularly *access*, *effectiveness* and *respect* which simply means finding help if needed and trusting in the caregivers' activities and motives. But what a "wanted outcome" is relates to objectives which have to be specified for each of the particular national, social and regional circumstances. In any case, providing access and meeting calculated goals are the keys to what quality is.

It is internationally a matter of controversy which party is in charge of defining requirements of quality is. Parties claiming for this right might be the individual providers, the responding teams, the organization's management, the paying party's coverage, and the norm-setting authorities or the patients. It is also a matter of controversy if quality will result from regulations under universal access and non-for-profit rules. Others see competition on free markets the ultimate road to quality.

In respect of pro-active norm-setting for quality, it must be accepted and openly communicated that nobody can expect or provide a level of quality that a third-party does not contract or pay for. Here both non-for-profit and for-profit paying parties share the same economic fundamentals even if conceptions and motives differ. This indeed can influence the degree to which delivered health services meet either expectations or established professional standards and legal judgments. This is a particular problem if regulations of rationing are explicitly implemented. The view relates quality primarily to the expertise of professionals and makes quality a third-party-payer's compromise and is leveling off what any of the patients can expect as a legal right.

In regard to pro-actively and individually buying and paying healthcare consumers, quality is featured by the available products, each demanding low variance, but comparably defined prices. Here, quality is issued by the multiplicity of particular price-quality-adjustments. It makes quality the correspondence of healthcare offers specified alongside the individual demands but each mirrored in a particular price. Quality does not only sell, it also costs. This market policy will create different kinds of quality depending on the patients' and the consumers' capacity to pay.

But "quality" also issues the relation between

• the benefits as contracted by the payer/consumer and the care given to the patient by the provider

• the professional understanding of quality according to the standards of scientific standards and the contracted access to these standards

• the system's and the providers' behavior to the patients meeting their values and expectations

According to the *Donabedian's Trios* quality is frequently described as having three major dimensions:

• the structural conditions to provide access to healthcare and to guarantee the availability of professional and technical requirements without social, ethnical or religious discrimination (*the structural dimension of quality*)

• the process of services delivery regarding necessity and appropriateness of diagnostics and treatment (*the process dimension of quality*)

• the "end-point" outcome of services' use according to accepted standards of medicine but also including factors like respect, information, behavior, commitment etc. (*the outcome dimension of quality*)

It is obvious that any healthcare can be described by criteria of quality. Consequently, quality measures differ according to preferred and selected criteria either as being selected by patients or by the paying customers. Here, public or legal goal setting is the key to quality assessment.

But quality of healthcare may also be seen as the strategy to distinguish providers according to their different offers for different expectations of different groups of consumers. What one target group may be value by as quality will not necessarily be valued by another. This indeed leads to the central questions which have to be answered:

1.Is there a common and unique understanding of what quality is?

2.Does this standard have to be set by an independent scientific authority or by the provider's policy or is this the fundamental target of the paying party?

Briefly, one can ask if quality is a common standard or if it is a specifically designed product for the providers' competition policy aiming at the selection of preferred target groups. Some experts have sarcastically called that quality policy also "wallet biopsy".

If a healthcare system focuses on guaranteeing universal and equal access, it will be the system's responsibility to set the norms and to adjust resources depending on total budget. This necessarily includes monitoring providers for meeting the standards and for the use of budgets. The expectation is to guarantee an average of requirements and to accept only some small degree of a variance.

Single providers may opt to go beyond but they are never allowed to go below the norms. Any norm will work as a common guidance both for providers and for patients. *Here, competition for quality is based on equal reimbursements for equal cases to be treated*. This fundamentally needs a commonly grounded acceptance of quality based on patients' proven needs and on evidence based medicine.

If a healthcare system primarily focuses on market strategies and on providing access to healthcare depending on the individuals' ability to pay for services, it will be the providers' task to describe, to advertise and to perform the offered quality to each of the targeted purchasing groups. The expectation is to guarantee the quality offered and bought according to the range of market demands. *Here, quality becomes the leading advertising argument to cover markets selectively*. The advertised quality is the provider's promise and liability as an individual offer wanting to meet an individual demand. This fundamentally demands an individually contracted acceptance of quality based on the consumers' desires. Consequently, the debate on quality will focus on the debate if healthcare, and medical care in particular, is guided by proven needs or by the paying parties' desires and intentions.

Evidence based medicine sets the scientific standards for healthcare and proven needs. Adjusting quality to desires needs simply some market observation. The first view makes, step by step, medicine a global scientific standard. The second view is strategically adjusting standards of quality to the paying parties' policies.

Clinical or Critical Pathway or Clinical Practice Guidelines

Such pathways are a "map" or a "high-street" of preferred activities or pathways through a case-specified medical intervention. It is to improve the organization, the structural conditions and the processes to conduct and to perform the healthcare procedures in the setting of a facility.

A pathway usually contains the design and standardization of the care process within a provider organization and the communication among the involved professionals. Pathways need first of all scientific evidence, staff's professional agreement and regular review. Such pathways are a methodology for communicating, decision-making, performing, processing, and also training and developing teams for defined cases and/or defined groups of patients. It includes goal

setting, shared decision-making with the patients, standard setting, documentation, but necessarily also permanent evaluation which focuses on quality improvement, effectiveness and efficacy. If not accepting the inclusion of the patients' will, these pathways might violate patients' rights, but depending on national legislation.

These pathways are developed by clinicians or consultancies for specific diseases or events. They mostly focus on "cases" but not on individual patients. By concept, they are regularly "depersonalized" but need the capability to become adjusted to individual variations. Also insurers or consultancies try to get competence in developing and even in trading and contracting for such pathways.

Pathways also outline

- the types of information necessary for decision-making
- the timelines for applying that information
- the setting of the actions to be performed by particular staff members

Pro-active providers are trying consequently to develop these pathways for the majority of their medical interventions and are developing the software capacity to distribute and store related information.

There are reports that managers of managed care organizations are also attracted by the idea to use pathway agreements for monitoring care "in real-time". There are also examples using real-time monitoring of the doctors by external consultancies.

These developments are obviously part of a management strategy to reorganize medicine under production performance rules and by offering a set of predefined products under capitation agreements. Some experts argue these practices of real-time monitoring could not only seriously violate legal and ethical requirements but also violate the concept of evidence based medicine.

Pathways can affect the liability rights regarding utilization if providers set the pathway's rule ahead of individual healthcare decisions.

Internationally, there are tremendous movements using such pathways as a method for overcoming "supplier induced" demand. That is splitting diagnostics, decision making and performing treatment. While the consequences of these developments are foreseeable, the success of these trials is not.

Clinical practice guidelines are something similar. They are sets of rules, standard products, recommendations, pathways or any advice to be followed by health professionals.

Such guidelines are systematically and explicitly developed and within the scientific community compromised as regulations, protocols, also as products which direct or assist clinical decision-making. They are also used to justify what is necessary and appropriate under pre-defined conditions or in liability litigations. Guidelines are also practiced to define a hospital or clinic portfolio or clinical pathways.

Guidelines are internationally seen differently. One may see them a provider organization's internal policy or a third-party-payer's contractual demand for provision and decision-making in the Managed Care environment. Others, mostly the scientific community and legal authorities, see such guidelines not a norm or an advice but a guiding help for individual decision-making and supporting shared decision-making on treatment plans by doctors and patients. This view accepts that globally and regularly the final liability for procedures and results will stay the professionals' liability.

The overall experience is that guidelines will improve average outcome measures by limiting the variance of treatment for similar cases. They are also expected to rationalize the utilization both in terms of effectiveness and efficiency. It is necessary to understand that these guidelines are tools for clinicians but not the management's tools to supervise the caregivers.

Some analysts see differences between guidelines and standards, others, especially lawyers, might interpret them both the same. This is why healthcare managers are highly recommended to clarify that point to clinicians, consumers and patients' third-party-payers.

The guidelines should be based on Evidence based Medicine or Health Technology Assessment but can also become designed by the providing organization or a health plan as the provider's standard by contract.

Guidelines are supposed to represent the consensus among the experts and they should become developed systematically but regularly revisited.

Guidelines and evidence based medicine are sometimes discussed as being the same. That can lead to confusion because evidence based medicine is based on shared decision-making while guidelines are made to guide or to rule actions. But it is always expected to set up guidelines according to the best evidence available.

Guidelines may also become used as a utilization and management mechanism designed to guide providers in making decisions according to the provider organization's brand and culture. The way could be to implement parame-

ters for the delivery of healthcare services under a managed care contract. The future of that product might be triggered by applications from artificial intelligence and will work interactively with the doctors both in guiding and in directing them.

From an international point of view, the contracting of services according to provable clinical practice guidelines seems to be essential for global healthcare provision and utilization, as well as its accreditation and certification.

see Evidence based Medicine

see Health Technology Assessment

Clinical Decision Support

This kind of support refers to the projected function of a data system which is delivering data to the healthcare professions and is responding to key features (symptoms, measurable parameters, unexpected developments) which are embedded in the support system.

Such clinical support systems are also used to alert case managers if the patient's eligibility for a contracted service has to set under prior approval or is exceeding the standard of a contract or the rules of case management or the clinical pathways established.

A clinical decision support system can also become designed to guide triage systems or Disease Management Programs.

Some systems may use highly sophisticated methodologies of artificial intelligence and are expected to become one of the triggers of globalizing healthcare. The regarding future will certainly include complex supports by sophisticated software that is based on artificial intelligence like neuronal nets or case based reasoning concepts which permanently learn from doctors' decision-making, the particular disease pathogenesis and alternatively treated patients' outcomes.

These tomorrow's systems show the potential for deeply influencing the current understanding of what medicine is. Considering the pros and cons, one may stress concerns on de-individualizing healthcare while it certainly is a pro to provide substantial support, for example for treating seldom diseases or serving people in less populated regions.

Cochrane, Archibald (1919～1988) and Cochrane Collaboration

Cochrane was a British physician, epidemiologist and health economist. He has been influencing the management of healthcare profoundly since the appearance of his book "*Effectiveness and Efficiency: Random Reflections on Health Services*" (1972).

It was leading the way towards a new thinking about defining the rationales of medical services by implementing epidemiologic and health economics and by opening eyes for quantitative approaches. His thoughts were particularly dedicated to the UK's National Health Service with universal and equal access but left the norm-setting authority to the government, respectively to the taxpayers.

His ideas have guided into the concept of Evidence based Medicine and Health Technology Assessment and they became honored by naming the worldwide acting institutions doing meta-analysis on medical and clinical research studies the "Cochrane Collaboration".

The collaboration gathers a group of about 15.000 scientifically educated and experienced volunteers in more than 90 countries. The overall goal of this group is independently to review treatments and medical strategies for evidence as reported by scientific media.

Founded in 1993, the group follows the vision of Archibald Cochrane. The collaboration is to "*help people make well informed decisions about healthcare by preparing, maintaining and ensuring the accessibility of systematic reviews of the effects of healthcare interventions*".

The results—called systematic reviews or Cochrane Reviews—are available at the Cochrane Library[①].

Not individual physicians' opinions and experiences but exact measurements under standardized conditions, the quantitative outcomes and systematically and independently reviewed clinical studies became accepted the "golden" way to perform quality adjusted and scientifically proven medicine both in terms of efficacy and effectiveness.

---

① http://www.wiley.com/Cochrane.

The Cochrane Collaboration is definitely one of several but also the most important formation towards the making of healthcare and its management an international standard of applied sciences. That is why mangers should be closely familiar with that collaboration and its impacts on providing healthcare.

see Evidence based Medicine

see Health Technology Assessment

see Health Insurance Systems

Diagnostic Guidelines (DG)

These guidelines coin doctors' decisions on the use of diagnostic methods and tests intending to clarify patients' particular symptoms and related diagnostics to prove the presence of a targeted disease. These guidelines fundamentally share the view that diagnostics have to be legitimized by precise targets. Diagnostic Guidelines want to overcome a "trial and error" or "take them all" practice in ordering diagnostics.

The final aim is always to find and to legitimize the fitting therapeutic intervention. One may use such guidelines to rationalize diagnostics in order to prevent individuals from harm due to unnecessary tests or interventions or from wasting resources.

Such guidelines are also used to prepare a screening of healthy populations seeking for early stages of disease or only for certain risks to develop a disease or simply to sell unnecessary procedures.

But DGs are also responsible for the practice of defensive medicine and of growing costs if not based on critical appraisal practices. Such behavior additionally pushes the allocation of resources from treating the needy to treating healthy individuals preventively.

The central problem is the lack of norms and of a common agreement as to assessing what kind of humans is still seen as healthy or is already in a treatable condition.

Screening program managers should be aware of the many disappointing experiences drawn from the extended WHO screening policy in the 1970s.

see Diagnostic

see Defensive Medicine

see Paradox of Prevention

see Predictive Medicine
see Screening

Donabedian's Trios

This trio refers to the research and the writings of the Lebanese physician Avedis Donabedian (1919～2000), who was the professor for Medical Care Organization and especially researched on quality measures.

He was the first to define the quality of care:

"*Quality of care is the kind of care which is expected to maximize an inclusive measure of patient welfare, after one has taken account of the balance of expected gains and losses that attend the process of care in all its parts.*"①

He made the point that quality cannot become pointed only to a single professional or a team without assessing structural and process conditions for the outcome. That is the way in which he proposed to distinguish the

Structural Quality

It describes how resources are allocated regarding time, place and responsiveness to the needs of population and the fairness in sharing benefits and costs

Process Quality

It describes how the resources are applied, how time and resources are used, how waste of resources becomes avoided, if risks of harming patients are reduced to a minimum, if the evidence based practice becomes a routine, if the appropriateness of care guides the decision-making, if the care focuses on the individual patient, and how the communication and information become performed

Outcome Quality

It describes the users' health improvement, the clinical outcome, the satisfaction and benefit.

These three criteria are known as Donabedian's Trios.

---

① Donabedian A. Explorations in Quality Assessment and Monitoring. Ann Arbor: Health Administration Press, 1980.

His contemplation was that lacks in quality are mostly due to deficits in structure and process management rather than in the team's qualification alone and that these deficits will cause most of the not intended outcomes. For that reason, his guidance always was that quality is the integration of staff's performance and management approaches. Regarding quality management, his following remark is often quoted:

"*If we are truly committed to quality, almost any mechanism will work. If we are not, the most elegantly constructed of mechanisms will fail.*"①

Evaluation of Healthcare

Evaluation is the measure and assessment of any of the utilization and of the outcomes intended by prevention, therapies, rehabilitation and nursing against the set of objectives.

Evaluation practice needs

- explicit targets, objectives and standards
- strategies and methods to fulfill targets
- a system of indicators to be quantified
- the ultimate wish to draw consequences resulting from evaluations

The usual evaluation procedure contains the following

1. assignment and data access
2. setup of methods and procedures
3. data collection and processing
4. data analyses and interpretation
5. discussion of the results with those involved
6. final interpretation and presentation
7. conclusions and consequences

Evidence based Medicine (EBM)

"*Evidence-based medicine is the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients. The practice of EBM requires the integration of individual clinical expertise*

① http://www.cmj.hr/2001/42/1/InMemoriam.pdf, 2009.

with the best available external clinical evidence from systematic research." (Sackett, et al., 2000)

EBM can also be seen as the way to introduce quantitative arguments into individual decision-making between the patients and the doctors. But quantitative arguments are related to likelihoods and it has to be understood that likelihoods principally cannot become defined for single or individual cases and that a decision about a therapy has to be accepted by the patient. This is why evidence based medicine has to be put into action by individual decision-making and communication with the patient but being used as a necessary tool. It does not exclude the necessity of guidelines but describes the difference.

The challenge provided by EBM is not so much the goal of performing a scientifically based medicine. The challenge is the ability to get along with quantitative knowledge and statistical data by doctors and to communicate them to individual patients.

Some doctors fear EBM could become used or misused by insurers and by the management of provider's organizations to cut costs if selecting only the cheapest treatments. That is why the tensions around EBM have a lot to do with the lack of professional training in handling quantitative information and with assumed or real misunderstandings by healthcare managers of what evidence based medicine really is.

EBM makes a deeper view into this important topic for health care management necessary for all of those sharing responsibilities in providing and performing health services.

Especially the idea that EBM would primarily save costs is a naive, fundamental misunderstanding of what EBM is projected for. It is a tool to increase the effectiveness of modern medicine which may result in saving money but in increasing cost as well. There is no evidence that EBM could save expenditures in total, but there is evidence for a better use. The often occurring problem is not the EBM philosophy. The problem is the misuse by insurance companies and by Managed Care Organizations if profiling offered products selectively by using EBM for strategies of risk selection or by trial to guide decision-making according to motives other than improving care for individual patients.

Evidence-based medicine is nothing else than the identification and application of the most efficacious interventions into maximizing the outcomes to be measured for the patients' quality of life. In general, experiences show that

this goal will raise rather than lower the total cost of care. EBM recognizes that many aspects of medical care depend on individual factors such as quality of life and will need some more scientific background than clinical studies exclusively.

Over the course of the years, two types of evidence based medicine became distinguished. One relates to *evidence-based guidelines* (*EBG*) on an organizational and institutional level seeking for the production of guidelines, policy, and regulations or also for producing medical products.

The other relates to making *evidence-based decisions* (*EBID*) as practiced by the individual healthcare providers.

It seems to be understandable that the first one is of major concern for managerial matters at the institutional level of any third-party-payer. The making of evidence-based-guidelines points to whom the responsibility for norm-setting and norm-control is given. This will deeply influence the relation between managerial responsibilities and evidence based medicine. This explains why so differently performing health services systems like the one of the U.S. and the U.K. have developed different concepts of interpreting EBM.

The U.S. model is developed and used by the "*US Preventive Services Task Force*"①. The agency stratifies and ranks the evidence according to the effectiveness of treatments or screening as follows:

• Level I: Evidence obtained from at least one properly designed randomized controlled trail.

• Level II-1: Evidence obtained from well-designed controlled trials without randomization.

• Level II-2: Evidence obtained from well-designed cohort or case-control analytic studies, preferably from more than one center or research group.

• Level II-3: Evidence obtained from multiple time series with or without the intervention. Dramatic results in uncontrolled trials might also become related to this level of evidence.

• Level III: Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees.

The UK National Health Services uses a system with categories that are labeled A, B, C, and D. The above levels are only appropriate for treatment or interventions; different types of research are required for assessing diagnostic accu-

① http://www.ahrq.gov/clinic/uspstfix.htm.

racy or natural history and prognosis, and hence different "levels" are required. For example, the *Oxford Centre for Evidence-based Medicine* suggests Levels of Evidence (LoE) according to the study's design and critical appraisal for prevention, diagnosis, prognosis, therapy, and harm studies:

• Level A: Consistent Randomized Controls Clinical Trial, cohort study, all or none (see note below), clinical decision rule validated in different populations.

• Level B: Consistent Retrospective Cohort, Exploratory Cohort, Ecological Study, Outcomes Research, case-control-study; or extrapolations from level A studies.

• Level C: Case-series-study or extrapolations from level B studies.

• Level D: Expert opinion without explicit critical appraisal, or based on physiology, bench research or first principles

The following recommendations are ruling according to the U.S. Preventive Task Force as follows:

• Level A: Good scientific evidence suggests that the benefits of the clinical service substantially outweigh the potential risks. Clinicians should discuss the service with eligible patients.

• Level B: At least fair scientific evidence suggests that the benefits of the clinical service outweigh the potential risks. Clinicians should discuss the service with eligible patients.

• Level C: At least fair scientific evidence suggests that there are benefits provided by the clinical service, but the balance between benefits and risks is too close for making general recommendations. Clinicians need not offer it unless there are individual circumstances.

• Level D: At least fair scientific evidence suggests that the risks of the clinical service outweigh potential benefits. Clinicians should not routinely offer the service to asymptomatic patients.

• Level I: Scientific evidence is lacking, of poor quality, or conflicting, such that the risk versus benefit balance cannot be assessed. Clinicians should help patients understand the uncertainty surrounding the clinical service.

It may be noticed that medicine is an applied human science. Any trial to reduce evidence to clinical decision-making will also find limits gravely to be taken into account. The reason is simple: There cannot be evidence if not based on the complex human sciences going beyond the clinical view.

On the given background, the remark of Sackett has to be well recognized:

"*The practice of EBM requires the integration of individual clinical expertise with the best available external clinical evidence from systematic research.*" EBM needs the integration of clinical and psycho-social competence. EBM only becomes Evidence based practice, if effective in "*...the integration of best research evidence with clinical expertise and patient values.*"(Sackett, et al.,2000)

The advantages of EBM would be unnecessarily limited if reducing the issue to a simplifying model of disease that does not consider illness as individually experienced. This can lead to disappointments and make patients look for alternative medicine. Some experts see the solution of the occurring problems in "*the use of evidence-based information in a way of enhancing people's choices when those are patients*"(Hope, 1996).

This has made Shared Decision-Making based on "informed consent" a fundament of EBM.

In many countries, the informed consent is legally required for any medical intervention and healthcare with a patient. If medical interventions (including diagnostics) are provided without documenting the informed consent, these interventions are seen as an assault and a personal injury by law.

Shared-Decision-Making (SDM) represents one of the top principles of modern medicine. The particular point of view is to respect the patient's entire autonomy. It is also a culture of cooperation between patients and professionals, and also between professionals if deciding on therapeutic strategies and supporting a patient's adherence especially in the case of chronic conditions. Except some precisely defined cases and circumstances, there is nobody who is allowed to rule the autonomy of the patient.

In many countries, it is principally against the legal regulations not completely to communicate targets and risks of the treatment with the patient. It is also strictly required to document the individual patient's agreement to a planned therapy. Only under legally proven conditions, somebody else is allowed to give the agreement. This may make language functions a fundamental problem for globalizing healthcare

Also in case there is a shared decision, it is in most of the countries principally regulated not to do dangerous and not universally accepted treatments even if demanded by a patient.

Especially internationally acting healthcare managers and medical professionals are

highly recommended to care for any legal issue round such shared responsibilities. They are also recommended to avoid conflicts with national cultures and traditions the same way they will do with legal regulations.

Informed consent is the root of SDM and the guiding principle of evidence based medicine practice. It is a professional medical standard that healthcare providers explain purposes, risks associated with a recommended diagnostic procedure or treatment, likely results and other relevant aspects of the utilization of medical care. It should, if possible, include alternative option of treatments and consequences of refusing therapies.

Individuals being mentally incapacitated to give informed consent are typically demanded to have an authorized legal representative. This might be an approved agent or attorney, a court-appointed guardian, parents of under-aged children or a close family member if a nation's law allows.

There is evidence that rules of informed consent are sometimes severely violated if the patient is a citizen from abroad. Any manager of cross-border services is asked to be very careful with such constellations. Therefore, it is highly recommended that healthcare managers establish and keep in action an internal provider policy for the informed consent especially in the case of treating foreigners.

Regarding EBM and health care management, there are overlapping or competing aspects like

- managing a provider institution according to evidence based guidelines can turn out to be an incentive for specified marketing concepts, for new risk selection methodologies and for readjusting internal controlling
- the planning and allocation of resources, portfolio and risk selection
- utilization reviewing, assessing effectiveness and efficiency
- formulating the basic philosophy of a provider organization

According to the legal nature of the provider and the paying party, many adoptions to the term evidence based medicine are going around, like Evidence based Policy or, Evidence based Managerial Decision Making or Evidence based Health Services, Evidence Health Planning and Evidence based Purchasing etc.

Behind the concept stands the idea to justify any decision by proven facts as provided by

- Evidence based Prevention
- Evidence based Behavior or Compliance
- Evidence based Resource Allocation

- Evidence based Organization of Health Services
- Evidence based Health Policy
- Evidence based Health Services
- Evidence based Health Planning
- Evidence based Purchasing
- Evidence based Management

It is recommended to discuss the pros and the cons of scientifically based autocracy. Health services also deal with individual preferences not totally covered by science.

see Alternative Medicine

see Choice

see Guidelines

see Shared-Decision-Making

Failure Management

Any health and medical care is ultimately to help suffering individuals through applying specific interventions. Such interventions will regularly cause their own risks and the results from interventions may not meet expectations. For the given reason, the assessment of risks and of unwanted outcomes of treatment is always the ultimate procedure of a failure management system and must be part of the provider's culture.

If the result of care and treatment procedures differs from expectations, the reasons have to be clarified in order to prevent against them in future and to meet legal requirements and possible liability litigations.

Whatever is seen as a "failure" has to be documented, investigated, assessed and categorized to the following matters

- *adverse events*, which means events and results which are not wanted or do not meet expectations of the patient, of the medical standards or what was promised by the provider
- *critical incident*, which refers to a situation that could have caused an unwanted outcome but has luckily not for whatever reason
- *medical error*, which is due to wrong diagnosis or failures in decision-making on treatment plans and in performing treatments

Any failure management has basically to understand the fundamental diffe-

rence between the cause of "failures" and their assessment as "guilt".

According to studies, typical causes of failures to be managed are

• failures regarding the prescription, the safety, the application and the individual use of pharmaceuticals

• failures in cooperation, therapy planning, timing, communication, documentation and performance

• mal-practice and mal-performance or missing communication

• misunderstandings by the patients regarding treatment procedures, cooperation and behavior①

see Event Analyses

Good Clinical Practice (GCP)

GCP is a standard agreement documented by the International Conference on Harmonization (ICH). This international body is implemented for defining standards for clinical trials conducted under national legislation. These guidelines are to safeguard humans' rights if being included into clinical trials.

A broader view accepts these practices beyond the conduct of clinical trials and coins any of the activities and programs wanting to assure the quality of care in a defined medical setting according to compromised standards.

Such programs include peer or utilization review methods to identify, to overcome, and to prevent from deficiencies in quality.

The particular program must have a mechanism for assessing its effectiveness and has to measure the performed care against pre-established standards, also called quality improvement. A compromised but transparent methodology and the set of activities designed to assess the quality of services provided have to be explicitly and independently outlined and communicated.

see Quality Improvement

---

① Barker K N, Flynn E A, Pepper G A, et al. Medication errors observed in 36 healthcare facilities. Archives of Internal Medicine, 2002, 162(16): 1897～1903; Brennan T A, Leape L M, Laird N, et al. Incidence of adverse events and negligence in hospitalized patients. Results of the Harvard medical practice study 1. New England Journal of Medicine, 1991, 324(6): 370～376.

Outcome and Outcome Measures

A clinical outcome is the result of medical or surgical intervention or of a self-healing. It can also be the results of another unspecific healthcare service and of nursing a patient.

The valued results of care are usually not simply to dedicate to single professionals. They can result from complex service processes and even from the patient's contribution to the outcomes.

Any outcome, wanted or unwanted, is anticipated to treat a patient and is to meet requirements. The measure of outcome depends on defined and compromised goals. Its assessment is comparing the goal and the result and can only be made if the goal is documented

If outcome variables are measuring defined aims according to a health plan or a contract with a patient, it can be measured if the result is equal, below or exceeding the planned and documented achievements. It may be discussed if wanted outcomes and the results will be measured individually but being classified afterwards or if the outcome measures are made against a standardized and pre-classified product.

The raise of a "pre-standardized product approved medicine" can also lead to controversies among the provider facility, the patient and the third-party-payer. It may turn out to be difficult to compromise on the average of standard and the individual conditions of a diseased individual.

The methods for measuring outcomes are also varying among providers. For that reason, the accepted variance has to be clarified. Much disagreement exists regarding what the best practice or tool of utilizing is and how the outcomes can be measured best. In fact, much disagreement exists in the medical field about the definition of outcome itself. Regarding quality, outcome measures are often not available, if treatments cycles are not centered at a primary care authority and if contributing facilities do not focus on individual patients but only on "cases".

Outcome can also become measured and assessed, if the providing organization is not so much individually oriented but bases goals on population instead. Such measures need healthcare quality indicators which gauge the extent to which healthcare services are improving or maintaining satisfaction or guaranteeing free

access to prevention, treatments or rehabilitation.

The outcome might also define the financial result and the surplus or the loss made by the hospital or other providers.

see Product Medicine

Peer Review of Healthcare

The procedure is used to evaluate the quality of healthcare that is provided by medical staff against a standard.

Generally, it is the review performed by experienced physicians, nurses or other professionals on selected parameters (such as effectiveness and efficiency of services) ordered or performed by other members (external or internal) of the same profession or experience (peers). The evaluation covers the performance of a staff and the outcomes regarding appropriate services applied to meet the patients' requirements. It is the most common method in managed care practice for monitoring the utilization.

In other words, other physicians (or nurses) review the decisions made by a physician (or nurse). Much controversy has surfaced in this area since the beginning of such procedures and it is independent from the country and the services system.

Some researchers and analysts suspect that peer review is not true peer review since both the providers and the reviewers often have personal financial incentives to reduce or increase medical care and peer review. But such reviews are also used for advertisements, cost-containment or other reasons. Because of that, there is some concern about independency of peer reviewing organizations especially if contracted by the provider's management and working on a for-profit basis.

Quality Assessment

Norms and standards for "quality" demand unavoidably the permanent control and assessment.

The assessment has to be performed on three levels at least. The first one relates to independent federal run or controlled agencies, the second one relates to the internal responsibilities and actions of the provider organization, the third one relates to those organizations that are acting as patients' advocates.

Most conflicting are the criteria to be considered and outlined, such as

- the medical necessity of provided care
- the appropriateness of applied diagnostics and treatments
- the effectiveness of the services and treatments
- the efficiency of services and
- the likelihood of gaining a wanted outcome

If assessing quality, the usual conflicts are focusing on the rationales of the planed outcomes and on how to classify outcomes of the providers having been involved. The difficulty is to determine the complex interpretation of what quality is and what proportion can be related to single members of a multidisciplinary interaction of different providers, particularly if patients' are influencing the outcomes.

see Donabedian's Trios

Quality Assurance (QA)

QA is an interactively performed management procedure. It is usually designed by the providing organization's practice and is to ensure the appropriateness and effectiveness of care.

It includes

- identifying deficits
- implementing improving actions
- monitoring the results

It is the purpose to ensure quality of care. In the common sense, the permanent process of assurance should involve the medical and professional staff, the administration, and the governing body of the healthcare facility. But such an assurance process should be free of individual consequences if results do not indicate the violation of legal conditions.

Providers may also make quality assurance a benchmark mechanism. As experiences show, improving quality will be more successful if practicing problem-centered and open discussions which include everybody concerned rather than investigating a "guilty" party.

Peer review procedures, utilization review and auditing will be helpful to assuring quality if adapted to given goals.

see Peer Review or Healthcare

see Utilization Review

Quality Circle

These circles are effective in improving quality if focusing on transparency and open discussion of individual healthcare performance. The mechanism creates and implements agreements on norms, risk management and evaluates reasons for unwanted outcomes.

Particularly doctors or other healthcare performing professionals working in single offices will profit from the mechanism of open reflection and discussion of occurring problems and unwanted outcomes. It gives them the chance to connect with the team without working in a team. This concept prefers cooperation prior to competition as a method for improving quality①.

Quality of Healthcare

From a management perspective, there are at least three dimensions to be noticed:

Healthcare System's and Provider's Criteria

- following norms and contracts
- guaranteeing access
- doing what is accepted as appropriate
- integration and cooperation of different professionals and providers
- respecting norms of legal correctness
- establishing risk management
- focusing on effectiveness and efficiency
- flexibility against changes in demands and scientific innovations

Staff Criteria

- qualification

---

① Donabedian A. An Introduction to Quality Assurance in Health Care. Oxford: Oxford University Press, 2003.

- evidence based care and shared-decision making
- respecting patients' values
- social responsiveness
- communication and interaction with patients
- pathway guidance
- failure and critical event management
- team performance

Outcome Criteria

- effectiveness
- results
- safety
- durability
- equity and respect
- satisfaction
- failures and side-effects
- patients' complaints
- data safety

Quality Improvement (QI)

QI samples management techniques used for assessing and for improving internal operations regarding services and its management. QI focuses on organizational systems and staff's professionalism. It focuses on staff's cooperation rather than on individual performance. It aims to improve quality prospectively rather than react when certain benchmarks are violated. The process involves

- setting goals
- implementing systematic changes
- measuring outcomes and
- looking for the subsequent appropriate improvements

QI is also called performance improvement (PI). In recent years, there are numbers of different approaches of healthcare quality improvement in use. Many of them are products offered by consultancies, sometimes differing only slightly, not systematically proven by evidence measures, hard to be compared and mostly adopted from production industries. Unfortunately, most of these programs are

not evidence based in independent studies and critical appraisals.

Total Quality Management (TQM)

TQM is an approach used to improve performance according to pre-set goals and permanently focusing on raising productivity and minimizing costs: "*TQM: Maximize productivity while minimizing costs.*" That is the very fundamental of any for-profit business. TQM roots back to the times after World War I and to the attempt to combine the use of quantitative and statistical methods to measure and to control quality. It rose up in industry production in Japan and the US and became an issue in its own when covering any issue of the activities within a business organization. The term "total quality'" means a company-wide quality control, involving any of the employees and of all the goods produced①.

Poor quality is costly or has to be. related particularly to quality management②. TQM identifies required elements to measure, design, and select processes which consistently deliver top outcomes.

After adopting the concept to healthcare, it became expected to improve productivity and cost-consumption through setting standards, monitoring processes, reflecting practice, supervising performance and developing pro-active risk management③.

The basics can be summarized as follows:

1. Outcomes of provided healthcare depend on meeting the customer's objectives, the provider organization's internal customers included. Here, the problem occurs to identify the customer, who externally usually is a third-party-payer and internally a cooperating staff.

2. Quality results include all the provider's staff contributions to an outcome. Here the problem occurs that provider organizations are mostly covering a wide scale of treatment offers. For the given reason, it can be difficult to structure the contribution of each part. It is also difficult to measure and to control short-and long-time results.

---

① Khan J H. Impact of total quality management on productivity. The TQM Magazine, 2003, 15(6): 374～380.

② Knapp D. Guide to Service Desk Concepts: Service Desk. Boston: Course Technology, 2009.

③ Kaluznym A D, Laughlin C P, Simpson K. Applying total quality management concepts to public health organizations. Public Health Reports, 1992, 107(3): 257～264.

3. Staff usually is motivated to try hard and do well. Here the problem occurs that management is set into responsibility not to lose staff's motivation through permanent interventions into established routines.

4. The process of healthcare and its improvement can be measured by approved facts. Here the problem lies in compromising on the measurements internally while not avoiding the staff's anxiety of being spied out. Employee involvement seems to be very difficult, if not developing a concept of identification with the provider (corporate identity).

Under the focus of healthcare quality, there are the following aspects of concern for TQM:

- accessibility of the provider
- appropriateness of offered services
- effectiveness of the programs and procedures as performed
- efficiency of using resources to reach goals
- equitability in treating patients
- acceptability of the services by ethical and cultural norms
- evidence based medicine
- accountability of services
- interdisciplinary approaches if necessary

Some of the TQM concept with its PLAN-DO-CHECK-ACT (PDCA) philosophy is seen as a permanent procedure of improving healthcare model. The experiences show an easy adoption by healthcare if the variety of healthcare providing processes is or can be limited and standardized. That will function best within providers only or preferably offer some very few options but make a large number of cases to be performed.

Six Sigma

The approach was developed by Motorola in 1987 and is recommended by some experts also for healthcare delivery. Six Sigma follows different ways to improve healthcare but mostly stressing two of them: the DEFINE-MEASURE-ANALYSE-IMPROVE-CONTROL (DMAIC) approach and the DEFINE-MEASURE-ANALYSE-DESIGN-VERIFY (DMADV) approach.

It seems to be a matter of fact that Six Sigma methodology needs well adopting portfolio conditions. Thus the question raises as to how to find out the conditions under which Six Sigma will function or not. Observation makes it likely to

assume that some providers try to adopt the methodology of six sigma in hospital portfolios, rather than in the requirements of hospital care. The consequence is mostly to reduce the offered indications for treatments, and to develop extremely specialized hospitals and facilities. But this will only function by increasing cases——mechanism that might be successful if downgrading norms for interventions①.

Lean

The concept refers to another concept of managing healthcare improvement. It has been developed by Toyota since the 1990s and is used around the JUST-IN-TIME philosophy and the concepts of mistake proving. In 1996, the so-called lean principles came up and were recommended for healthcare approaches by some consultancies, too. These principles are

1. identification of consumers' values and wishes
2. management of the value stream
3. developing the flow of production
4. use of "pull" mechanisms to support material flow
5. pursuit of perfection through reducing waste in the system counted in time, qualification and materials

Lean is promoted by some providers in the U.S. managed care industry by implementing Toyota rules in so-called "lean healthcare facilities" (inpatient and outpatient). The short of reports on mechanism and outcome are making it hard to comment on Lean performance. But it seems obvious that the outcome will depend on the context defining the ultimate goals for performing Lean.

According to the proponents of "lean", "with this methodology we could promote the ability of team cooperation, create an appropriate working environment and procedure, change the management approach and expectation, increase the staff qualification and participation, and rationalize the provision chain."②

It can be problematic to adopt these strategies because of the need to reduce the variance of such product-medicine by forcing selection mechanisms on indications and treatments being offered. The selection process may show macro-effects

---

① Chassin M R. Is health care ready for six sigma quality? The Milbank Quarterly, 1998, 76(4): 565～591.

② Kimsey D B. Lean methodology in health care. AORN Journal, 2010, 92(1): 53～60.

for overall quality criteria and the macroeconomics of healthcare systems which are mostly not wanted, but make the provider organization profitable in its selected fields of acting.

Fundamental is the approach not only for the evaluation of the outcomes for the provider and single individuals but also for the system on the whole.

Concept of Constraints

The basics are determined by two assumptions[①]:

- any system has constraints limiting higher performance
- identifying constraints provides the opportunity for improvement which makes existing constraints a chance for the organization

Though there are many articles on the concept published by the concept's sellers, there is no independent evidence appraisal to be found showing results.

Clinical Governance

Clinical governance is the ruling policy which medical facilities or provider organizations operate within all of the provider's clinical affairs.

In this light, any healthcare provider has some kind of governance if intended or not. The governance can be measured by the explicit and implicit objectives which are to make the mission of a provider organization come true, such as

- educational standards and further qualification rules
- evidence based practice rules
- developing clinical leadership skills
- clinical and critical pathways
- utilization of technologies, devices and information technologies
- audit practice
- monitoring performances and outcomes
- risk and event management
- accreditation policy

Here the view on quality management practice is stressed as a Good Clinical Governance which fundamentally includes

---

① Goldratt E M. Production the TOC Way. New York: North River Press, 2003.

- cooperating with others
- outlining principles and objectives
- improving and maintaining standards of services
- good health services practices
- setting and readjusting service standards
- clinical auditing
- evidence based practices
- documentation and recording
- risk and crisis management plans
- documentation of adverse outcomes
- performance standards
- constant learning and qualification
- involving patients

As Donabedian has already outlined, sometimes quality and its improvement contain measurements simply to be done such as

- learning from the best (benchmark)
- planning with the best (brainstorming)
- defining the critical points (checklists)
- facilitating internal relations (communication)
- designing the patient's pathways (structuring work flow)
- analyzing risks, outcomes and failures (assessing results)
- "housekeeping" (making the environment friendly and clean and comfortable for patients, visitors and staff)
- learning atmosphere (readiness to improve)
- controlling portfolios, structures, processes and outcomes (evaluation)
- measuring what can easily be measured, but discussing results with all being involved (transparency)

Providing the conditions for developing the personal, giving feedback about outcome and measuring the effects, caring for staff stability and for change seem to be the best road to quality.

Clinical governance specifically pictures the provider organization positively to any of the stakeholders, like the public, the patients, the competitors, the third-party-payers, the deliverers and the media much more than commanding and executing "*the most elegantly constructed of mechanisms*" (Donabedian). The ultimate strategic concept for quality is supporting motivation and commitment.

Management Approaches in International Healthcare

General Considerations

The relationship between health sciences and healthcare management is difficult and coins the relationship between science and practice in general. Here we find internationally two distinct approaches. The first group of discussants sees healthcare management the practical application of best scientifically based knowledge and speaks of Evidence based Health Policy, or Evidence based Management Decision Making or Evidence based Health Services, also of Evidence health Planning and Evidence based Purchasing. The position here is to use scientifically based decisions for healthcare management by adopting latest results from public health sciences, economics, and strongly evaluated international healthcare management practices. Here the fundamentals are seen as

- the public health and epidemiologic approach of target setting regarding needs, demands, priorities and inequities for providing healthcare
- the finding of solutions for the most effective and efficient use of scarce resources
- setting obligatory norms for necessary, appropriate and economic reasonable utilization of care and treatment
- regulating access to healthcare and to the fitting levels of professional education or

• managing prevention, medical services, rehabilitation and permanent care

• including permanent evaluation of processes, infrastructures and outcomes of change management.

This view may be embedded in resource and facility management or advertising. But the most crucial point is if healthcare management is allowed or is responsible for healthcare product management or placing it in a position dependent from public health concerns, individual needs or medical staff's decision making.

The alternative to that view is the belief that healthcare management wound stand in responsibility to meet market requirements and rules best. Here the fundamentals are seen

• meeting the consumers' and the paying parties' demands and interests best

• adopting standardized and economically profiled healthcare products

• selecting patients, consumers and offered services according to the rules of free choice

• negotiating prices and offers of diagnostics and treatments depending on the market conditions

• inducing permanently new demands by pro-active advertisements

The first view needs systematic public health research and evaluation, and the second one market research and micro-economic methodologies on how to reduce costs and to maximize prices.

While globally public health sciences are to ground decision-making in non-market or non-profit healthcare environment, micro-economic management approaches are to refinance and to recapitalize investments.

For that conflicting discussions, the fundamental question for adopting healthcare management is whether providing necessary and appropriate healthcare and treatment could follow the same rules as any other business or not. If healthcare management is dealing with basic human needs, then it would make a difference to discussing healthcare management approaches either in terms of essential rights or in terms of offering consumer goods. In an international surrounding, it cannot be the prime aim of the authors to decide on controversial statements. The authors' duty is to clarify different positions.

In international practice, healthcare becomes provided predominantly by taxpayers and employers or by socially funded insurance. At least in the so-called economically developed countries, healthcare managers are to manage public mis-

sions. Only some or many developing or emerging countries are making healthcare a private business or alternatively depending on international charity to operate their healthcare systems. That always makes people ask the question to whom healthcare managers are responsible for

- the public and patients
- the paying party or
- the facilities' owners and investors

This discussion may provoke conflicts and it is entirely left to the managers to decide for responsibility statements. But one aspect is globally for sure: healthcare and its management is one of the most regulated and legally supervised services at least in any country with advanced healthcare systems on whatever policy. Even if allowing some segments of provision by following markets rules, regularly these rules are regulated by law and supervised by particular executive bodies.

What healthcare and hospital management practice under particular national, legal and contractual frame conditions is varies between provider organizations and countries. Visions, regulations, ownership, entrepreneurial intentions or priorities for healthcare offers and target groups vary widely. But despite such variations, there are some common basics which should be shared by managers also if working under different national frames and intentions.

The general goal of managing healthcare is certainly commonly understood. Much more obtain agreements regarding topics like universal or selective access to healthcare, risk selection policies, for-or non-for-profit provision of healthcare and norm-setting policies. It may also be of controversy as to what is medically necessary, appropriate and efficient. There are additional agreements or disagreements on processes of corporatization and on the (economic) integration of healthcare provision into giant chains and stock listed healthcare chains.

Regardless of such controversies, the authors assume a common understanding that healthcare management is to organize and is to allocate the necessary and appropriate frame for a professionalized, effective and efficient healthcare. It is to provide the conditions for the best use of any of the resources available for the benefit of the patients. Healthcare management is a safeguard of people's life. It intends to bridge what the advanced life sciences make possible and what the organizational frame for effectiveness demands and economic resources allow. Whatever healthcare is expected to be, it will be the result of the cooperation and

interaction of the professional medical staff, the wide range of internal and external services, the supply of devices and pharmaceuticals and the management of the providing organization and all the processes required for keeping healthcare provision available. In a comprehensive, complicated and sometimes also conflicting daily practice, management brings all parts together and makes things go towards mission.

A central position in healthcare holds the professional staff working in a vertically and horizontally netted corporation for and with the patients. Whatever the particular responsibility of the management is, any medical decision, responsibility and the liability for the patients' wellbeing is left to the doctors and the nurses. Whatever management decides, managers are well advised not to put the professional responsibility and competence of the medical staff into question. It is necessary to stress that point because there is internationally a number of management approaches which limit professionals' decision making and subordinate the provision and utilization of healthcare under some management objectives that are simply to maximize financial returns by applying only simple medicine, even if more than necessary and practicing systematic over-utilization beyond scientific and ethical norms of necessity and appropriateness.

Healthcare management needs a comprehensive understanding of the managing professionals' role. The importance of this simple statement is underlining that some of the managed care philosophies try to shift some of the medical staff's responsibilities to other parties such as consultancies producing standardized, depersonalized and technically based procedures of care and treatment. This obviously leads to conflicts, staff's dissatisfaction and sometimes to rather volatile personal resources. Already now, the competition for qualified staff both regarding quantity and quality is one of the most challenging issues in the practice of management globally. This lack of personnel will obviously rise up.

Managers, if not primarily educated in one of the many health profession, are asked to understand some few key notes on what the performance of professional medicine and of healthcare requires. What some call Roemer's Law and others "supplier induced demand" is one of the key notes for addressing the difficult balance between medical staff's professional ethics and their management.

First of all, managers are to understand that the application of healthcare means intervening into the autonomy and integrity of another life in any case. Such an intervention demands legally to be legitimized by the patient's agreement

and by a license justifying the doctors/nurses legal status. The making of the diagnosis is a key element of the processing of healthcare and of deciding on resources, which are to be allocated. The diagnosis has to be communicated to the patient including information on therapy, risks of treatment and prognosis. Doctors and autonomously working nurses would not meet the profession's requirements if not doing so. Both under and over utilization are seen as consequences of mismanagement and may harm patients. This particularly is a concern if one decision or more are made out of economic interests and therefore violates essential requirements of medical professions.

Management procedures hampering in doing so are failing principles of healthcare management. At the same time, there is a growing public interest to put the professional standards and the quality of healthcare into question. This puts both the caregivers and their management surrounding under the pressure to review any of the delivery of healthcare. It is necessary but difficult and needs labor-division and cooperation (often including non-medical professions). Thus, it is marking what some call the modern medicine.

Managers should ask and should be able to answer some questions, like

• What is the ultimate goal of providing healthcare?

• What are the particular professionals' responsibilities in providing healthcare •

• What information is essential for finding the diagnosis and what information is not?

• What has to be done to involve a patient in the process of healthcare and especially in treating chronic diseases?

• What is the staff's daily routine and how can staff trust in management as a support but not as a threat?

• What kinds of professionals are necessary to meet the standards of medicine and the needs of sick individuals?

Managers of healthcare should also agree to some general standards:

• Healthcare is regulated by law and ethics, but not by the providers' business interests.

• Healthcare management needs a vision and a clinical guidance shared by all of the staff.

• Effective healthcare needs an encouraged staff who trusts in its management.

• Professionals have to be given the opportunity to further develop competencies, cooperation, permanent and transparent concern on quality rather than only permanently to specialize in technical skills.

• Team work is the key to an entity's quality and includes the team's ability to communicate with the patients and other teams.

• Healthcare is most of all focusing on patients and deeply understands the difference between a disease and an illness.

• Healthcare needs a clear focus on outcome measures regarding effectiveness and patients' satisfaction. This includes the open discussion about unwanted events and failures.

Any of the facilities providing healthcare, such as community nurse stations, doctor's offices, clinics or hospitals has to be administered in order to fulfill its goals and objectives and use available resources as effectively and efficiently as possible.

Reflecting on the healthcare of tomorrow and its challenges, the management has to provide the frame for moving towards tomorrow's medicine. At least in some aspects, this future is clearly foreseeable. Accordingly, healthcare will be

• *focusing* on permanently redefining what will necessarily be done in healthcare and what will be appropriate

• *guided* by norms for appropriateness through evidence based medicine and shared decision-making between patients and healthcare professionals

• *pre-defined* through guidelines and pre-standardized products but will limit professionals' independent decision making

• *pre-paid* according to the products assembled or the individuals' contracted agreements under spreading capitation

• *outcome driven* as offered and contracted

• *evaluated* according to standardized measures of outcome

• *offered* both by sharply competing non-for-profit and for-profit-providers

• *internationalized* by the transfer of patients, professionals, expertise and information

• *rewarded* according to tremendously varying concepts and types, but regularly by third-party-payers who want to decide on product and resource consumption

Any healthcare management needs to outline its objectives according to the

goal (final achievement), the aims (managerial priorities being set) and the objectives (managerial road map). The objectives are always focusing on providing services directly or indirectly for individuals and will finally intervene in the individuals' integrity. These kinds of performances need a number of requirements which are on top of any other objective. Managers are asked to accept that objectives in healthcare management are lined up in some hierarchy but always on top must be the patients' well-being.

Managers are recommended explicitly to describe intended aims by objectives in a way that they are

- understandable and approvable
- transparently communicable
- time-related achievable
- measurable
- adjusted to resources
- outlining any involved individual's tasks and responsibilities

Sometimes it also makes sense to implement independent mentoring and supervision.

A more recent development is to establish the terms purchaser and provider also in matters of managing healthcare.

The provider of healthcare is engaged in the delivery of related services that are offered by out-patient facilities, by hospitals or by long-term care facilities, but also including dentists, midwives, nurses, clinical psychologists, etc. Providers have been traditionally single persons offering services at their own risk as numberless doctors and nurses with single offices or clinics continue to do in many regions round the world.

Nowadays, providers are often, and to a growing extent, large organizations and (public or private) companies with some legal status and acting internationally. The trend is that the provider industry will expand with not exclusively but increasingly employed, instead of self-employing doctors. This, indeed, changes traditional healthcare provision tremendously and in any of its particular aspects. The raise of healthcare management as a profession in its own is one of the consequences and this movement's indicator.

Traditional doctors and nurses do not necessarily support these changes. Experiences show this a particular source of conflicts which mangers should be aware of.

The purchaser of healthcare and treatment can be an individual, an employer, a government agency, a community, a public or social sick fund or an insurant buying the healthcare.

Any direct payer might be defined as a purchaser and therefore a customer. Regarding current discussions around healthcare, it has to be understood that most of the patients are never purchasers and therefore are never customers, at least in more developed healthcare systems. The contractor or purchaser of healthcare is mostly a third-party-payer and is therefore the provider's customer. Individually purchased care is typically limited to product beyond necessity and appropriateness or might be bought for wellness and additional comfort. But there are many development making doctors and nurses pro-active salesmen and women of unnecessary offers.

One may speak of a patient being a customer if paying out-of-pocket and being a customer for what he is paying directly and in advance. It depends on the regulations on how to pay for access and utilization if a patient is a customer or not. This is why both the poor and the rich my feel being costumers but assessing the feeling differently. Some will assess it a burden, while others an advantage.

Because third-party-payers are regularly the provider's customers they are also taking advocacy for patients exactly for that amount of benefits covered by a plan. That is why the insured's trusting in the insuring party is important for its market success. This makes a number of experts demand non-for-profit characteristics as being essential for third-party-payers, and demand the paying party should be set under public or independent control of a sponsor.

On this account, the following compiles very selectively some of the managers' language environment and tries to give illuminations of context rather than explanations or definitions. The gathered contents are to bring awareness to principles that are to be adhered internationally but left to be clarified under concrete frames.

Access

Access to healthcare is the predominant characteristic of a healthcare system's quality and it is the ultimate goal of healthcare managers to guarantee access under a particular legal or contractual umbrella. Whether a nation's health services system provides universal access or not will have some important conse-

quences for the system. Universal access usually minimizes the variance of quality around an average. On the contrary, if access is provided selectively and depends on the users' potentials to pay for healthcare, the quality will typically vary widely. Under both these different considerations, the average of quality might be the same but the variance will cause tremendous inequities possibly causing social incoherence and tensions.

That is why the universal access is independent from a nation's socio-economic context and seen as a challenge, goal or success, while access to healthcare depending on individuals' financial resources necessarily causes risk selection as the major strategy both of providers or insurers. This is the final reason why nearly any advanced healthcare system tries to guarantee universal access and does not allow risk selection policies or provide healthcare as a social privilege both on the insurers' and the providers' side.

Consequently, there are numbers of regulations targeting at providing universal access even if resources are limited, as they usually are. In order to solve occurring problems, the bundle of methods for tackling the occurring problems are rather uniform but will vary widely under the concrete frames. These methods are

- listing benefits either by explicitly including or excluding accessible services and treatments (rationing)
- setting priorities for budgeting
- norm-setting for what is accepted to be medically necessary, appropriate and efficient
- allowing exceptions from regulations under particular rules for decision-making

On the contrary, systems which regulate access via the individuals' power either to buy for insurance or for utilization directly are functioning by limiting access and by selecting offers and patients. As a result, the proponents and the opponents will belong to different social strata or classes. That makes the alternatives of universal or selective access a matter of social politics. Public or national health services or social insurance make people members and are grounding benefits in needs. The market alternative makes sick people customers and is based on demand. The consequence for providing healthcare is tremendous and influences both management's and providers' guidance and self-understanding fundamentally.

Universal access by Public Health Insurance or Social Health Insurance versus selective access according to the individuals' financial power provokes fundamentally different requirements for healthcare management. Free access is seen as a fundamental right by most people and nations and mirrors aspects of social-economic development. If people are lacking in this freedom, healthcare is only an individually charged resource. But one may also argue that rationed healthcare for all provides more freedom for all than selective access for some does.

Access can be described by dimensions like

- availability
- accessibility
- accommodation
- affordability
- acceptability

Availability can relate to all the necessary infrastructures to provide care, such as staff, type of required healthcare, diagnostic and therapeutic equipment, pharmaceuticals etc. Briefly, it is coined by meeting the needs and demands of sick people.

Accessibility refers both to geographic and financial matters, like the distance between the medical facilities and the residence of people to be served, the concentration and/or de-centralization policies, the relation of needs and resources, gate-keeping practices, the kind of third-party-coverage, fee-for service regulations etc.

Accommodation refers particularly to the availability of overnight stays not only in the case of hospital referrals, but also in the case of distant outpatient offices or accompanying persons. This in particular can play an enormous role in some countries and cultures.

Acceptability relates to the question on how offers meet expectations. This can be of major concern, if patients or their families show difficulties to understand or to accept some certain therapies.

Barriers to access can be caused by many factors, like

- insufficient financial resources
- lacking of the availability of medical service providers
- the kind of reimbursements (like fee for service)
- mechanisms to ration healthcare
- the social acceptance of the providers

- the geographical distance to providers
- social discrimination of groups of people
- risk selection strategies
- language barriers
- pro-active avoidance of access because of possible unwanted social consequences for patients
- cultural barriers

Access is one of the most prominent criteria for measuring the quality of a national health services system and addressing key tasks of healthcare management. Efforts to improve access often focus on providing/improving health coverage but they have much more to take into account than this.

Under the background of legislation regarding the regulation of competition and insurances' rules, it is a regular concern that if providers are allowed to bring their services actively (and selectively) to the potential patients or if, in contrast, healthcare is only allowed in case of a pro-active demand by patients (except emergencies).

Lack of resources on one hand and the over-utilization of selected products (for example due to industrializing the services) on the other or the fundamental interest in limiting access (cost-containment) make "access" to the top health political issues and the profiling tasks of management.

Many methods to regulate or to manage health services like waiting lists, co-payments, limiting the free choice of doctors, fee for service, limiting the kinds of benefits or rules of pre-authorization are intentionally related to access.

Sometimes the difficult access to healthcare is not because of lacking financial recourses but because of the country's population seize.

see Appropriateness
see Managed Care
see Necessity
see Regulation of Health Services

Accreditation, Certification and Licensing of Medical Services

This is the approval for providers of medical care by an authorizing agency installed by law. Accreditation policy is projected to secure patients' liability rights and to protect both patients and trained providers from fraud.

Internationally, accreditation procedures are pivotal for providing healthcare but differ widely in requirements. Procedures and regulations can refer to single healthcare or nursing professions and to complex institutions as well. The procedure is to guarantee the national standards but sometimes also to protect the local providers from competitors. It can also mean that institutions, like insurance companies or hospital groups develop their own accreditation procedure in addition to those required by a country's legislation.

However, the accreditation is to meet a set of pre-determined standards. That, in fact, needs transparency for the standards and fosters regularly the issue of the independency of the accrediting organization and its control. The problem is tremendous because of ongoing specialization of doctors and nurses and different standards of education and of further training as well.

There is a need for international accreditation policies for the reason that medical tourism becomes a growing matter of interests beyond seeking for best quality abroad but for the use of affordable healthcare either if paying privately or under some health insurance contracts wanting to save money.

Despite being organized nationally, some of these agencies like the National Committee for Quality Assurance (NCQA) and the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) of the U. S. are also internationally most influential and influencing health services matters and politics in many countries and are also routing cross-border healthcare provision this way. JCAHO furthermore accredits hospitals and clinics internationally as many others do. And there is no globally accepted or negotiated accreditation policy.

The Canadian Commission on Accreditation of Rehabilitation Facilities (CARF) accredits rehabilitation providers internationally, but particularly if offering cross-border services.

Some further important accreditation agencies for international healthcare providers are

- Commission on Accreditation of Allied Health Education Programs (CAAHEP)
- National Accreditation Board for Hospital and Healthcare Providers (India)
- Joint commission International (USA)
- United Kingdom: QHA Trent Accreditation
- Australian Council on Healthcare Standards International (ACHSI)

- Quality Health New Zealand (QHNZ)
- Accreditation Canada
- France Haute Autorité de Santé (France)
- TEMOS (Germany)
- The Commission on Accreditation of Medical Transport Services
- The Commission on Accreditation of Ambulance Services (CAAS)
- Accreditation Canada International
- International Society for Quality in Healthcare Ltd. (ISQua)
- Accreditation for Comprehensive Wellness Programs

Users of these accreditation businesses should be aware of the fact that even accrediting agencies may have to be proven and certified by another one. In the United Kingdom, the United Kingdom Accreditation Forum (UKAF) takes the responsibility for accrediting accreditation standards in the United Kingdom.

Accreditation of international healthcare may become a problem if accreditation standards are run as a for-profit business but not by public administration authorities. When healthcare goes cross borders either for wanting to pay cheaper prices or for demanding higher quality or comfort, the paying party must trust in offers.

Beyond the accreditation of provider organizations such as hospitals, professionals will require a particular certification which allows performing medical care in addition to the proof of being examined at a regular medical university or school and most countries. This legal requirement is to license, to register and also regularly to supervise any doctor and nurse providing medical services within the country. The certification is to guarantee legal and professional standards of medical care and to prevent from laymen and betrayers; thus it is undertaken for the safety of patients. Such certifications may play an important role in liability litigations and play an important role in international healthcare both by transferring patients and professionals. It is a matter of particular concern for transferring expertise via intranet.

Under current neo-liberal deregulation politics, there is a tendency to give the certification to non-governmental and even for-profit organizations. In some countries, it is seen as a task of the caregiver's organizations to certify themselves and to act as a self-certifying provider group after being approved for that right by another certifier.

Following this philosophy, both non-for-profit and for-profit agencies certif-

ying healthcare providers become powerful agencies as market regulators. The ideology is that markets themselves would self-regulate this way more effectively and efficiently than public administration could ever perform. The overall belief is that marketing and the "value for money belief" would constantly increase the quality of certified providers. The theory is also that patients and third-party-payers would make it a matter of competition to decide on best certified contracts.

Studies can hardly approve those assumptions true empirically. The providers are usually interested in selecting and buying such certifications for legal reasons or marketing. Certificates are available for single specialties, for prevention, diagnostics, therapies, rehabilitation, home and out-patient care, general and specialized professions, producers etc.

Some analysts call this a "certification for every practice" which makes quality a question of trust in the certifier more than in the provider's accountability. The development is the ultimate consequence of shifting the states' administration responsibilities to privatized provider management.

Licensing is a process which involves the review and approval of application for not only doctors, dentists, but also nurses, midwives and similar health professions. It is also the procedure to allow a provider institution to offer care. It is also a mechanism to accredit medical procedures accepted to be provided by certain but regularly selected professionals.

The applicant must prove that they meet all the existing statutory and regulatory requirements prior to beginning his or her business operations.

A particular aspect is the licensing of providers in general, but their licensing is done or by some selected third-party-payers.

In the context of international health services and the medical tourism practices, there is no international standard for certifying providers up to now. The same is true of e-health providers. It is a question of national legislation to handle the pre-conditions for the licensing of healthcare providers and there is no official international agency like the WHO to set norms and to control them.

Up to now, the WHO has not developed its own international accreditation policy. And there are doubts that governments would support such developments for the reason of national market interests. That is why nations are recommended to develop their own accreditation policy.

see Administration and Certification of Medical Services

see Medical Tourism

Administration and Management

While some managers are responsible for planning and strategic developments, others administer the organization or facility and may be called administrators in order to earmark the difference.

Most of the healthcare managers are responsible for administrating the services and facilities as well. Administration regularly demands high qualification in so-called soft skills like communication, integration and mentoring rather than in advising and strategic planning.

There is no exact description of what an administrator and what a manager is. But it might be an illustration for this difference if considering administrators, the executers of pre-defined rules, while managers share more self-responsibility in making the rules. The shift from traditional administrators of healthcare facilities or health insurances to managers stands for some remarkable conflicts. If so, these conflicts' occurrence is reported as conflicts between the leading medical staff and the entrepreneurial interests and attitudes as a newly developing culture to run healthcare organizations.

The move from administering healthcare organization toward managing them is mirroring more than one transformation. As long as leading staff may be called administrators, they are executing the will of a third party such as the government, public and the community. They are bound into a bundle of advices and rules to be performed or supervised. Vision, mission, targets and objectives are set by law or constituting guidance. Administrators are executing the authority of legal requirements as guided by state and are legislative, judicative and executive bodies.

This kind of administration is or was rooted in the government functions which are to guarantee the welfare of citizens by performing and executing the will of those representing the state. The power of the state was and mostly is still grounded in administrators staying in responsibility for any of the states' functions in economics, jurisprudence, education, public and social security and welfare or healthcare provision. It simply organizes citizens' daily life.

Management opposes administration. The move toward management, here towards healthcare management, signals the reduction and minimization of the states' role but handing over the functions of government to entrepreneurship

and the investors' will and decision making. Managers are now executing not the governments but the investors and shareholders are. Some explain that that a loss in democratic legitimation of leadership, others a gain in freedom. Regarding healthcare, this transformation is accompanied with handing over public hospitals and social responsibilities to privatized and entrepreneurial driven health and social care. Deregulation policies, the slowdown of legal frames for healthcare and the decreasing role of government in directing citizens' access to healthcare are parts of this development as grounded or explained by the theories of, for example, Arrow, Buchannan, v. Hajek or Friedman. The turnover of these theoretical works into political practices was mostly done by the U.S. Administrations of the 1989s, by the British Prime Ministers in the early 1990s and by German governments of the later 1990s.

The period is massively coined by the switch from public administrations to the management of public affairs. As a result, healthcare predominantly became a private, but still legally regulated business and even the supervising bodies became privatized.

Today's conflicts are obvious: While healthcare is and certainly will stay a public, tax-paid or socially funded achievement, the transformation makes former administrators managers. Those managers are demanding the deregulation of legal guidance and want to take over the responsibility for the setting of visions, missions and objectives in healthcare provision by offering differentiated and profiled products of healthcare and treatment and are meanwhile by law obliged to perform by competition. It seems this development is without alternative and will give healthcare enterprises, chains and integrated association globally the market power. For this reason, there are numbers of internationally running developments which are implementing patients' or related consumer organizations which are taking (in some countries by law) the former role of government as citizens' advocates.

These transformations run globally at very different dynamics but with some remarkable impacts not only on national healthcare but also on international bodies, such as the WHO.

Readers of this book are recommended precisely to understand that healthcare management is signaling the move from public and state run welfare and solidarity administration towards entrepreneurial driven performance of a new generation of healthcare managers and provider organization hopefully edu-

cated in the balance of globalization and national roots and necessity.

Appraisals, Audits and Assessments

In management, appraisal refers to the practice of reviewing staff performance periodically and systematically against the standards of anticipated or explicitly contracted job performance. It is a methodology recommended to strengthen the success of management. If accepted by staff and staff's representatives, such appraisals are regularly to be done by external providers and organizations. One may assess appraisal a management tool used to stay in power against staff. Experiences show these methods a matter of conflict between staff and management which possibly cause instability of staff with negative results rather than positive ones. Those appraisals are one of the many examples for the power battles between management and leading medical doctors and nurses.

Appraisal may also become used as a management-by-objectives approach and as a method to improve the congruence of the individuals' understanding of its tasks with the demands by the employing healthcare provider.

Appraisal might also play an important role in developing standards and product definition for services to be offered according to the management's concepts on how to profile the organization against competing providers.

If positively accepted, it is fundamental to follow up a standard for any appraisal, including basically

- a formalized, known, transparent process
- self-assessment of the included staff
- the open discussion on potentials beyond the performance of the staff

Any appraisal interview always focuses on potentials but never on deficits. Fairness, constructive and positive challenges on the processes but not on mistakes, results and outcomes are recommended to perform appraisal. It is to encourage the staff not to threaten it. Experiences with appraisals show them as often used methods in private hospitals and executed by medical doctors or nurses, and also show a tendency to lose effect if pressure will not become increased. That's why appraisals' outcomes might be negative on staff performance.

Audits regularly performed are in line with these developments. They are tools of risk management and used to reflect staff members' attitudes and behaviors against medical, clinical or administrative objectives as given by manage-

ment. Not only external and internal but also self-and peer audits are used but they should always follow a standardized circle with its steps of

- setting standards
- collecting data
- monitoring practice
- comparing the performance against standards
- formulating and implementing change
- monitoring the results of change
- re-auditing

Assessment of staff performance is another management approach of evaluating and monitoring individuals', staff's and teams' competences against the standards and governance of the provider organization.

Any assessment needs standards or clinical governance known by the professional staff at first hand. An assessment is not an exam; it is a kind of a permanent or regular communication within a team and/or with the management to bring staff as close as possible to the provider's mission. Experience shows that it is highly recommended to involve a professional and independent moderator to keep down internal conflicts, and to keep potentially occurring motions against such procedures part of the assessment procedure. But finally management is always recommended to be careful with appraisals, audits or assessments of staff as part of management style.

Benchmarks in Healthcare Management

Benchmarks are the pre-set of goals and objectives to be attained by individuals, serving staff or a healthcare organization. These goals are usually set by the management and used for comparing with others for performance improvement or other objectives.

Benchmarking in healthcare may be used to implement guiding standards for the wanted and committed standards of quality by comparing the providers' functions as entitled or contracted with the paying party. Nowadays, payment systems, such as the Diagnosis Related Groups or other care guiding mechanisms may work as part of benchmark methodologies or as part of health economic or quality studies as described earlier in that book.

Beyond the system's performance, benchmarking is also used as permanent

process by which a provider organization or hospital can measure and compare its own performance with those that are leading in a particular area. Four types of benchmarking should become distinguished:

- internal benchmarking (comparing the functioning within an organization)
- competitive benchmarking (comparing with comparable competitors)
- functional benchmarking and
- generic benchmarking (comparing with similar processes of activities but performed by services, which are different from healthcare).

Benchmarking is the activity of the team under benchmark because it will result in changes and change management. But expected results will only become a reality if staff is involved in change.

If benchmarks are internally used as a tool of competition or combined with individual or staff financial incentives, benchmarking might turn out to be a problem for the staff's stability and might become a problem for all of the organization. Benchmarking may also become described as a permanent process of seeking for best practices and establishing new guiding rules for future performance. Benchmark techniques can only be used if healthcare is a staff's duty and if data of performance are documented and accessible, for example in hospitals or hospital chains or for healthcare provision comparisons of regions or particularly defined populations or groups of patients. Here, some of traditional epidemiology or public health research may become categorized as being benchmarking. The difference is the use in a scientific or in a interest guided management environment.

Healthcare and medical staff are working all under the same principle duty, namely to ensure best healthcare and treatment under the frames of given conditions and resources. That always raises the same fundamental questions if differences in performance are due to

- the patients' structure
- to all the external infrastructural and healthcare process conditions
- to internal preconditions for performance
- to medical staff or
- to management performance.

The issue of concern in using benchmarks is not the demand for open evaluation practices. The critical issues meet the followings:

1. Benchmarking is principally not the same as the utilization research. In

public and tax-paid health services environment, all the tax-payers or the public should have the right to be informed about the system's performance.

2. It makes a difference if comparisons are investigated by experts' committing to scientific methodology and publishing or to the ordering party's interests and decisions.

3. We see it absolutely necessary not to leave benchmarking to the involved managers. Benchmarking should be first of all demanded standardly by an independent group of researchers and become reported to or by the paying party.

4. The ultimate goal of benchmarking must be clarified and compromised. It definitely makes a difference if it is used to improve access to healthcare and performance for the patients or the provider organizations' owners.

5. The authors are strongly committed to the view that benchmarking has to be used as a measurement tool used to monitor and evaluate the advantage of the public. This view contrasts to the use as an instrument to improve gains and profits.

6. Healthcare managers using benchmarking should be educated in reading reports and relating studies. They must know the fundamentals of interpreting qualitative and quantitative studies or using principles of evidence based management.

For these purposes, different techniques are used, among others statistical reports on performance, volumes or outcomes if available. Benchmarking also measures against an ideal or against best practices within the organization or all of the healthcare industry.

Benchmarks are used in providers' targeted improvement programs, for example the raise of quantity per unit or the decrease of resources consumed or the improvement of quality. Benchmarks are often combined with incentives that are to encourage change of care and services, efficiencies, productivity, surplus etc. Benchmarks use length of stay comparisons, comparisons of resources consumed, utilization reviewed, or risk management and financial analysis' reports.

The benchmarking process identifies what is assessed as the best performance regarding the particular objective (healthcare or non-healthcare), describes how that performance is achieved, and extracts the lessons learned to improve performance.

The problem of benchmarking is to do the procedures of comparison and to use results in concordance with the applied methods. It is often impossible to

compare two or more hospitals even if the treated diseases are the same. It also might be unwanted because of concentration policies or of having differently leveled hospitals according to specialized indication. The need of treatment, the outcome and the costs depend not only on the hospital's performance but also on the structural characteristics of the patients (severity, stage of disease, self-manageability of the patients, its physical, psychological, social, motivational resources to contribute to the medical outcome etc.). Regarding targets like access or patient's anti-selection policies, benchmarks can also set wrong-leading incentives if there is no ongoing and transparent discussion about the objectives and the criteria of benchmarking.

The concept runs to its limits if the variance of competitors seeking for "best performance" is very small. This may happen both in case the competitors are comparably very good or very bad.

For that reason, setting and supervising norms by external and independent agencies cannot become replaced by running the benchmarking techniques in a simple way.

Some third party payers demand benchmark reports as pre-conditioning contracts.

There are countries, such as Germany, that try to implement some quality and performance benchmarks by law and make it an obligation to give access to the reports for all the public, so that insured people can read them in the internet.

While benchmarking is generally accepted as a management tool, it is internationally not closely integrated in health policy directed to improving all the systems' functions beyond the financial and competitive interests of single providers. This limits the functions particularly in developing health services systems where the lack of resources and infrastructures does not enable provider competition or where patients compete for access to necessary care①.

---

① Ellis J. Introducing a method of benchmarking nursing practice. Professional Nurse, 2001, 16(7): 1202～1203; Wait S, Nolte S. Benchmarking health systems: trends, conceptual issues and future perspectives. Benchmarking: An International Journal, 2005, 12(5): 436～448; Benson H R. An introduction to benchmarking in healthcare. Radiol Manage, 1994, 6(4): 35-39.

Change Management

This is the practice of managing change and it is based on the understanding of what has to be done in order to meet tomorrow's goals and objectives, (here) of a healthcare provider wanting to meet contracted services. Change management may be performed re-actively or pro-actively if providers decide for strategic management.

The trickiness of change management usually is

- to understand the need for change and to compromise its necessities within all the staff of the provider's organization
- to meet requirement of scientific innovations
- to compromise the direction, the extent and the time-line of change and to overcome resistance
- the planning and the definition of responsibilities of each of those responsible
- the dependency on the (sometimes) unforeseeable will and intention of the contracting paying party.

Planning of change includes

- staff involvement
- seeking commitment
- looking for measurements for the outcomes of change
- outlining the future consequences for objectives, structures and processes to be continued both within the traditional practices and with the expected changes by the team member
- monitoring change and outcomes
- eventually the change of the planning and the responsibilities are striking future management practices

Change management is often recommended to act pro-actively rather than reactively but is often a financially risky decision and can easily stand in conflict with those fearing change. That is why management might decide against pro-active change management.

Change management needs

- clear focus on future
- supervised communication

- regular feedback
- performance monitoring
- effectiveness and efficiency control

Tackling needs for change pro-actively is the ultimate approval of managers' capabilities and makes a difference to administrators who make thinks go as advised.

That refers to more than the managers' capabilities. It also refers to a healthcare organization's philosophy regarding the kinds of hierarchy and "command and control" practices. The fundamental question always is to take staff into consideration when there is necessary change or only commanded change. The problem is also closely related to "hire and fire" practices versus strategically focused "personal development".

Credentialing

Credentialing is a review procedure where both a potential or existing healthcare professional and a provider organization have to prove they are able to meet the standards and intensions of the paying party.

The process is to review practitioners' credentials, i. e., training, experience, or demonstrated ability. The applicants can also become reviewed for former liability trials, cultural attitudes, life style etc. in some countries, while in others for anti-discrimination rules not. The purpose is to determine if the criteria of the provider's clinical governance are met by the candidate both regarding professional competence and the willingness to comply with the organization's governance.

The credentialing process for medical staff will include registration, certification, licensure, professional association membership, or the award of a degree in the field of application. In some countries also religion, sexual orientation, or positions on abortion, ethnic or skin color are reported. Certification and licensure affect the selection of health personnel by controlling the entry into practice. It also influences the stability, the distribution, the mobility and the retention of the labor forces. Credentialing also determines the quality of personnel by providing standards for evaluating the competence and by defining the scope of functions and how personnel will be used.

In managed care environments, one hears of a new kind of credentialing,

that is the financial or economic credentialing. The practice refers to an organization's evaluation of a provider based on the provider's ability to provide value, or high quality care at low cost or to provide evidence that the candidate will attract or distract patients according to the healthcare organizations' intentions.

But there is also evidence given that credentialing is also used to identify high utilizing healthcare professionals or those being active in health related public movements in order to avoid their employment. In this regard, some speak of "black lists" and discrimination. But there are reasons to assume these practices to be common in most countries.

Some parties decide to outsource credentialing to specialized companies and stress some expected advantages. Others claim against such outsourcing procedure and stress the likely disadvantages.

see Economic Credentialing

Delegation and Substitution

The term coins the most fundamental question of how to share responsibilities within a team but holds one—mostly the patients' doctor—responsible for the final result. But delegation makes specialists. There cannot be any labor-sharing and specialization if team leaders decide against delegation.

Delegation practices do not simply transfer tasks to somebody who can do better and/or cheaper. It is also a mechanism profiling any team member's best skills for the tasks comprehensively to be done by a healthcare providing team. The authors are advocates of delegation but know about many controversies and opposing behaviors. This mechanism is part of teambuilding because it makes staff members depend on each other. That includes sharing both chances and risks. While some argue delegation would only economize healthcare or would weaken single staff members position in competition, we see it an ultimate issue for improving the quality of a well-organized staff under the team leader's responsibility.

Delegation has to be seen as the central point of managing healthcare. It shifts a proportion of the required professional skills to staff members of vertically lower but horizontally better qualification. This makes particular procedures more frequent in one professional's routine. While responsibilities are usually vertically distributed and often legally appointed, cooperation and labor-

division in teams are mostly understood as being horizontally distributed. Therefore, delegation is also a form of best professional culture.

If forced as a cost reducing measure only, delegation regularly implies difficult questions on how the change of the traditional "pyramid of qualification" will affect all the team members' "justified rights and, responsibilities of professionals". But the experience is that costs saving motives do often not come true because of pushing specialization. This easily can raise higher costs because of the specialists' demands.

Delegation can decrease the number of doctors needed; but the remaining number will be higher qualified and therefore become more costly. Shifting traditional tasks to nurses or further professionals will need higher qualification, and consequently be followed by financial demands etc.

Going on that way, it might be followed by a reality where some professionals will share several employing providers, but eventually lower the provider's position in competition. There are international experiences with hospital exclusively run by professional nurses and doctors are only contracted to perform specialized procedures against a contracted honorary per procedure or time unit.

There is no doubt in the advantages of delegating tasks for quality-centered teams but it should be carefully assessed if the idea of cost reduction should become the ultimate goal. In any case, any delegation needs more supervision and management.

In healthcare, substitution is a concept beyond delegation. It is to displace a particular healthcare profession's tasks by another professional group. Substitution makes it necessary to license these new professions for those new tasks by transferring the total accountability for the outcomes, including liability, to the new professionals in charge. The concept follows two different intentions:

1. The increasing demand for healthcare and the change in population patterns are making substitution an attractive concept for any healthcare system independent if developed or still developing. But it needs closely to integrate medical care, rehabilitation activities and permanent care by a primary care staff, and shift tasks to other professionally integrated but self-responsible professionals (for example psychologists, biologists, nurses etc.).

2. Another intention is that "doctor by nurse" substitution will reduce variable costs and help to optimize profits under prospective capitation payments.

Examples show remarkable potentials for substitution even in hospitals and

advanced surgery or anesthetics. The development of telemedicine and the introduction of concepts of artificial intelligence into the care processes (for example Case Based Reasoning) will certainly foster these developments and readjust many of the traditional labor division among medical staff. These policies may be of advantage both in the light of quality and of reducing costs or of both.

Substitution policies are of tremendous impacts on pre-existing conflicts between provider groups and insurers as well as inside a provider organization because it touches some providers' adverse interests①.

Documentation and Electronic Medical Records (EMR)

This is a fundamental duty of any of the healthcare professionals. It is to be guaranteed that the process of an individual's healthcare becomes documented and can entirely be reviewed for legal purposes.

Any patient must have the right to reconstruct the treatment process as it has been performed. He also should be in full ownership of any of the data regarding his health and treatment. Exclusively the patients and the medical professionals should be allowed to look into the files under regular circumstances. Exceptions are lawyers if trials occur. For that reason, it might be the future that providers will only possess completely de-individualized files while the patient takes his electronic files away when leaving the doctors.

Documentation is a most crucial issue in healthcare management, particularly if payments depend on documented diagnosis and related procedures. In common legal understanding, the person who produces information should be responsible for the documented data even if delegated to somebody else. According to the authors' view, documentation can become an issue of delegation but it can never become substituted by somebody else's responsibilities.

Internationally, the implementing of DRG like systems has made documentation a matter of many conflicts. That is because of practices to proof and to "optimize" documentation if relevant for grouping and rewarding cases by a third professional responsibility, but it is also matter of conflict because such payment systems necessarily need mechanism of external billing control and supervision.

---

① Laurant M, Reeves D, Hermens R, et al. Substitution of doctors by nurses in primary care. Cochrane Database System Review, 2005, (2): CD001271.

Here documentation is the basis for transparency and regularly raises the question of responsibility and liability if documentation does not meet demands and reality.

Discussions and literature present influential speculations about the future of patients' data. There are some powerful interests from competing with health insurances or medical supply industries or pharmaceutical companies to find access to patients' and providers' data, for example by speculating about the future profession of internationally acting "data-broker". These developments would make documentation and ownership of data a globally important subject of concern.

Data storage by Electronic Medical Record (EMR) technologies meanwhile belongs to the standards of hospitals and contains any patient's and the performing medical staff's information. These technologies meet provider needs for real-time data access and evaluation in medical care when fully developed and can be transferred even to far distant cooperating professionals. The particular potential of this development is not the easy storage but the opportunity to link data for numberless interests. Some experts already speculate this new quality of information could become an additional business for healthcare providers. Together with clinical workstations and clinical data repository technologies, the EMR provides the data basis also for longitudinal data storage and evaluation.

A motivation for healthcare entities to implement electronic technology in healthcare derives from the need

- for medical outcome studies (medically and economically)
- for providing transparency on costs and billing under certain reimbursement rules
- for assessing staff regarding resource consumption
- for speedier communication among providers and the management of health plans or
- emergency incidents and many more

The records will contain some, but not necessarily all, of the information that is in an individual's paper-based medical record.

One conflict around EMR is to protect identifiable individual health information from misuse for other objectives of patients' justifiable interest. The move from a paper-based to an electronic medical record system needs to make information inaccessible for illegal third-party-interests. For that reason, the

ownership of the data has principally to be clarified by law and treatment contract. But that, of course, needs to make legislation at first.

The problem is of special concern in case of cross-border healthcare provision because different providers are only to connect via data exchange which might be important both for pre-and post-hospital services and liability litigations.

Billing for Healthcare

There are a large number of methods on how to reward care and treatment available and evidence-based. None of the many methods can only be grouped as positive or negative. That simply depends on the stakeholders' interests and it makes the methods of billing for healthcare a matter of never ending conflicts and even of abuse. The particular problem in healthcare is that abuse will only affect the paying party's wallet but potentially also the patients' health either by the health risks over-and or under-utilization. That is why billing is of fundamental importance for any of the global healthcare systems independent from resources and the systems' basic design.

All or at least the majority of them is discussed in an extra chapter. Thus here we limit discussion to some particular management obligations.

First of all, management is responsible for providing care as contracted according to standards of science. Any supplier induced demand is against the needs of patients even if the offer becomes accepted. It is the ultimate task and duties of doctors and other caregiving staff to keep the norms for what is legally and scientifically necessary or appropriate for the leading guidance of services. Any trial to intervene into that decision either by advice or by incentive violates the rules of profession. While incentives of any kind might be appropriate in any business in healthcare, it is a risky disaster even if not being followed by harm for an individual patient.

Particularly the use of pharmaceuticals and diagnostics can become most problematic. But in today's medicine also surgery might become a matter of concern. It must be the standard of qualified management to avoid any billing action which might come close to abuse of the unique position of doctors both to decide on necessity and to apply treatment in one hand. That is extensively described as "supplier induced demand" and is the final reason for continuously experimenting with mechanisms of payment rules. This "game" is one of the central reasons for

a waste and growing "bureaucracy" which is finally vesting a tremendous amount of resources being better applied to those in need of help.

In that context, abuse refers to actions that do involve illegal billing of medical services, not only the application of unnecessary and inappropriate diagnostics and treatments but also of improper utilization from the patient's side. Both professionals and patients may be potential abusers. This is a major cause for implementing regulations, control and even task forcing investigation on medical crimes only installed to prevent from abuse or searching systematically and unsystematically for abusers.

Under the assumption and experience of providers' moral hazard to induce demand beyond what is necessary, appropriate and efficient, abuse is reported a regular problem in healthcare. This has fostered a comprehensive discussion on that subject and the implementation of strategies to limit the doctors' or providers' rights to decide on services. Managed care and its microeconomic instruments are the most prominent developments in this regard.

Also patients may abuse a given contract frame if access and utilization are limited. If patients abuse healthcare contracts they certainly do that to increase benefits from advertised treatments and services not covered by the contract. But also this abuse might be beneficial for providers and might be induced by them particularly under fee for service rules or providers' incentives

The improper conduct of legal policies or of contract with a patient or with a third-party-payer can violate contracts and health plans and can be severely illegal and might be combined with corruption. As practice shows, improper billing is the most important abuse in healthcare provision and management. Practices of abuse affect not only private insurances, but also social and solidary insurances and are, therefore, of tremendous public concern.

Consequences can result in civil liability, administrative sanctions and fines or in the loss of accreditation and license. Worldwide there are huge amounts of reports on criminally minded and even organized activities and if investigated, they will be followed by some very severe punishments in many countries. Problems of particular concern are illegal abuse practices regarding "experimental therapies", transplantation or the illegal production of pharmaceuticals or the improper fabrication of medical devices or kick-back payments of any kind.

Many national health services systems have settled agencies and tasked forces to discover such illegal practices which are widespread and in some cases

obviously well-and internationally organized.

Unfortunately, most of the countries do not give evidence on that matter as freely as the U.S. authorities do, despite of facing tremendous problems with abuse practices.

Especially in the field of cross-border use of healthcare, abuse is a top matter for international healthcare management. The lack of profound contracts, transparency and legal regulations makes abuse a severe moral hazard for managers.

see Accreditation
see Moral Hazard
see Over-utilization

Goal Setting

When one analyzes international healthcare systems, goal setting leads to the systems' conception: Who holds the responsibility for setting goals and objectives for the health services? The answer focuses the countries' preferences for governance, public and community or market power in developing the healthcare system strategically.

On the level of government, goal setting approaches are parts of developing the country's visions, priorities, legal requirements and regulations or priority settings and research for actions and budgeting.

The involvement of the public and the communities implies empowering and encourages citizens to take implicit and explicit actions for health, for example by the strategy on primary care (Alma Ata Conference 1979) or health promotion as proposed by the Ottawa Declaration of 1986 and its followers (Adelaide 1988, Sundsvall 1991, Jakarta 1997, Mexico City 2000, Bangkok 2005 and Nairobi 2009).

Goal setting by market approaches relates to the investors' conceptions on financing services and covering markets according to the consumers' desires and financial strength and by leaving decision-making to the markets' stakeholders which may be non-for-profit or for-profit organizations.

Any of these approaches needs strategic planning but very different surrounding of legal regulation. The governments and the public activities are taking responsibilities for the well-being of the nation or the citizens, while the market approach of setting goals takes responsibility for the investors' market success.

The former will measure success in terms of gains for population's health; the latter will measure success in terms of volumes of sales, revenues and growth.

Covering particular regions or population's needs according to priorities may stand in alternative to profiling healthcare offers selectively when setting strategic goals. The fundamental difference is the focus either on assessing people's health versus people's "wallets", or rating the social strata according to ability and willingness to pay for offered health and medical services.

Generally, the healthcare and hospital managers are in responsibility of goal setting by following either government/communities or by planning for the shareholders' visions.

Such goals are expected to be

- specific and clearly formulated
- measurable through costs, volumes, quality desired, timing
- communicable to the public or the investors
- indicating priorities by plans and deadlines
- updated continuously
- checked and assessed

Often used is the acronym SMART which stands for specific, measurable, achievable, realistic and targeted.

Health Risk Appraisal or Health Risk Assessment (HRA)

It refers to the strategy and the techniques that a managed care organization or health insurance company operates and assesses any information available about a plan member's health status, personal and family health history, and health-related behaviors and all the members' social circumstances. Such appraisals are to predict the applicants' or insured's likelihood of developing specific illnesses or injuries and of causing losses for the insurance company. These appraisals are requirements for prospective payment systems and for the capitation rules of Managed Care but additionally also for strategic risk selection and goal setting.

In some or actually, in many countries these procedures may be illegal or at least legally controlled for any or some of the insurance mechanisms. One of the problems around such assessments is a technical one: Likelihoods can never become defined for single individuals. HRA is only to focus on groups of people.

That is why the grouping makes the center of such appraisals but will mostly belong to the know-how of the MCO. In this regard, the risk factor approach and the grouping of individuals according to specified health risks as proposed by medicine have been of fundamental importance since their widespread occurrence in the early 1970s.

Another and more severe concern relates to the question whether the insure is in control of one's data or not and what is going to happen if one changes the insurance or Managed Care Organization. There are fears that all these appraisal data could be uncontrollably taken like any other product and be traded freely but secretly among the MCOs, or life insurers or employers or credit sellers, pharmaceutical industries and many more interested parties. There are reports assuming and discussing a bright future of internationally acting appraisals' and patients' data brokers.

Hospital Management Accounting or Hospital Management Controlling

This is the mechanism to conceptualize the internal regulations and directives as a fundamental processing tool for managing a hospital or any other medical facility. It is also called controlling and persons who practice such tools are called controllers. Some, even managers, are misinterpreting this as "control" and "supervision" but it is most of all to guide hospitals by objectives made by accounting.

Management accounting is designed and installed for the use by the management within the provider facility only. This is part of the internal guidance of the medical staff's decision-making.

The particular task is to adjust the hospitals' targets and objectives by

- planning of budgets and portfolios
- helping decision-making regarding LoS, referrals, clinical pathways,
- optimizing billing
- data based monitoring
- regulation and direction
- optimizing the use of resources of the hospital
- coordination
- safeguarding the assets

Management accounting and controlling share responsibilities in improving effectiveness and efficiency according to the pre-set of conditions by revenues as contracted. Experience shows that especially the introduction of the Diagnosis Related Groups has forced the implementation of hospital management accounting tremendously and has made it a key of economic success.

There are three areas of concern for controlling

1. the strategic management of the hospital by profiling products and product portfolios (just another word for risk selection) and preparing contracts

2. the performance management through monitoring effectiveness

3. the risk management in terms of efficiency

Management accounting of hospitals changes the role of management within the hospital and especially the relationship between doctors and managers. The management accountant comes into a position between the doctors and the management. According to experiences, it is very often assumed as an advantage to qualify doctors to management accountants.

see Balanced Score Card

see Diagnosis Related Groups

see Risk Selection

Incentive policies

Incentives are not only used to attract the interests of hospitals, providers, subcontractors and physicians and nurses but also insurances or insures and patients. They are used to support and push the particular interests of those implementing the incentive policy.

Incentives are focusing on selected goals of that party putting incentives into action. The fundamental assumption is that nobody would do what is intended by the paying party if not given an incentive to do as wanted. The discussion around such incentive policies merely focuses on two aspects:

- The first aspect strikes the prime motivation of medical professions.
- The second one focuses the right and the autonomous responsibility of the goal-setting in healthcare.

Both the motivation and the autonomous responsibility of the medical staff are coining the self-understanding of medical professions in general. The assumption and also the experience of effective incentive policies are challenging the self-

reflection of the healthcare professionals. But dependency from incentives will be followed by the loss of professionals' autonomy.

Particularly the raise of managed care is closely connected to mechanisms of incentive policies. Also any other cost-containment policy tents the development incentives which are controversially assessed both by patients and by professionals. It is a specific problem that incentives are mostly established to split off the shared interests of groups of professionals. Here, the motivation is to foster competition rather than cooperation and a shared identity.

The typical expectation is to increase benefits like increasing productivity, a better patients' satisfaction or compliance with the provider's internal governance etc.

Clinicians guided by incentives and by sharing gains may increase personal income if

- reducing the quantity of care per person if prepaid or if
- increasing the number and the intensity of diagnostics and treatments beyond appropriateness in case of fee-for-service payments

The problem usually is that incentives show many unwanted results which are often not foreseeable. That might make incentives dangerous also for management. It should be a good advice for managers not only to be careful with incentive policies but also to study the comprehensive experiences and the pros and cons around the topic as provided internationally.

Medical Management Information System (MMIS)

This is a data system that allows payers and purchasers to obtain information on healthcare expenditure and utilization patterns of providers and insurances.

Such systems are also called Health Information System (HIS), Health Information Management (HIM) or Information System (IS) and Electronic Medical Record (EMR).

The fundamental goal is the monitoring and systematic observation of risks and their consequences for providers' healthcare provision, performances and outcomes. Management necessarily needs comprehensive insight into the organization's performance but has to clarify and to agree the data collected.

Internationally a broad range of applications can be found. The simplest sys-

tems are those which collect and store data. Others may be used to profile the providers' portfolios, while others again might be in action for reviewing resource consumption by contracted patients and medical staff or for supervising results of professionals' decision-making. Very sophisticated systems may allow internal and external experts' prior approval of doctors' decision or benchmarking teams. These instruments are objective of management decision and management may decide for or against particular procedures and may also involve staff in decision making. In any case, these systems are potentially subject to conflict. The issues of conflict are always the potentials to supervise and to interfere into staff's decision making by management.

Monitoring usually needs regulations on the objectives, the methods of measure, the rules of date security and the duties for the cooperating parties by law. Depending on a country's system, such procedures might be regulated by law or by a provider's governing rules.

Organization, Organizational Development and Organizational Structures

It is the managers' duty constantly to adhere the organization and its defining structures as the true basic for effective and efficient actions. There are—especially regarding medical facilities—very different and controversial views on the culture of such structures. These controversies are often related to three aspects:

1. the relationship between the medical professionals and the operating managers (including the discussion if the medical directors should act as managers or if their role should be taken by a professional with a different qualification)
2. the strengths of hierarchy versus a flat hierarchy
3. the sharing of labor and the borders of responsibility

It should be the manager's responsibility to govern these aspects on what is best suitable for the facility's culture and its goals, and for the cultural experiences and expectations of the staff and the patients. Experiences teach that the right answer to the question will also depend on the region of concern and will be especially of importance in an international perspective.

But nevertheless and independent from awareness, it also has to be taken into account that organizational structures should always be able to develop and

change of essential for outcome.

Developing a healthcare facility or organization towards future and permanently adapting them to changing frame conditions and demands (organizational development) is one of the central managerial challenges. This means pro-actively modifying structures and processes for best effectiveness and efficiency. But this needs to include all the staff and seek its commitment. Therefore, managing organizational evolutions is usually rendering the linking of employees to the hospital's goals and to each other.

In doing so, managers are recommended to notice the following conditions:

- the culture of the entity
- the critical responses possibly to await against intended changes
- the particular language needed to invite different but necessarily cooperating teams to go with further developments as planned
- the alternatives considered by leading staff and team members
- the pre-existing internal climate and conflicts
- the consequences for team building and employee's perspectives
- the distribution of responsibilities and internal leadership
- the employees' commitments
- the internal relationship between management and the medical professionals of any qualification
- the compliance and willingness regarding change
- the different consequences of change for the individual staff members

Regarding organizational development, it is often useful to cooperate with external competencies.

see Change Management

Outcome Management

Healthcare organizations are increasingly interested in learning how to manage the outcome of care prospectively rather than just managing the cost of care and utilization or facility. Healthcare management is increasingly outcome oriented both by owners' intention and by third-party-payers' demand.

It is obviously a process of learning how to reach the acceptance that with the help of records of outcome measures and performance indicators, caregivers will know better which treatment modalities will result in evidence-based im-

proved outcomes and for what kinds, what specific health conditions and compliance modes the patients are.

This kind of outcome management database will be particularly forced if contracts provide incentives for risk selection, pro-active capitation and portfolio management or for profiling profits to be expected. Increasing the number of patients treated and of profiling the offered portfolio of treatments is a quite usual mechanism in outcome management. This kind of consideration raises regularly the likelihood to include some more patients with a good prognosis by changing the norms for deciding on necessary interventions.

The interest in outcome management is most of all forced by prospective payment systems and managed care organizations or marketing. Also third-party-payers are very interested in outcome management taking it a chance for rationing access to treatments by calculating patient groups' different likelihoods of wanted outcomes.

For these purposes, a number of performance indicators have been proposed, These indicators are to measure outcomes and performance against a set objectives of hospitals, of outpatients or of other facilities and of disease management programs.

Often used performance indicators are

- indicators of the aids provided
- indicators relating to the clinical governance as specified
- resources consumed
- risk management procedures
- the compliance with contractual and legal conditions
- the regularities of billing and acquisition
- the patients' satisfaction

In some health systems, performance indicators are used for methods of performance-related-payments. This, in fact, needs the permanent recording of any of the relevant data. The rationales of consistency regularly demand agreements among all of the particular stakeholders. This might be complicated if interests in competition hinder transparency.

Performance management is part of the management style and is regularly used to compare performances between individuals, departments or facilities, and with the performance expected by mission.

The procedure is likely to use standardized performance indicators as defined

by law in some countries or by contract under third-party-agreements or by a provider organization's internal policy.

Benchmarking is one of the favored intentions and a method of performance management.

see Benchmark

see Pay for Performance

see payment by Results

see Risk Selection

Out-Patient Practice Manager

Any doctor running an out-patient facility or a clinic is challenged to perform medical services and the management of the facility simultaneously. He/she may decide to employ a practice manager or to share this management with others in order to professionalize the practice management and to rationalize and to reduce the time consumed for work that does not meet key competences.

Nowadays, a professionalized practice management is often unavoidable. For this case, it is recommended to use offers by others qualified in business administration or management of healthcare or to develop such qualifications by attending particular studies.

The practice managers being employed or externally contracted or being the health and medical service provider themselves, will usually do the following tasks:

- managing other professional caregivers
- financial management investments and reimbursements
- information technology management
- documentation
- facility management
- product management
- supply and delivery management
- marketing and promotion

The success of the practice or clinic will depend on managerial skills such as

- maintaining the practice concept
- representing the practice externally
- supporting and compromising the interests of any individual working with

the practice

- communicating, writing, reading, presenting
- mentoring and consulting
- negotiating
- managing human resources, teams and change
- coordinating, implementing and monitoring performance
- controlling structures, processes, conflicts

Most crucial is the fact that practice managers have to balance their position to the personality of the leading doctors in a kind of doubled leadership. It will mostly depend on the personality of the manager to tackle that difficult matter.

The question occurs if such labor-division will be possible or not. In any case, a practice manager will never succeed in his tasks if not accepted by the medical professions but will also never succeed if only holding matters together. On such a given background, the owner of a practice or clinic has to decide to take external competencies or to employ a manager meeting his interests.

The problem of contracting a professional management company like a Management Service Organization or a Physicians Practice Management Organizations might be much more difficult but will depend on the practice's or clinic's size.

Personnel Management

Personnel Management comprises all the management of the human resources of an entity, here of a provider organization or a healthcare facility. It regularly includes

- human resource planning
- job description
- salary administration and design
- contract setting
- designing work and performance demands and patterns
- adopting human resources to legal requirements and future market strategies of the provider organization
- human resource appraisals
- further qualification planning
- personnel development

- workplace motivation
- intercultural management
- representing the facility's culture
- conflict management

The particular duties are different and depend on the provider's culture, but generally, personnel management is the strategic and long-term human resource management. By any means, it has to be seen as a key for the strategic effectiveness and efficiency of a hospital or comparable facility.

Internationally, it is obvious that personnel management will become the most serious matter for effective healthcare offers. There will be no other topic than this one deciding on the outcomes of investments and strategic placement in the healthcare industries. Nearly everywhere in globe, well-educated and trained healthcare personnel is rare and in some regions a matter of competition. A growing number of healthcare professionals and even of healthcare managers decide to leave their country and apply for working cross-border.

These developments need particular awareness by management regarding the mechanisms of credentialing, licensing and accreditation, cultural experiences, language functions and many more. Some may discuss competition for medical staff a mechanism of "brain drain", others globalization. But in any case, these movements are part of medical tourism and must be bound by related regulations.

Planning and Commissioning for Healthcare

In the context of healthcare management, planning is the process of identifying population's needs for prevention, treatments, rehabilitation, care and nursing in order to allocate resources required, setting priorities, purchasing services and evaluating out-come is in some countries called commissioning in other plannings.

Planning

Planning is the procedure balancing resources and investments to targets and objectives but is also the prospective calculation of expenses and reimbursements and any of the calculating of the costs of providing healthcare. In some countries, this is the legally demanded key duty of managers.

The general targets of planning are:

- the strategy of how to provide healthcare for the target population
- the development of the required staff
- deciding on the wanted outcomes in each of healthcare activities
- making the tactics on how to compete other providers
- the calculation of the disease-specific prevalence of patients to be served or the treatment portfolios offered
- the strategic partnership to third-party-payers and/or other providers within the target region etc.

There cannot be any planning without target-setting and no target-setting without planning. People who has no plan has no vision and any target.

Regarding the methods of planning, there might be internationally different requirements, but one should use a minimum of steps as part of a fixed and adapted planning cycle.

Any cycle of planning contains similar procedures like

- problem and target identification
- date collection
- data analysis
- developing and coordinating targets, objectives, resources and priorities for action
- calculating investments and human resources
- implementing plans and responsibilities
- outlining the review procedures
- monitoring and controlling measurements

but planning is some more. It regularly needs the involvement of medical staff, their expertise and commitment. The crucial point is to assess what is advertised as innovation.

The planning of innovations is both risky and challenging. It regularly needs the expertise of staff and independent decision making by management. Avoiding "supplier induced demand" or even corruption is internationally reported one of the most challenging moments of planning. Countries have develop mechanisms to tackle that matter by implementing supervision and norm-setting for panning hospitals and out-patient facilities or by assessing any new diagnostics, treatments or technology. Some countries, such as most European countries will only accept those new methods, pharmaceuticals or supply if the added benefits is

independently proven true by scientifically designed procedures such as evidence based medicine, health technology assessment or particular critical appraisals. If not, such offers have no chance to become reimbursed by insurance. If allowed, there is an additional barrier that makes planning a target of specific authorities beyond the particular provider organizations' will.

Planning might refer a bit more to deciding on needs as classified by the WHO classifications, commissioning some more to the consumers' desires and willingness to pay for services as advertised. Commissioning can also be seen as part of a planning cycle netting all the necessities of services under a given budget. That means budgeting would not follow planning but planning would follow budgeting and allow adjusting resources to local or groups' needs. For that purpose, particular commissioning management or completion management systems have been developed.

While planning is mostly rooted in public health and epidemiological research or central planning, commissioning reflects results of some more aspects like market observation and the running services under specific local or social conditions. Both lines of activity want to answer the question what and to whom services should become offered by setting priorities or by excluding some of achievements. In any case, both are driven by evidence, but by giving more responsibility to the commissioners. It intends to give more decision-power to the providers who are assumed to know the markets better than planning boards do.

Internationally, planning and commissioning are a matter of mission either by a nations' policy or a provider's concept of provision. The first one might explicitly exclude any risk and benefit selection or marketing, the second line of interest might explicitly be based on selecting running offers and might use commission for advertising and marketing services. There is no country known only using planning or commissioning but regularly both. If there are conflicts, then these conflicts will refer to the proportion of planning and commissioning. Commissioning may include the assessment of risks covered and the adjustment of provider activities.

Planning is usually based on

- epidemiological studies measuring the occurrence of diseases and disabilities
- age-and cause-specific mortality data
- social-demographic analyses

- evaluating already existing activities
- reviewing current outcomes
- assessing deficits

Commissioning may use the same sources but additionally

- desires and individual conceptions of life
- wellness offers
- body-styling and anti-aging
- consumer research on life-style attitudes or
- marketing strategies

On that background, commission might be seen as an extension or traditional rigid planning methodology by involving some more variables which are in focus and responsibility of providers and patients

The mechanism plays an important role in the United Kingdom's system and becomes executed by the NHS Commissioning Board (NHS CB). It starts in 2013 and 2014 and is part of health policy reform of current government.

Significant Event Analysis

This is called a method of quality management analyzing not only clinical but also administrative events retrospectively if assumed having been dangerous to the patient, to the employees or to the organization and its reputation.

Such an analysis should include any of the experiences having been involved in the event. Such an event analysis is not primarily to define guiltiness but is to draw conclusions on how to further prevent critical events. It is most important not to mix up the event analysis with investigating fault and liability. The analysis is at first to clarify subjective and objective facts for quality improvement and for supporting the staff's coherence and comprehensibility to manage unwanted events or to improve external conditions for a better performance.

The method has to be clearly outlined and structured and is to answer the following questions:

1. What are the complaints and the hard facts?
2. What went wrong?
3. What and to whom is it due to?
4. What has to be done regarding supply, organization, support or qualification?

5. Are there principle lessons to be drawn for all of the organizations?

6. What actions have to be taken to compensate patients or others eventually?

It is generally seen important to document such analysis and to make them transparent.

Utilization and Utilization Research

Utilization of healthcare coins the practice of providing services. Under fee-for service rules, any product being utilized is a gain but under pre-paid and capitated services a loss. Accordingly, the interests in researching and evaluating utilization are different. Both patients and professional providers or their organizations might be subject of such recording. It can focus on a reference region, social and age groups, gender, ethnic groups or a nation's population or a government's particular public health policy.

Of leading concern are the following topics of research:

- access to healthcare
- necessity of healthcare
- appropriateness of healthcare
- outcome and quality of healthcare
- resource consumption

Utilization regularly results from a patient's decision. Exceptions may be caused by emergencies and certain legal requirements. Consequently, the volume, the reason and the state of need for utilizing care is grounded in patients' recognition about needs and subjective or objective the barriers to see the doctors.

More regularly than exceptionally, utilization is biased by

- individuals' characteristics (age, gender, education, social situation etc.)
- social norms
- the self-assessment of the health condition and its consequences
- the regulations of access
- the distance to the providers

An estimated proportion of 60 up to 90% of health conditions will never be seen by the doctors. Depending on regulations and economic background, some see this a problem others a chance. There is no proven evidence what proportion has to be seen by doctors and what is (quantitatively) an appropriate field for

self-care or traditional healers.

Utilization is commonly examined in patterns of quantified measures related to the use of a single service practice, a hospital, a clinic, a home care facility or the pattern of drug prescription. It might be asked for different patterns of professional response to similar health complaints or in terms of costs and more.

Related research is also performed to compare utilization between social groups and classes, providers, contracted health plans, regions and nations.

The practical consequence of utilization research is the wish to manage utilization (UM) by objectives. UM is both an internal concern on how to adjust resources by third-party-payers and the service organizations which provides healthcare under given financial conditions and contracts.

The process of UM includes recording and adopting the necessity, the appropriateness and the efficiency of healthcare services against established (contractual) criteria.

Under the managed care philosophy, UM is the precondition for economic success and providers' survival.

Utilization Review (UR) is part and pre-condition of utilization management. It follows an accepted procedure to review the appropriateness of healthcare services delivered and the efficiency of delivery.

The methods may differ as the goals do depend on the system's frame. Utilization can be reviewed prospectively or retrospectively either in relation to patients or in relation to the doctors.

It is also used to compare the provider's teams. It might not only be done internally together with the doctors and the teams (non-delegated utilization review) but also by the administration or externally by utilization review consultants (delegated utilization review), by a specialized peer review group, or a public agency.

Usually, UR uses protocols, benchmarks or data and compares specifically classified cases against a "norm". Cases falling outside the average or corridor of data are reviewed individually. The crucial point is always by whom the norms are set and how the responsibility for supervision takes.

In general, the review of the use of services and supplies, here in particular the use and the consumption of medical services and supplies, is fundamental for managing healthcare. The aim of reviewing utilization is to picture the reality of utilization against the needs, the appropriateness, the effectiveness, the

efficiency and the quality not only on the level of the patients, the providers, the structural conditions and processing but also on the subjective anticipations of patients and the public and the particular contracts.

Such measures are not only important in regard to the organizations' administration. They are also fundamental for health plan adjustments, assessments, the allocation of resources or for intervening into services and for adopting guidelines and reviewing outcomes and quality.

Managed care organizations may not agree to reimburse healthcare if it does not meet their sets of UR standards. UR grounds on the review of patients' records and patients' bills primarily but can also include telephone interviews with the doctors and nurses. The performance of pre-certification, re-certification, retrospective review and concurrent review are all UR methods.

Working Rights

Legalized working rights are a reality in most of the countries (even if not being a reality for parts of the working people). Managers of healthcare, especially if working internationally, are obliged to look after the legal condition for running a facility regarding working rights.

Such rights include

- employment rules
- interaction between management and staff
- payments rules and vacation regulations
- health and other insurances
- job security
- further qualification
- career development
- safety of working places
- workplace absence rules
- acceptance of religious rules

The compliance with any of the working rights will regularly and fundamentally contribute to the provider's market success and reputation, especially if being internationally engaged.

XI

Concepts of Billing for Healthcare

General Considerations

The reimbursement for healthcare is to cover any of the costs a provider has. Under for profit functions, it additionally is ensure the expected profits. Since costs might be different from prices for health services, both costs and pricing might be subject to regulation policies in healthcare systems where prices have to be paid by the public, such as in National Health Services or Social Health Insurance or other non-for-profit paying concepts. If government or legislation regulates pricing for healthcare by allowing only the same prices for the same services or treatments, for-profit healthcare necessarily needs to reduce internal costs as the only source of gains. The methods chosen make the difference of the providers and the regulation policy the difference of the global healthcare systems.But even if contracted privately, advanced systems mostly regulate and supervise prices that are to be paid by public third-parties by giving some government administrations and agencies responsibility and authority.

That simple statement leads to some comparably simple consequences.

1.Politics mostly try to avoid or to limit competition by pricing mechanisms for healthcare.

2.The regulation of costs mostly intervenes into the pricing for supply, devices and pharmaceuticals or into salary (if the systems' professionals are paid by government).

3. If prices are fixed, there cannot be any competition by pricing.

Competition will use other methods, like marketing, risk selection, profiling portfolios, extending volumes selectively and minimizing others, up-grading charges, or trying to sell unnecessary and inappropriate "extras".

4.Free market behaviors induce incentives selectively to excluding some of the benefits from the health plans' lists.

5.The fine balance of over-and/or under-utilizing services becomes a regular management strategy and may result in permanently developing new kinds of regulation.

6.Charging for healthcare other than by budgeting is the private provider's mechanism of internal cost-shifting, resulting in a consequence not allowing for preferences for certain activities such as rejection.

7.If budgets stay below what is accepted as necessary, appropriate and efficient in healthcare, then decisions on rationing benefits or on excluding people in need of care are likely to be made.

The capability to pay for healthcare is the true and ultimate regulator for access to healthcare. On that background, the reimbursement concepts of healthcare are fundamentally giving evidence for any of the national healthcare systems. This also marks the point of some interdependency of reimbursement policies between the providers' and the third-party-payers' legal nature, and the mechanism of coverage and adjustment of premiums will influence any of the mechanisms to reward healthcare.

There are only two principal lines for regulation. This is either norm-setting under the roof of equal access (the social approach) or marketing offers according to individuals' bargaining power (the "wallet biopsy" approach). Each of the ways needs reimbursing mechanisms by making prices and by transferring the money to be paid. These mechanisms are subject of regulation policy.

On that background, a number of mechanisms to reimburse healthcare have been developed. But the outcomes do not simply depend on the methods themselves. They also depend on the particular legal frame conditions as implemented within the system. The same reimbursement mechanisms will potentially develop different effects if used under different frames. The consequence is striking: What within nations is often called a "healthcare reform" is focusing on changes in reimbursement policies rather than in changing missions. But the change of missions may accidentally be followed by changing reimbursements.

Healthcare will always work under a budgets policy or under fee for service

regulations, and by charging per case or procedure. The first way will need budgeting methodologies; the other one needs the making of a "price". This very simple regulation includes some very sophisticated details and provokes controversies regarding the following questions:

1. Who is in power to decide on what is necessary, appropriate and efficient in healthcare?

2. What healthcare products are in-and excluded by contract or other rationing policies?

3. Who makes, regulates and contracts the prices?

4. What is the method of billing for healthcare?

5. Who carries the financial risks if needs of healthcare exceed the budgets or contracts?

6. What are the particular regulations for approving services, billing and payments?

The range of possible answers makes the methods of reimbursing healthcare a difficult matter. The costs of treatments and care will differ between the patients served, between the diseases treated, the resources consumed, the frequencies of utilization per specified case, the qualifications contracted, the devices necessarily to be installed, the region covered, etc. What is more, any of the constructed reimbursement methods will potentially affect the behavior of any of the stakeholders differently.

It is—as outlined in the chapter on Health Economics—part of the basics to understand that the objective needs and subjective demands for healthcare are unequally distributed within any population. That induces a sharp interest in marketing concepts for recruiting patients selectively. The asymmetry of patients' needs reflects the degree of a populations' social-demographic homogeneity. But needs for healthcare are typically reciprocally-associated with the individuals' financial resources to pay for necessary and appropriate healthcare. If it is a nation's accepted value to guarantee access to healthcare, there is no alternative to establishing reimbursement methods and rules against the typical market mechanisms, which are excluding poor patients and costly treatments for them. That is why the concepts to pay for healthcare precisely mirror health politics.

The methods to reimburse healthcare can set incentives both for over-and for under-utilization. Both these behaviors are mostly unwanted, violate ethical rules and can be dangerous for patients. But reimbursement schemes can also provoke

mechanisms to prefer or to neglect groups of patients, diagnostics, treatments and services and play a role as profilers in the selection of the provider's preferred or offered portfolios according to the shareholders' interests. Therefore, the interaction of reimbursement policies and interests in risk selection is always a major issue of rewarding healthcare.

Selection policy guided by reimbursement schemes influences globally the systems of healthcare and the entire stakeholders' behaviors. While there may occur interests to compete for the same portfolios, there can be interests to neglect other necessities because of not being cost-covering or for not being profitable. For-profit-providers may induce "cherry-picking-strategies", while non-for-profit-organizations is left with the responsibly for the "remaining needs". That makes it the public's interest to closely supervise, to regulate and to intervene into reimbursement policies. Any pro-active decision to prioritize a target against another will promote one provider and set aside another. Consequently, methods of reimbursements are the very fundamental regulators of a system and most controversial in healthcare management for very practical reasons. Non-for-profit settlements can limit the problem a lot but will definitely not diminish it. On the given background, "Reimbursing Healthcare" is one of the most powerful mechanisms to regulate, to reform or to convert systems if groups' interests and the visions of the system are changing.

In the following, the compendium selectively collects some terminology, concepts and methods referring to healthcare reimbursements. It is one of the fundamentals for managers to understand the interaction of the reimbursement environment, its function, its outcomes (intended or not) and its philosophy rooted in different concepts. Managers should also understand that all of these methods cannot simply become classified according to advantages and disadvantages. The pros and the cons depend on the particular stakeholder's interest. If something can be classified as a pro or a con, then it simply depends on answering the question for whom a pro or a con is. Such interests are usually limited to circumstances and periods of time. In other words, they are permanently likely to change over time if the surrounding changes. It is one of the many and very traditional public health and social medicine competencies to evaluate these subjects. The following does not relate concepts of payment to its particular national and the healthcare systems' frames. But readers should understand that the systems that try to adapt to market rules are developing the most extended

diversity of payment concepts and related bureaucracy, while public health services systems try to uniform and keep simple the mechanisms of reimbursement.

Most of the managers of healthcare will not have the opportunity to decide on payment methods if acting in a regulated society and in a society which is bound together by the majority's visions. For that reason, managers have to get along with a pre-existing frame but should always look for the best of all of the patients being covered.

Actuarial Cost of Coverage

This is the calculated cost of insurance health plans' coverage if based on assessing the risks of individuals applying for health insurance.

The method which is determining this value will usually use person-classification schemes and adjust or pre-estimate costs for health insurance plans' applicants according to pre-existing health conditions, or to work-related, to geographic and to demographic and social characteristics of groups applying for enrollment. These characteristics will be used to determine the predicted associated average costs of utilization per group, and will prospectively determine the gains and the losses of an insurance company. The assessment may also become used as the case-mix basement for contracting or sub-contracting providers under managed care agreements.

The risk adjustments methods behind are mostly owned by the performing insurance company or by a consultancy, but regularly not generally available to the public. Contracts with providers will use actuarial cost of coverage for (prepaying or budgeting) contracts and according to the mix of the persons according to a particular classification scheme.

While the estimation is regularly the mathematicians' role, it is a manager's duty strategically to decide on the approved and accepted variance around the average. Here it is one of the more general problems that decision-makers often do not understand the methods used to calculate the financial risks but entirely depend on trust in these calculations.

Internationally, we only find this method of calculating costs if premiums depend selectively on risk groups' conditions or on prospective payment systems for depending providers such as Managed Care Organizations. Even if constructed

as a Social Health Insurance but set under ruling competition, there might exist an interest to calculate such actuarial costs of coverage for a sample of policies, such as internal risk adjustment or risk equalization procedures between different insurance funds

see Person-Classification-Schemes

see Prospective Payment System

see Risk

Adjusted Admission

This is a measure of any of the care activities given to a patient if offering both inpatient and outpatient services.

This estimate of adjustments is calculated by multiplying outpatient visits with the ratio of outpatient charges per visit in relation to inpatient charges per admission. A result of 0.01 would say that even a high number of outpatient visits will cost only one percent of the hospital admission costs. Taking the reported number of the visits and the referring as the empirical basis for the adjustment, it can become used to calculate pre-payment conditions under managed care contracts. Depending on interests, these adjustments can also become used for particular groups of patients, or of cases or of providers covering a total of a region.

Depending on strategic planning, the figure may be used in planning the medically appropriate and economically most efficient proportion of out-patient and in-patient services within a provider organization or a region.

see Adjusted Per Capita Cost

see Managed Care

see Prospective Payment System

Adjusted Average Per Capita Costs (AAPCC)

AAPCC is the average of the Adjusted Per Capita Costs according to the real mix of all the individuals' costs covered by a health insurance plan or a Managed Care Organization.

Adjusted Average Per Capita Costs are to reflect the relative risks of the health insurance plan´s mixture of the insured. The difference between the

AAPCC and the Adjusted Payment Rate (APR) estimates the gain between the insurer's budget and the expenses, and the expected insurer's or the Managed Care Organization's gains or losses.

This estimation can play a major role in defining the market strategy of insurers or Managed Care Organizations either for designing case mixes or for strategic risk selection concepts.

see Adjusted Payment Rate

see Risk Selection

Adjusted Payment Rate (APR)

APR is the capitated or other prospective payment spent by the contracted providers under the agreement of buying the insurer's risks. It is one of the methods among the wide range of managed care health plans used for capitation or other pre-paid services. For a given plan, the APR is usually determined by the adjusted level of a region and might be additionally regulated by legal requirements. It needs regularly to be readjusted.

APR may also become modified for buying and selling profiling case mixes. That needs the pre-calculated adjustment of costs to pre-standardized cases or products, such as the DRGs.

State-run health plans may decide to use this rate as the basic figure but will usually go below that rate.

see Adjusted Average Per Capita Costs

see Case-Classification Schemes

see Person-Classification Schemes

Adjusted Per Capita Cost (APCC)

APCC is the cost estimation for a group of persons in a given region and time-period but interpreted as an individual's cost. The adjustment or standardization usually uses gender, age, social status and many more features influencing costs.

APCC plays an important role in pre-estimating costs and pre-paid revenues under the frame of most of the managed care contracts.

see Person-Classification Schemes

Administrative Costs

These are the costs related to administration both on the provider's and the insurer's side. The following will typically be accounted as administration costs:

- costs for utilization review and risk assessments, costs by salaries for administrators and managers
- costs for insurance and rewarding care
- costs for negotiating and contracting
- costs for prior approval policies
- costs for marketing and competition
- costs for medical underwriting
- costs for agents' commissions
- costs for processing, quality assurance programs or risk management and provider's insurances etc.

Administrative costs are also any of the variable costs not directly related to the costs of working with the patient. In other words, a huge proportion of wages have to be classified as administrative costs or as not directly work-related costs.

These types of costs give precise evidence for insurances' or providers' efficiency and are of analytical importance if comparing for-and non-for-profit systems or market and public or social healthcare systems.

Internationally, administrative costs are not so easy to be compared. In some systems, the allowed sum of administrative costs is limited by law which needs a national explanation of what administrative costs are. In others, marketing is not or nearly not allowed for parts of the stakeholders.

All Inclusive Visit Rate

The rate summarizes all of the fixed and variable costs that are accountable for any patient's visit. The rate is the annual costs of the provider divided by the number of the patient's visits per year. The rate incorporates the costs for all services at the visit.

Using these data for benchmark or international comparisons is regularly difficult. It must be taken into account that admissions are not randomly distributed among an insured population. The data are highly biased by characteristics like

age, gender, region, ethnic, culture, doctors' decisions etc. If a calculation does not take into account this fact, it can cause both miscalculations and even wrong settings of incentives. The number of visits is easily pro-actively to influence or even to be manipulated by interests, co-payment or deductible policies.

Allowable Charge

This is the maximum amount of money for which a third-party will reimburse a provider for a defined service. The particularly considered services may be doctors' visits, diagnostic tests, treatments or any other of the contracted benefits. An allowable charge is not necessarily the same as either a reasonable, customary, maximum, actual, or prevailing charge.

This charge is used as an incentive to cut the risks for the insurers and is used for prospectively paid managed care organizations. It is also an incentive for installing co-payments and for opening up additional business opportunities and offers beyond what is allowed to be charged.

In terms of allowable charges, they have many implications for the providers' behavior and decision-making and are calculated exactly for that purpose.

Ambulatory Payment Classification (APC)

APC is the method of reimbursing for outpatient services under the U.S. legislation regarding the tax-paid Medicare benefits as implemented in the year 2000. While traditional Medicare did exclusively cover hospital care, the new program did allow some "hospital outpatient services". To pay for this services, APCs are constructed as a prospective payment system as covered by U.S. Medicare. These methods of payment are preferably used when a patient is discharged from an emergency or when the patient becomes referred to another out-patient provider or a Managed Care Organization. The mechanism is an Outpatient Prospective Payment System (OPPS) but excludes payments for the physicians who are paid by other methodologies, like the Current Procedural Terminology.

Such a system is internationally important because there is evidence that also outside the U.S. insurances try to adopt these methodologies. The experience is that this regularly needs to adapt the national conditions for healthcare to the

frames of the origin. The problem is not the exchange of methodology but the exchange of fundamental conceptions.

see Medicare

see Prospective Payment Systems

All-Payer-System

This coins a system in which all the prices for health services and any payment method are the same for any paying party.

For example, in an all-payer system, federal or state government, a for-profit or non-for-profit insurers, a self-insured employer plan, a community, an individual, or any other payer will always pay the same rates for the same services and treatments.

The uniform fee regulations are to bear healthcare providers from shifting costs from one payer to another. It is also part of philosophy to focus competition not on pricing but on quality. Systems using such models might experience the extension of offered "extras" to be paid out of patients' pockets and in cash directly. If nations do not want to allow such practices, they need to implement particular regulations. This is particularly an issue of concern, if the all-payer-system covers what is evidence proven necessary and appropriate. Here "extras" may turn out not to meet scientific standards and therefore are likely to harm individuals' health.

Approved Charge

It is the price a third-party-payer is obliged to pay for utilized health services and treatments.

The approval will be negotiated and contracted prospectively or retrospectively. It is part of the contract with the paying party and can differ between the contracts for the same insurance product. The methods used for approval should be an explicit part of the contracts but have regularly to be performed by experts of the equally accepted profession. Approving charges is unavoidably to cause supplier induced demands or up-coding under product policies such as DRGs.

Some countries, such as Germany, have regulated these approvals by legislation and have established particular organizations conducting them.

Base Capitation

This is the base amount of money to cover outpatient and/or inpatient healthcare costs per person and time-unit as contracted. The base capitation rate can in-or exclude prescription and administrative costs, optional coverage such as dental health, emergencies services or care for drug addicted individuals or for some reason the access ever becomes discriminated against the others. It might also in-or exclude services for legal or illegal expatriates.

In state-run healthcare systems with privately working provider facilities, this base capitation can also work as a tax-paid subsidy for all the providers or selectively to help coverage for unattractive regions or disadvantaged social groups.

Base rates are also used for a prospective equal payment which is independent from excluded reasons of utilization for any insured people but adds additional payments for particular treatments after prior approval.

See Capitation

see Person-Classification Schemes

Budgeting and Bundled Payment

This refers to one of the many major mechanisms to reward health services both retrospectively or prospectively and sharply contrasts any of the fee-for-service or per case payments. But the adjustment of budgets can base on calculating volumes of special products, case-mix-measures, or simply on experiences from the past. Under managed care, budgeting is increasingly of importance and will depend both on person-or case-classification schemes.

Planning the expenses as time-period-budgeting is also the usual methods of internal planning especially if management decides to give the budget responsibility to the organization's self-governing departments or facilities.

Budgeting is mostly used to give providers flexibility to meet all a regions needs for healthcare and to allow strategic planning what is mostly rather difficult under fast running for-profit demands. It gives providers and third-party-payers the opportunity to trust in stability and flexibility for long-term decision making.

The basis for budgeting is access to data and the confirmation of the popula-

tion and the region to be covered. Concepts usually use epidemiological data, results from utilization research and public health for planning. An example is France where a system similar to the DRG is used for strategic budgeting but nearly not for per case payment. The experiences result in positive cost-containment practices, in regional independency in strategic planning and in internal flexibility if reaction to external changes is necessary.

Bundled payment is a particular type of budgeting, paying uniform and comprehensive payments for a group of explicitly related services often for complex and coordinated services for chronic cases in order to avoid fragmented services forcing competition against the needs and interests of patients.

Current bundled payment initiatives distinguish four different models in combination with DRG schemes in the U.S. These are:

1.Retrospective Acute Care Hospital Stay Only

2.Retrospective Acute Care Hospital Stay plus Post-Acute Care

3.Retrospective Post-Acute Care Only

4.Acute Care Hospital Stay Only

In recent years, bundled payments have also become the norm in many internationally known health plans as a method of cost-containment.

One may also call it a product-related payment or a case related complex budget or a target based payment. The design of product-classification-schemes makes bundled payments a systematic approach in health services going far beyond rewarding services①.

see Case-Classification-Schemes

see Person-Classification-Schemes

Capitation (Cap, Capped, Capitated)

It is the (usual) kind of prospective per capita payment for a pre-defined package of contracted healthcare benefits for a single person or a group of covered persons. By capitation, it pays a certain money amount per member per month or

① Struijes J N, Naan C. Integrating care through bundled payments — lessons from the Netherlands. New England Journal of Medicine, http://nejm. 990 org, 2011-03-17; Porter M E. A strategy for health care reform — toward a value-based system. New England Journal of Medicine, http://nejm. org, 2009-07-09; McClellan M, Mckethan A N, Lewis J L, et al. A national strategy to put accountable care into practice. Health Affairs, 2010, 29(5): 982～990.

any other time unit prospectively to providers or organizations of providers for which those guarantee contracted services in reverse.

The quantity and intensity of healthcare which is accepted to meet the health needs of the defined population is fully covered by the capitation fee. This method transfers the economic risks from the Managed Care Organization or an insurance company to the particular provider or the subcontractor of a provider. Therefore, capitation is a method to sell and to buy the risks of an insurance plan or of a contract regardless of quantity rendered.

The method is developed to prevent third-party-payers from unforeseeable risks and needs or loses due to so-called "high-utilizers".

The particular amounts are calculated through a payment per member. The procedure makes it essential

- to pre-estimate the risks of utilization according to person-classification-schemes and to the mix of the individuals covered and
- to install mechanisms to prevent from under-utilization, adverse selection etc.

Capitation, sellers' and buyers' individual risks or the mixture of the risks of all the sold and bought contracts is the center of the managed care philosophy. Providers are not reimbursed for services which exceed the pre-calculated amount even if necessary and demanded. The rate will be the same for all members or will be specifically adjusted according to age, gender, pre-existing conditions, social characteristics of the members, based on actuarial estimations of likely medical utilization.

The difference between the amount of all the capitations for the individuals and the provider's costs is the provider's profit. The system clearly demands a binding of the patients to the Managed Care Organization by excluding or limiting the free choice of doctors.

The model can also be used if a Managed Care Organization subcontracts doctors not belonging to the organization. But it can also become necessary for the MCO to pay for services bought outside the organization under fee-for-service conditions. The consequence of capitation is a very high dynamic of the known provider organizations because capitation might turn out to be dangerous both for the providers and the patients as well.

see Managed Care

Case Adjusted Revenues

This is the payment for a predefined case per time unit, if related to chronic conditions. This type of revenues is made in order

- to optimize case management
- to support case related risk selection and to profile the providers' portfolios
- to foster interest in some less prevalent cases
- to reduce services beyond what is defined being appropriate
- to increase documentation quality

For instance, under these regulations, a provider might be paid a firmed sum for any case of diabetes regardless of the individual characteristics of the person suffering from diabetes, and the payment is just case but not patient adjusted.

Case Budget

This is a method to budget revenues for health services either by a retrospectively (retrospective case budgets) or by a prospectively calculated (prospective case budgets) budget.

The particular adjustments make it necessary to gain total transparency about any dimension of costs but also explicitly to define what has to be done under the adjustments' rules and under the definition of a medically classified product. Additionally, to reimbursement mechanisms, such schemes also provide the opportunity

- to compare utilization
- to assess utilizations for benchmarking
- to standardize pathways
- to plan and allocate resources

Case budgets are difficult to handle for (typically elder) people suffering from more than one disease. The adding of all the budgets per case might be profitable for providers but increase costs for the paying party beyond appropriateness.

But case budgets can lead patients and the utilization management

accordingly to severe problems if real costs exceed case budget or if the management has not developed procedures of approving charges.

Case-Mix (CM) and Case-Mix Index (CMI)

Case-Mix is, in healthcare, the mix of cases treated within a particular institutional setting, such as the hospital using product-classification schemes like Diagnosis Related Groups or any other case classification scheme.

CMs can be used to measure the hospital case mix for setting benchmarks, for reimbursing services or, for example, for assessing hospital demands for allocation purposes.

The case mix reflects the mix of demands, the use of hospital resources, and the general mix of hospital admissions per case as classified. The mix represents the portfolio of the provider. The revenue per case depends on the pre-classified cases and their price. The more complex the patients' needs are, the greater is usually the amount of services for the patients' care.

The case mix is established by counting the relative frequency of various types of cases seen by the provider in a given time unit. In terms of tendency, it is right to assume that high priced cases are seldom while low priced cases are frequent. This can set, wanted or unwanted, an effective incentive for risk selection against seldom and severe cases demanding comprehensive care and treatment.

CMI is the average weight for all the cases paid to a provider under a case rate scheme. The CMI is a measure of the relative revenues for the cases treated in each hospital or group of hospitals. An index of 1.05 means that the facility's patients are 5% more costly than the average is. The index is mixed by all the listed cases of the hospital and is used for the prospective and retrospective calculation and planning of resources and/or costs, but is also used for reimbursing single cases. It raises an incentive for portfolio and risk selection. The implementation of CMI as a guiding strategy makes the variance of the index an important figure for profiling portfolios for processing "product medicine".

It is foreseeable that comparable case-mixes will also become of importance for outpatient care payments or rehabilitation in future.

see Case-Classification Schemes

see Case Rate

see Diagnosis Related Groups

Case Rate

This coins a policy paying a flat fee for a patient's treatment.

The method needs to adjust the definition of what a case is. For this adjusted fee, the provider covers all of the services the client requires for a specific period of time or a healthcare product or for any service under contract.

The case rate is also called bundled rate, or flat fee-per-case or flat fee-per-product.

The case rate fee is often used as an intervening step prior to case budgeting or to capitation. Here, the provider accepts some significant risks, but does have flexibility in how to meet the patient's needs. The less the system of coverage is regulated the more seem providers are willing to accept case rates.

From the providers view, the results will depend on

- appropriate definition and pricing for the cases considered
- the number/volume of eligible patients related to the pre-defined cases

see Bundled Payment

see Capitation

see Case-classification Schemes

see Fee-for-Service

Claims Examiners and Claims' Review

These are professionals proving the case related claims of doctors or of hospitals for providing healthcare. They are contracted for giving the insurances' the proof of billing for care based on professional expertise.

There is an ongoing and controversial discussion on how to ensure the entire independence and the particular case related and specialized competence of the examiners. The examiners will give a review prior to reimbursement. The purpose is to validate the medical necessity and appropriateness of the provided services and if contracts are run as signed. It is also to approve if the cost of the service is not excessive. Some of the used methods are standardized but not all.

Claims reviews are often a matter of complaints and actually of trials.

Competitive Bidding

This is a feature of market based healthcare provision if legally allowed. The bidding method is the most consequent competitive method for finding prices and will establish the payment rates by selecting the best offer that is regularly the lowest price that health insurance or healthcare providers have to pay in a region for a fixed amount of cases and in e contracted time-period.

Competitive bidding is also the process of offering reduced rates to health plans to obtain exclusive contracts from payers.

Such bidding for lowest prices can worsen quality or separate the provider and insurer markets into different markets for each of different social classes. But such policies easily violate some nation's anti-discrimination legislation. Accordingly, governments will only allow this practice if interested in parting the markets according to the payers different capacity. Governments may also allow the bidding if wanting to reduce the numbers of providers and hospitals.

see Competition

Concepts of Rewarding Outpatient Healthcare

In the following, the most common methods of rewarding out-patient healthcare providers are briefly summarized by some of its main characteristics.

Fee-for-Service

- causes over-treatment and billing selectively
- profiles the provider's portfolio by focusing on financially attractive procedures
- limits interests in keeping scientifically accepted standards of necessity and appropriateness
- raises interests in defensive medicine and risk selection
- discriminates patients covered other than by fee-for-service

Public Salaries for Service Providers in self-owned Offices

- focuses on the patients' problems free from financial issues

- sets incentives to reduce the number of patients being treated
- limits the doctors' and patients' concerns on being ruled by making profits
- lowers the interest in pro-active offers of inappropriate healthcare

Salary Payment for Employees of Public Facilities

- no economic risks for the employed doctors and nurses
- no interest in risk selection
- interest in cooperation with others rather than in competing with them
- setting incentives to reduce the number of patients being treated
- dependency from the employer and from the employers' interests

Prospective Capitation

- limits financial risks through foreseeable and calculable budgets
- forces interests in defensive medicine and risk selection
- makes seeking for contracts the major concern
- initiates incentives to set financial gains ahead of the patients' needs
- sets interest in efficiency on top of effectiveness and quality
- limits over-utilization but stipulates under-utilization
- fosters bureaucracy

see Defensive Medicine
see Over-Utilization
see Risk Selection
see Under-Utilization

Disability Payment System (DPS)

This is a payment system used in the U.S. to reward services for disabled and chronically ill people under Medicaid. It is another concept to construct care products which are to enable the contracting partners to negotiate on structure, volumes and prices to be delivered prior to the process of delivery. It is also shifting the financial risks of delivery to the provider.

In the particular case of the DPS system as used under Medicaid, the wide range of covered services are divided into 43 classes but additionally differentiated

according to a three parted sub-grouping of costs for the purpose of prospective payments.

see Medicaid

see Prospective Payment System

Discounted Fee-For-Service

This is a reimbursement system where a provider agrees to offer healthcare on a fee-for-service basis, but with the fees discounted by a certain percentage from the physician's usual or officially allowed charges.

Providers generally accept such contracts because they represent a mechanism to increase their volume and to reduce their risks of losing volume. It is a "classical" method of competition for patients and against other providers. Providers calculate volume against price.

The mechanism will work differently depending on the particular kind of cases and of the number of competing providers within a region. Usually, the providers' position is weaker than the position of the third-party-payers.

Discounts may also be pro-actively demanded by third-party-payers.

Fee-For-Service (FFS)

FFS is the very traditional method of rewarding healthcare where specific payment is made for specific services rendered.

FFS is the usual kind of billing under indemnity insurances and traditional private insurances offering particularly designed health plans for coverage and by sharply selecting the insured. It refers to payments in specific amounts for any specific services rendered and is opposing any other arrangements. Under FFS, the healthcare provider takes the privilege to induce demand and thus make the volume of care performed be widely out of control. This may make understandable why most of the providers and their lobby prefer FFS, while paying parties (and their lobby) try to do best in fighting it.

In today's advanced systems with universal access and coverage by third-party payers, FFS became and becomes more and more replaced by alternative payment methods, like prospective payment systems and different types of budgeting. The permanent search for new payment methods is forced by, even if not

intended, FFS practices actually.

FFS is sharply contrasting capitation, prospective payment systems, DRGs or per diem discounted rates, and all the entire other person-and case-classification-schemes.

Under a FFS payment system, expenditures increase if

- the demanded fees increase
- more units of service are performed and delivered
- more expensive services are substituted by less expensive ones
- healthcare becomes unnecessarily and inappropriately offered and performed
- low quality causes repeated treatments and doctor's visits

FFS payments may be agreed by an insurance company, by the patients themselves or by a government agency. It is often also the payment method if highly specialized sub-contracted doctors apply healthcare for the primarily contracting provider. With respect to the payers' interests, any of the payers share the interest in controlling expenditures and in controlling costs. This has made to develop many policies against FFS.

Fee Schedule

This is a list of fees for specified medical procedures. If used in medical care plans, it usually represents the maximum amounts the program will pay for the specified procedures under fee for service according to the claims of insured individuals.

It is also the fee determined by a managed care organization for services performed by subcontracted doctors, nurses or facilities.

Some governments are establishing an allowance procedure for fee schedules especially for private providers. The policy is made to support universal access and to fight risk selection against public funds.

Flat Fee-Per-Case

This is the fee to be paid for a treatment under the providers' particular market interest against competing providers. The flat fee is specified per case or by certain circumstances of a case, like chronic conditions or the social situation

of an individual or a region. The entire services per case in a specific period of time are covered by that fee. This kind of payment has been developed in some current managed care environments and is often characterized as "second generation managed care systems". The concept will often interfere with demands for quality and will work like risk selection regulations do if not being strongly regulated.

DRGs are an example of flat fees paid per product.

see Diagnosis Related Groups

see Managed Care

Global Budgeting

It is a method of healthcare cost-containment in which providers under contract have to accept a prospectively designed budget. It is also a method to sell and to bargain the economic risks of healthcare provision from the paying part by the providers. The provider which is taking a global budget becomes responsible for performing any of the benefits contracted. The budget can include or exclude parts of the costs, for example the payments for doctors or pharmaceuticals and so on.

Global budgeting will be especially mandated under a universal health insurance system and is the alternative to fee-for-service agreements. Global budgeting needs mechanisms of prospective planning of both expenditures and benefits.

The typical procedure is

- to fix the norms for access, benefits and expected quality
- to decide on the budget for any of the providers, subcontractors and benefits
- to assess the risk mix of the providers and subcontractors according to the mix of those subscribing for a certain provider or provider organization

The making of a global budget is a sophisticated procedure and adjusts the budget to the particular mix of "needs". These needs have to be regularly measured and assessed by the Public Health sciences and particularly by Epidemiology. The adjustment typically needs to calculate the budgets by considering all the variables influencing the risk mix, such as age, gender, relevant morbidity, utilization behavior, social structure, accessible benefits and the number of

persons belonging to each of the clusters considered.

The measurement of the risks to be covered by the budget will use person-classification schemes or case-classification schemes or alternatively a mixture of them. Also figures of resource consumption per clustered group are frequently used, such as actuarial costs of coverage.

To get along with this procedure needs to implement both a systematic health record, and a permanent mechanism of adapting to reality. The responsible authority must be independent from stakeholders and care for a maximum of transparency.

The method is also used for allocating funds for a defined region but demands providers to compete for its part through incentive offers. Here it is used for downgrading costs for coverage.

see Actuarial Costs of Coverage
see Case-Classification Schemes
see Epidemiology
see Person-Classification Schemes
see Product Medicine

Global Fee

The term coins the total charge for a specifically negotiated set of services, such as obstetrical services that encompass prenatal, delivery and post-natal care.

Managed care organizations will often seek for contracts with hospitals that contain global fees for certain sets of services if not under the regulations of DRG. Global fees are of growing importance also for out-patient services.

Incentive Payment Systems

This is a system to pay for and to reimburse healthcare by setting selected aims prior to others and by adjusting payments not primarily according to costs but to goals. It can play a specific role if providers subcontract with others or become subcontracted themselves. It might also become used in settings of some priorities for certain treatments, prevention or disadvantaged regions and social groups.

Medical Loss Ratio (MLR)

MLR is the insurer's cost ratio of the total benefits and is used to compare revenues received. A ratio like 0.75 would mean that 75% of premiums are spent on purchasing or billing medical services. The goal is always to keep the ratio below 1.00.

Successful HMOs or insurance companies do regularly have MLRs in the 0.70~0.80 range. But also minimum ratios of less than 50% are reported.

Out-of-Pocket Payment or Out-of-Pocket Costs

This is the amount of money directly to be charged by the patient. These costs are individual charges for pre-estimating costs of intended treatment and care, for billing, for co-payments or deductibles, and for healthcare delivery and related services, prevention etc. It may also be an illegal charge for services that are completely paid by sick funds but not understood by the patients.

It is often discussed that out-of-pocket expenses would prevent from patients' moral hazard. But unfortunately, there is no empirical evidence for this argument. Others argue doctors would prefer out-of-pocket payments for some more and other reasons than avoiding patients' moral hazard. In this situation, it is understandable that some analysts see the moral hazard discussion against patients as the front argument to mask the providers' moral hazard.

Out-of-pocket expenses are also expenses not covered by insurance or a state-run health plan mostly for dentists, optometrists, pharmaceuticals and for some kind of rehabilitation tools and auxiliary devices.

In the age of managed care, out-of-pocket expenses can also refer to the payment of services not approved for reimbursement under the health plan's coverage.

Internationally, these mechanisms to pay for healthcare are of minor importance in most the advanced systems and are typically policies of individual private health insurances or coinsurances.

see Moral Hazard

Pay for Performance (PfP)

This focuses a frequently discussed concept wanting to implement a certain type of financial incentives for healthcare improvement. The idea results from discussing the publication *To Err is Human: Building a Safer Healthcare System* by the U.S. Institute of Medicine in 1999.

Similar arguments are reported by some other projects such as by the Dartmouth School and the Rand Cooperation. The studies show simultaneously and permanently that Americans are not only facing "errors". They also receive less care than medical evidence recognizes necessary and appropriate average of the population. Additionally, American people face a wide variance in quality depending on region and social class, say related studies. To overcome these fundamental problems, a pay-for-performance approach was supposed the solution and is out-lined by many different kinds of proposed payment systems. It is thought to become a method to combine some clearly outlined and contracted objectives with an added extra payment.

The fundamental belief is doctors or hospitals would only do what they are professionally obliged to do if being paid an extra reward. It is the philosophy that delivering healthcare would profit from a customer approach rather than from a patient approach but being in need of the paying party's advocacy. Thus patients would gain better care if third-party-payers take control over the providers' decisions and doings. It is expected that PfP would be the golden way on the road to competition and competition would improve quality if the paying customers would be given the opportunity of contracting providers selectively for defined customers' concepts of what is necessary and appropriate in healthcare delivery. PfP competes with any other nationally implemented mechanism of setting norms for healthcare, but particularly with implemented concepts of the providers' self-governance, such as it is implemented in many European countries.

If, for example, the paying party wants to reduce the malpractice of over-prescribing antibiotics or of some other pharmaceutical or wants to improve care for some predefined groups of socially disadvantaged groups or regions, or wants to improve complying with best practice approaches or other contracted improvements, these could be rewarded for successful performance. Taking international experiences into account, a doctor or hospital could be paid an additional 3

percent above the standard fee that will be paid for the particularly contracted code for service or treatment. These practices make providers' performance a matter of scores of benchmarks that are set internally by the provider's management for medical staff or by third-party payers for contractors.

Besides having such contracts, first of all PfP will need precise objectives, survey and monitoring, permanent evaluation of data and performance by independent agencies and certification.

But none of these systems was obviously able to get along with the variance of quality through buying required services under the rules of competitive markets. In contrast, there is evidence that competition would be a source of the "humans errors" on its own. Some of the evaluations give fundamental lessons about that kind of concept:

1. The overcoming of the problems mentioned can hardly be done by financial incentives without solving the true fundamental deficits of the systems, most of all the limits of access to healthcare for a high proportion of the population and the dependency of income from volumes. One particular problem is that a high number of patients wait for going to see the doctors up to the point when becoming classified as an emergency case. Improving healthcare is mostly a matter of access and overcoming incentives for over-utilization and financial risk selection.

2. Only a selected and a small number of highly prevalent cases will determine what the average of quality is if quality becomes measured by focusing on high prevalent reasons of utilization. But rewarding for quantity can easily become mixed up with quality and is likely to be followed by neglecting treatment and care not being contracted under PfP. The mechanism is pro-actively seeking for patients through pro-actively offering tests and treatment as an advertised specialty. This is particularly a problem if hospitals and their departments are run as profit centers. In this way, it is likely to push over-utilization for highly prevalent cases but provoke under-utilization for the very large number of diseases of a minor prevalence.

3. PfP sets powerful incentives for risk and portfolio selection by providers and for selective contracting on the side of the third-party-payers. This strategy can easily become adverse to interests in the treatment of severe and seldom (but costly) diseases. Pay for Performance is likely to make defensive medicine and risk selection a prior strategy of the providers but compete for high prevalent reasons of utilization.

4. It can make sense to perform less instead of more interventions into individuals with very early stages of a disease or into those suffering from simple health conditions. PfP models are likely to ignore such constellations for healthcare improvements.

5. Depending on the population's size, only about 5 or 10% of the occurring diseases will be prevalent enough for outcome comparisons. If there is no disease-related outcome measurement possible, PfP will lead to pathway standardization exclusively. Pathway standardization will lead to efficiency but not automatically to quality improvement. That is why PfP will be followed by remarkable consequences for the selective allocation of investments in facilities, research and education.

6. PfP may tend to pay for compliance with the rules but not for improved quality. If providers are set under compliance rules by the reimbursement system, providers tend to go further and to set also patients under compliance rules to adopt them according to the provider's requirements.

PfP is also a method of salary payment by the providers' management and aims at

- differential pays to enhance competition between doctors or medical teams
- incentives to follow the providers' interests in efficiency and gains

Some analysts argue performance-related pay could violate ethical rules and the needs of cooperation. There is also evidence given that performance-related pay might be de-motivating and unfair but undermine the corporate identity. There is evidence that such internal PfP rules are a method to extend volumes and to avoid complicated cases. Especially critically are contracts to be seen binding wages to the quantity performed. This is reported for those doctors specialized in some very few elective procedures. Here it could initiate a mechanism or incentive to adopt the indication's norm for necessity and appropriateness according to the number of cases contracted or expected. Some countries, such as Germany, are just trying to implement rules which are forbidding such practices, at least voluntary ones.

But PfP may provoke compliance with payment rules rather than with improving quality. If providers are set under compliance rules by the reimbursement system, providers may be under pressure to go further and to set also patients under compliance rules in order to adopt them according to the provider's requirements.

One may critically ask what the long-term consequence of a strategy—doctors and provider organizations are only systematically trained to do the right things for the right persons if given an extra bonus for professional standard and obligations—is. It is at least a potentially successful strategy to overcome the provider-purchaser-split if being nationally implemented.

see Purchaser-Provider-Split

Payment by Results (PbR)

This is the established rewarding system for hospital care in UK. It is similarly constructed as the DRG system and has been introduced since 2002.

The payment system calculates similar cases as having to be treated at the same price (by a national tariff of firmed rewards) within the country's entire hospitals. The prices are designed according to any of the clusters of diagnosis and procedures performed in hospitals, called Healthcare Resource Group (HRG) which becomes regularly updated. Each case related to one of the groups is expected to consume the same level of resources. The price for a classified procedure is the national reference cost.

The payment will be unbundled if a treatment is performed by different providers. It is expected to allow competition if splitting the traditional integrated providers into competitors. Also here, competition is assumed to improve quality rather than cooperation①.

see Bundled Payment

see Case-Classification Schemes

see National Health Service

see Diagnosis Related Groups

see International Classification of Procedures in Medicine

Pre-payment

This interesting method of prepaid services roots in the history of healthcare provision, but particularly in less populated regions, for example early in the U.

① http://www.dh.gov.uk/en/managingyourorganisation/financeandplanning/nhsfinancialreforms/index.htm, 2009-12-22.

S. history and also much earlier in many other regions. Under that scheme, doctors acted both as providers and as insurers by giving contracts for a limited number or reasons for utilization against a regular pre-paid premium per time unit.

It is nowadays a method of reimbursing for the cost of healthcare services and used to transfer the economic risks of third-party-payers to the providers or from primarily contracted sub-contractors.

The method is used for mainly three reasons:

1.ensuring permanent cash flow

2. predetermining service products selectively according to the rules of managed care and of some third-party-payers' policy as specified

3. strapping the providers and the insured into a strategically constructed alliance to prevent from the risks of competition by mechanisms of prospective payments

The overall concern is always the possible incentive to reduce benefits after receiving the pre-payment. Any pre-paid money may also be lost in the case of bankruptcy.

see Prospective Payment System

Prospective Payment System (PPS)

This is the system performing pre-payment by establishing the rates, prices or budgets for specifically contracted services or groups of patients prospectively. Particularly the combination of PPS and capitation has made certification for quality and its regular approvals a top agenda of health policy and stakeholders. It contrasts any fee-for-service.

The calculation follows more or less sophisticated risk assessment concepts related to person-classification schemes or referring to case-based-classification schemes like the DRGs.

The gap between the payment and the provider's cost decide on the gains and on the success in competition. For the given reason, PPS unavoidably raises problems of guaranteeing quality by prospectively calculated and contracted plans.

Healthcare management might be in favor of PPS because it ensures providers' contract reimbursements and makes expenses for insurers foreseeable. Depending on design, PPS can also be a budget.

see Capitation
see Case-Classification Schemes
see Person-Classification Schemes
see Quality of Healthcare

Target Payments

It is primarily a staff payment mechanism using incentives in order to reach a target set by management or the facility's owners. Additionally to an already adjusted payment, a bonus will be paid but it might also be the exclusive method of rewarding healthcare, if so, then mostly for top experts.

Target payments are also contracted to lower costs by avoiding traditional contracts or are to initiate competition between teams or team members if management does not want to target at cooperation and coordination because of competing interests.

Target payments can be helpful if there is a specified goal to be reached but may also show unwanted side-effects like de-motivating or de-organizing a team. The way out of such dilemmas or to limit them is to include the staff in defining goals and in assessing the different contributions any of the team members has to give in meeting objectives.

Target payments are also an issue if third-party-payers want to reach specified goals (like cost control or exclusive quality standards) together with an allied provider or provider organization.

It might also play a role in concepts of favorable selection incentives.

see Integrated Delivery System
see Pay for Performance
see Risk Selection

Treatment Costs

These comprise any of the costs covered by treatments. For purposes like reimbursement or benchmarking different methods of classifying, costs have to be considered, such as:

- costs per episode of treatment by teams of staff
- costs per episode of treatment per provider organization or hospital

- costs per patient or case
- costs per life time
- costs per region

Costs are never to mix up with prices, but prices are to cover costs. That is why it is important to notice that cost containment and reduction, as well as price containment and reduction can mean something very different in methods and results. Each of the concepts will follow different interests. .

Weighted Capitation

It is a method of allocating and adjusting resources per region or provider organization, but is also used internally to adjust capitated payments to single departments or staffs.

The concept uses the mix of weighted per capita expenses according to the provider's portfolio. It allocates resources on the basis of average needs either under non-for-profit or under for-profit rules but for both of them pay the same weighted capitation.

The construction sets both types of organizations differently under pressure. They both have the same structure of costs except the profit rate. That again sets for-profit providers under pressure to reduce costs to an amount that is equivalent to the profit rate expected. The mechanism makes private companies more intensively seek for the reduction of fixed and/or variable costs and by managing the process of healthcare pro-actively. This has a simple consequence: Compared to non-for-profit organizations, private providers have to be more efficient if wanting to reach the same effectiveness.

see Capitation

see Competition

Withhold

This concept is used as an incentive to encourage providers to reduce utilization of services by including them in the share of risks. The provider's or the contracting third-party-payer's management keeps back part of payments for the provider until the surplus or another given target can be counted. For this purpose, a percentage of a provider's payment will not be paid during a contracted

time period.

Withhold is a common part of capitated payments. It will be given back at the end of the period covered if targets are fulfilled.

The mechanism gives withholders obviously some incentives to use the money for short-time stock speculations. Considering the enormous sums gathered within most of the systems, this misbehavior might turn out to be critical for the provider's existence.

XII

Drugs and Prescriptions

General Considerations

Pharmaceuticals have been most important in therapeutic concepts since the very beginning of medicine. Today they are based on a vast and globally acting industry, integrating research, development, testing, manufacturing and trading drugs. Their enormous market penetration and power give some few internationally active trusts a unique position in lobbying, market rules and pricing. Healthcare providers are seen as the key door to the drug markets and consequently play a major role in market coverage, testing new drugs, evaluating introduced products and marketing.

While the pharmaceutical industry regularly is less regulated than other industries and is mostly market driven, the provision of drugs, particularly if proven necessary and appropriate, is mostly not. But there are some remarkable global differences, as figures and reports from *www.OECD.stat* show. Thus it is right to summarize the followings:

1. The poorer a nation's economy is, the higher is the proportion of individuals' out-of-pocket payments for healthcare and self-medication.

2. The more economically advanced a country is the higher is the proportion of public or tax-payments for healthcare and pharmaceuticals.

These results are significant and should be noticed by managers because of their influence not only on nationally but in some countries also on cross-border and overseas healthcare utilization.

Despite being absolutely necessary, the pharmaceutical industry and its policies are under permanent critical discussions. The critiques mostly meet

- the proper and the improper use of the pharmaceuticals in relation to the true needs of patients
- the use of newly developed drugs and their testing with underprivileged, uneducated and the reporting people with poor results
- the lacking of transparency for obligations regarding side-effects and the liability
- the costs of drugs and their availability for those likely to be more dependent on subsidies than on others
- the systematic search for opportunities to avoid national regulations for testing and trading drugs
- making the pharmaceutical studies an international business especially using countries with low legal standards

But any advanced healthcare system has developed rules to regulate the way to markets and the use of drugs according to scientific evidence. These rules work mostly internationally but need to look sharply after the particular studies conducted. Healthcare managers should know about the function of meta-analytic studies, agencies providing transparencies and assessment rules for new drugs. They should also know about

- Evidence-based Medicine (EBM)
- Health Technology Assessment (HTA) or
- Comparative Effectiveness Research (CER) or
- the discussion on value healthcare chain and
- the diversity of regulating access to pharmaceuticals internationally.

It is not the compendium's aim to cover all of the managerial problems around providing pharmaceuticals. But the following chapter tries to point out at least a minor part of internationally used tools mostly to control costs and to guarantee access to therapies.

The utilization of drugs has developed some kind of its own language. Some fundamental terms of the following chapter will hopefully help for orientation but is far from covering the issue.

Catastrophic Coverage

The term relates to some nation's regulations in case of drug expenses exceeding the individual's resources. This coverage includes drugs approved as necessary in particular cases. It also has to be approved that such drugs exceed the patient's or family's resources. The need can easily happen in case of very severe diseases and impairments or in case of natural or manmade disasters.

Under some countries' legislation, catastrophic coverage has to be guaranteed by government which may demand the money back after proving other liabilities.

Claw-back

In some of the global healthcare systems it is the legally implemented policy of skimming "excess profits" from pharmaceutical companies by the government in order to subsidize tax-paid healthcare or catastrophic coverage. Such policies need legal norms of what "excessive" is and for what purposes the claw-backs become used.

This particularly plays a role in the NHS of the United Kingdom, where government systematically skims profits for subsidizing Primary Care including pharmaceuticals and supporting doctors' budgets①.

Closed Formulary

This refers to the governmental or a third-party-payer's decision to cover only those drugs by health plans or health insurances, which are on a preferred list.

It is important to settle closed formulary exclusively on the name of the chemical substances. Naming the product and the producer will regularly offend competition policies. In some countries, such as Germany, doctors are demanded to prescribe (in regular) only chemical substances, while pharmacists must select

---

① Office of Fair Trading. Medicines distribution. http://www.oft.gov.uk/shared_oft/reports/comp_policy/oft967.pdf, 2009-08-11.

exclusively products listed by SHI.

It can also be the case that a paying party holds direct contracts with a manufacturer and its brand or generic products in order to get reduced prices or rebate for listed pharmaceuticals.

see Formulary

Comparative Effectiveness Research(CER)

This methodology is developed to support decisions on health-care delivery. The concept provides information about evidence from comparative studies regarding

- effectiveness,
- possible side-effects and
- options for choosing different treatment plans for applying, pharmaceuticals, medical devices, diagnostic tests, surgeries or alternative ways to deliver health care.

The concept of study may use two ways:

1. Studying conductors' searching for already available studies about the benefits and risks of optional choices for treatment plans for different groups of people but suffering from the same diseases by conducting systematic reviews.

2. Scientist design and do studies in order to research on new evidence of effectiveness in comparison to already existing plans for services.

Comparative effectiveness research use all the accessible data sources and methods to conduct research in order to inform doctors, patients, or decision-makers in managed care organizations or third-party-payers organizations.

Part of the concept is the experience of the limits of a case-centered or product medicine. CER signals the shift from "case-medicine" to personalized or individualized medicine. This development is forced for many reasons. Two of them are: making decision-makers more independent from the services applied, particularly under the rules of prospective payment and it is also made to encourage patients to behave as true consumers if searching for the advertised best care.

Part of the promotion of CER is the growing critical debate regarding Ran-

domized Clinical Trials (RCT) in the current practice of Evidence based Medicine[①].

Part of the push of CER has been the wish of the U.S. Congress and the U.S. President Obama to develop a priority list based on the "American Recovery and Reinvestment Act of 2009 (ARRA)". For that purpose, the Institute of Medicine (IOM) has published "*a report recommending a portfolio of 100 study topics related to a range of diseases, research methods, and care models that are important to the health of the U.S. population.*" The IOM report, released June 30, also recommends research studies on rare diseases that "*disproportionately affect certain subgroups of the population, such as women, racial or ethnic minorities, and particular age groups.* "The panel concluded that "*the most important priority of all should be the building of a broad and supportive infrastructure to carry out a sustainable national CER strategy*" and that Congress and the secretary of health and human services "*must take concerted steps to establish a robust CER enterprise.*"[②]

see Choice
see Consumer
see Informed Consent
see Institute of Medicine
see Managed Care
see Personalized Medicine
see Pharmaceutical Benefit Management
see Product Medicine
see Systematic Review

Compassionate Drugs Use

This mechanism of using drugs describes the practice of using unapproved pharmaceutics experimentally and separating it from a specific clinical trial.

The compassionate drug use is nationally differently regulated but mostly

---

① Luce B R, Kramer J M, Goodman S N, et al. Rethinking randomized clinical trials for comparative effectiveness research: the need for transformational change. Annals of Internal Medicine, 2009, 151(3): 206～209.

② Iglehart J K. Prioritizing comparative-effectiveness research — IOM recommendations. New England Journal of Medicine, 2009, 361(4): 325～328.

not illegal if there are qualified reasons to use or test unapproved drugs.

Particularly, medical tourism may advertise for such uses and for such offers to avoid national regulations around the legally defined "qualified reasons" for compassionate drug use.

Mangers should be aware of two, sometimes conflicting, aspects. One focuses on the necessity to have allowance for compassionate drug use, the other may relate to weak dividing rules between legality and some providers' interests.

see Off Label Use

see Medical Tourism

Critical Appraisal

This is the key method for conducting critical assessments regarding clinical studies' evidence and is the methodological heart of Evidence based Medicine (EbM), of Comparative Effectiveness Research (CER) and of Health Technology Assessment (HTA).

The appraisal systematically investigates and assesses the validity, the reliability and the relevance of the (mostly) clinical studies' outcomes. The intention is to make providers and patients more independent from marketing, personal opinions and irrational hopes or therapeutic experiments by trial and error.

The final aim is to close the gap between research and some practices in medicine. The best evidence is accepted by critical appraisal if being most relevant for applying the best practice of medicine to patients.

For healthcare managers, it is of relevance that internationally more and more third-party-payers demand only to contract treatments if the use of health technologies and treatment plans has passed through critical appraisal procedures.

see Evidence based Medicine

see Experimental Therapy

see Health Technology Assessment

see Reliability

see Validity

Drug Abuse

Such an abuse is both the irregular use of approved drugs and the use of

drugs being illegal according to national legislation.

Both practices can be followed by physic, psychic and social consequences severely intervening into an individual's and its family's life and can cause tremendous amounts of therapy, support and help.

Especially in case of legal drugs that are abused, these drugs mostly need a doctor's prescription or are sold by pharmacies without allowance. In such cases, providers might be accused of violating law and their professional responsibilities, which will additionally induce conflicts between doctors, providers and insurance companies.

The rise of virtual pharmacies selling drugs internationally and via internet is a matter of severe concern. This may lead to some particular problems if professionally treated patients use such new kinds of providers in order to contain costs, but are getting harm from the products bought. Even pharmacists, doctors or hospitals may find incentives to take part in practices of abusing market regulations for reasons of profit but to the disadvantage of patients.

Such cases can make litigation trials difficult. Many countries try to regulate this new market but the results are unclear.

Drug Formulary

This is a list of drugs which can be prescribed under coverage by a third-party-payer.

A "positive" drug formulary lists products which are eligible, while a "negative" one exclusively lists the exclusions.

Insurers will regularly not reimburse for prescribed drugs not listed on such a formulary; others may have limited reimbursement for non-formulary drugs. There may be exceptions if a non-listed drug with untested indications is assumed to be effective but is untested because of high costs for testing seldom indications. Here legislation or contracts with third-party-payers might allow for off label use. This often occurs in child oncology.

see Closed Formulary
see Drug List
see Off Label Use

Drug List

The list refers to the number of drugs covered by health insurance. It may also be called a formulary or eligible drug list.

Different insurers will regularly decide on different lists within different health plans. Such in-and exclusions are used for profiling costs/profits and for marketing. This practice has nothing to do with an assessment of effectiveness. It is to attract or to distract (particularly chronically ill) individuals from applying for insurance.

Such strategies are part of the so-called simple medicine and a method of pro-active risk selection.

see Healthcare Marketing

see Risk Selection

see Simple Medicine

Drug Plan

While some insurers and third-party-payers do not cover pharmaceuticals, some others do or national healthcare systems offer people to join a specific or supplemental Prescription Drug Plan. It is of principle importance to find rational ways to develop such a plan, particularly regarding what is necessary, appropriate and to adapt plans to running innovations. This is particularly difficult if plans are covering different groups of risks and pharmaceuticals may be also of use for those crossing the limits of a particular plan.

Such plans might give individuals a "plan member card" for the purpose of asking for drugs at the pharmacies in order to get prescriptions. In such a case, the drug plan card will work to prove true the membership guaranteeing full reimbursements by the insurance either for the pharmacists or the consumer or to get a certain discount on prescriptions' price or even to get them free of charge.

It might also happen that the listed producers will reward the insurer or the prescribing party through "kick-backs" and rebates. Any mechanism of profit-sharing, even if designed as rebates, might be problematic because of supplier induced demands and dangers of over-or under-prescription. But it may also violate a nation's legal regulations.

Pharmaceutical industries have sometimes unclear interests in such drug plans. They might be preferred for pushing consumption or industries may prefer selling drugs via self-medication. That clearly depends on market interests. Internationally acting pharmaceutical industries may have different interests in different countries, simply depending on the particular nation's regulations.

See Roemer's Law

Drug Risk Sharing Arrangements

Healthcare provider organizations can be at entire, at partial or at no risk for drug costs depending on national regulations or in some managed care settings and contracts. Such arrangements are ,for example,

• Providers may at partial risk-share in a proportion of contracted savings and / or if costs overrun contractual agreements.

• Providers accepting (or having to accept) to take the full financial risk of drug prescription by prospective budgeting may realize all the savings or may take all of the losses.

• Providers not taking any of the risks for prescriptions do not take any profits or losses.

These types of contracted arrangements are usually made by some types of Managed Care Organizations and sub-contracted providers (both doctors and hospitals). The intention of the MCOs is to discourage contract partners from the overuse of prescription in order to avoid a loss of profit for the MCO under prospective capitation rules. These shared risk arrangements make the MCO and its contracted providers share the losses and profits. These practices can also encourage defensive medicine.

see Capitation

see Prospective Payment Systems

Drug Use Evaluation (DUE)

This summarizes a bundle of methods used to evaluate the prescribing patterns of different physicians or teams but specifically to determine the necessity, the appropriateness and the efficiency of treatments.

DUE has to be conducted continually, systematically and based on compro-

mised criteria and intends to help ensure the proper use of pharmaceuticals on individual patients. As a consequence, if treatment is assessed to be inappropriate, DUE will be the basis for actions to improve therapy by intervening into medical staff, provider rules or patients' behavior. DUE will help assess performance of drug-or disease-specific as well and will be the mechanism of systematic Drug Utilization Review.

Its basis is regularly applied to Medication Use Evaluation (MUE) studies.

Under certain contracts, DUE is additionally used to monitor if sub-contractors stay in line with the particular rules of the insurance arrangement.

There are three types of DUE reported:

- prospective DUE (before or at the time of dispensing prescription)
- concurrent DUE (during the course of drug therapy)
- retrospective DUE (after the therapy has been completed).

Such evaluations are an essential part of utilization review tools if providers conclude contracts for prospective payments and for prospective capitation.

Also insurers and other third-party-payers may show a high interest in DUE, while contracted doctors and hospitals regularly do not share this interest. It makes DUE a permanent topic of conflicts.

DUE is also used by the pharmaceutical manufactures or is performed by pharmaceutical benefit management organizations for profiling advertisements and for competing against other companies.

see Drug Utilization Review (DUR)

see Medical Use Evaluation (MUE)

see Pharmaceutical Benefit Management

Formulary

The term stands for a list of drugs which are covered by a particular insurance scheme. It is also named a "preferred drug list".

Organizations in market adopted and tax-paid systems often develop a formulary under the aegis of a pharmacy and therapeutics committee. This committee is runed or at least regulated by a federal agency. When used by hospitals or clinics, a formulary is usually a recommendation but not an obligation. However, when it is used in some Managed Care Organization or Prescription Drug Plans, physicians are regularly obliged to prescribe from the formulary. If a

physician prescribes a drug not listed in the formulary, the patient will not be able to get any reimbursement for the pre-paid expense.

Formularies are supposed to be based on evaluations of efficacy, safety, and cost-effectiveness of drugs, but formularies are increasingly based on cost and expense factors primarily.

Formularies vary between drug plans and also vary in the co-payments. Most formularies encourage generic substitution through exclusions or particular incentives.

see Drug List

see Formulary

Generic Drug or Generic Equivalent

This is a drug which is the same as a brand name drug and which can be produced and offered after the brand name drug's patent ends (typically 9～10 years after accreditation). Generic drugs are identical to brand products in terms of efficacy, safety, likelihood of side-effects and dosage. But they are significantly less costly than original drugs.

Some big manufactures care prospectively for covering the markets with their own generic drugs, actually if competing against original brand name owner.

Some insurance exclusively pay for generics if available. Generic substitution lowers drug costs both for sick funds and patients (depending on the system's characteristics).

The long time before a brand drug can be replaced by generics causes problems particularly for countries lacking recourses for healthcare coverage. These have to wait up to 10 years before getting access to effective drugs for the prices of a generic. This is, for example, a serious topic in case of tuberculosis or AIDS and internationally subject of controversial debates.

Health Technology Assessment (HTA)

Relates to methods and techniques assessing

- the effectiveness
- the appropriateness for specific indications and

• the efficiency

of procedures in prevention, diagnostics, treatments and rehabilitation. HTA is not only of fundamental importance for managers, investors and the paying party but also for developers and producers and in some countries, such as Germany or United Kingdom required by law.

The assessment has to answer the following questions:

1. Is the method technically safe and prepared for practical uses?

2. What data are available to assess effectiveness and efficacy?

3. Are possible risks acceptable to harm a person in relation to the dedicated indications and intentions, and under what conditions are the risks acceptable both in terms of general ethical and particular psycho-social or liability considerations?

4. Which groups of patients with different diseases and which sub-groups of patients suffering from the same disease can profit from the new technology and which groups will not?

5. What preconditions for using the new method have to be heeded (devices, qualification, organizational frame-conditions, time, number of uses to be calculated)?

6. Is there evidence that the new method will provide an advantage compared with methods already established?

7. Is it to replace already existing methods or is the method simply an add-on?

The procedures of HTA follow the concept of meta-analysis and, as a standard, contain

• the complete recherché of the related literature

• the expertise of the Cochrane-Collaboration if already existing

• the control of the standards of the critical appraisal and the good epidemiological practice

• a cost-effectiveness-analysis and/or a cost-utility-analysis

• the systematic evaluation of the literature regarding bias and confounder

• the use of the techniques of the decision analysis

Any HTA will end up in a report, drawing conclusions and giving recommendations. The report should become externally reviewed before finally published.

The established procedure and the concern to make HTA an universal stan-

dard explain why HTA is more and more grounding the national regulation policy of medical services and why these assessments necessarily have to be done by independent and legally controlled agencies. There is an argument that the demand for HTA could make developers search for markets not controlled by such policies and give reasons for globalizing some offers.

Some countries, such as Germany, have a centralized data base collecting any of the HTA reports and providing them for doctors and scientists①.

see Cochrane-Collaboration
see Cost-Effectiveness-Analysis
see Cost-Utility-Analysis
see Critical Appraisal
see Decision Analysis
see Health Economic Analysis

Legend Drug

This is a drug that, by law, can exclusively be obtained through prescription. The decision about a legend drug needs an assessment by an institution especially legitimized by federal bodies or a federal body itself.

Many of the smaller countries do not have the resources to run such agencies and take the lists from larger countries which are ruling the international markets.

The regarding internationally most important agency is the U.S. Food and Drug Agency (FDA). There is regularly no or only a very limited chance to bring a new developed brand pharmaceutical to the markets if not developed, tested and produced according to FDA standards. To be on such a list will turn out to be an advantage for the producers but can also be a disadvantage if high standards reduce the chance for successful market penetration.

In many countries and for many drugs, there are policies limiting the access to them in order to avoid an inappropriate use and to protect the health of individuals. (There are estimates of a crude mortality of about 25 to 60 per 100 000 persons and actually more a year due to the not intended use of pharmaceuticals also in countries with advanced healthcare systems.)

---

① http://www.dimdi.de/static/de/hta/dahta/index.htm.

Medical Benefit Management Companies (MBMC)

see Pharmaceutical Benefit Management Companies

Medication-Use Evaluation

This is a method established for permanently improving the processes of applying pharmaceuticals in relation to the patients' appropriate needs.

For evaluation, the proving party may select a particular group of medications, such as antibiotics or anti-arrhythmic drugs. It may also primarily select a targeted disease or health condition such as diabetes or chronic pain, or the processing of medication for particular groups of diseased patients, classified by age, gender, education or social patterns etc.

Such study groups are demanded to be independent from any party, particularly from industries, providers or third-party payers or private for-profit individuals or other interests groups and need a specific legal regulation and settlement.

Medication Therapy Management

This describes the additional help that people with multiple prescriptions, chronic diseases, and high drug utilization might need to receive. It is provided to manage all of their medications.

This can especially be important in case of lacking personal competencies and is to ensure that all of a patient's drugs are taken and used appropriately. It includes helping patients to understand the medication's procedure and to know how to manage potential side-effects.

see Self-Medication

Me-too Drugs

This term describes drugs very similar to already known drugs and with only minor differences in its molecular structure.

Some experts also discuss me-too products as potentially price-competitive or as drugs simply aiming at the avoidance of generic drug policies.

National Drug Code (NDC)

This is the national classification system for the identification of approved drugs. It is similarly constructed to the Universal Product Code (UPC).

Numbers Needed To Treat(NNT)

This refers to a specific measurement to assess a drug's or procedure's benefit and is to support doctors' and managerial decision-making on new treatments and technologies.

The numbers needed to treat are a measure that counts how many treatments would be necessary to calculate one positive outcome on average. The measure expresses the effectiveness and the safety of a diagnostic or medical intervention.

In general, NNT is always computed with respect to two treatments A and B, with the one, for example, a drug and the other typically a harmless placebo. A defined endpoint becomes specified as the outcome's measure. If the outcomes for A and the outcomes for B regarding the particular endpoints under treatment are counted, then the NNT is computed as 1 by the probability of B minus the probability of A.

Depending on goals,

- numbers needed to prevent
- numbers needed to screen or
- numbers needed to diagnose

can also become calculated.

By convention, a NNT of 20 to 40 (or one positive outcome among 20 to 40 trials) is considered clinically effective. It is easy to understand that critiques see it a problem if up to 39 individuals are treated or tested with no wanted outcome but being endangered for unwanted side-effects.

Regarding preventive treatments, there is no agreement on an acceptable number needed to prevent. And there can't be one because in prevention there is no chance to associate preventive measures with a measurable individual outcome.

The counting is of serious concern also for managers for economic, liability and for marketing reasons.

see Cumulative Incidence
see Health Economics
see Prevention
see Screening
see Therapy

Off-label Use

Off-label is the use of pharmaceuticals approved for some treatments but not for a specific indication or age group. That case often occurs if a disease is seldom or if the disease is seldom in some age groups.

In most of the countries, the use of unapproved drugs by doctors is allowed and legal. Controversies will occur if contract doctors of a nation's health plan are not allowed or only allowed under specific regulations to use drugs off-label.

Orphan Drugs

This is the term for a pharmaceutical that is particularly to treat seldom diseases.

Because most of the known diseases are to classify as being "seldom", the approval of a pharmaceutical might be difficult both for epidemiological and for economic reasons. At the same time, it will be impossible to test such drugs in smaller countries' populations. Under the given background, drugs for seldom diseases are called "orphans".

To provide medication for such diseases, some national legal regulations are providing drug developers with the incentives to bring these medications to the markets by implementing some particular regulations like

- drug admission policies
- assessment rules
- reimbursement regulations or
- the agreements for off-label and compassionate use

These incentives are absolutely necessary to warrant access to treatments in such cases.

The crucial point is always to assess what a "seldom disease" is. Technically, the term is defined by taking the cumulative incidence or the preva-

lence rate into account. What seldom is may also depend on age or social group.

The prevalence has to be calculated as the product of the incident cases and the duration of being ill and of being under treatment. Seldom diseases are particularly accruing problems in childhood and in regard to permanent health problems which are not really to be healed. Consequently, if treatment is successful by prolonging life with the permanently existing disease, it may cross the borders of being seldom. At the same time, the legal regulation may provide the incentive to reconsider the definition of a disease in a way that the definition makes the prevalence slip down under the border of what is legally defined as being seldom.

It is one of the problems that such kind of drugs may play an important role in cross-border trading.

see Cumulative Incidence Rate

see Prevalence Rate

see Off-label Use

see Compassionate Use

Over-The-Counter-Drugs (OTCD)

These are drugs which do not require a prescription.

The discussion on OTC includes some problems regarding market interests, cost-containment for insurers, and safety for patients and handling the liability for side-effects. But to speak of an OTC preconditions a drug under the nation's legal drug policy.

Problems can be much more difficult if a product is a substance not approved or tested as a drug but works like a drug, side-effects included. Thus some nutrition additives (for example vitamins) might not be OTCs but are intended and advertised to be.

Personalized Medicine or Individualized Medicine

This is a concept rather than a practice. It is intended to develop specific treatments for patients by using individualized information such as genetic or other information if individually related to a person's health conditions.

According to the concept, treatment should not become applied by comparing described clinical signs and symptoms, anamnestic data or diagnostic

tests, but by following up the prime nature of genetic information and its location and variation among individuals. The idea is that analysis and characterization of all of the epi-genetic and protein activities, which control all of the cells' functions, will explain diseases and their pathogenesis at an individual level. Diseases, if caused by genomic failures, could become individually modulated by individualized pharmaceuticals. Pharmaceutical industries hope for insights into the genetic etiologies of some high prevalent diseases, such as cancer or the metabolic syndrome. These insights are assumed to enable to generate a new generation of drugs intervening into pathogenesis individually.

Another trunk of discussion relates to the fact that patients aged 70 or older often suffer from more than one disease. If they have more than one disease, traditional concepts would treat each of the diseases separately. The single individual would consist of a number of distinct "cases". Here individualizing treatment could mean understanding the interaction both of the diseases for an individual's health condition and for the effectiveness of the interaction of applied drugs.

If this will become a future is still unclear, but if so, it will be accompanied with dramatic consequences for all the traditional managerial requirements. That is the reason why there is already a broad discussion related to the pros and the cons now.

The concerns are grounded in doubts that this development could lead to early prediction of individuals' future, possibly followed by discrimination. Also the world wide access to data, their ownership and consequences for international markets would be uncontrollable. This also could have impacts on health insurance and national health services systems because of potentially becoming dependent from the power of some few pharmaceutical industries.

At the moment, it is not clear how developments will go on. But if this becomes a successful way, it will certainly continue to develop, but it necessarily needs a kind of international regulation policy not foreseeable now.

Pharmaceutical Benefit Management (PBM)

It is a professionally offered service to doctors, provider organizations, third-party-payers and also to the public but originally designed for the U.S. markets. PBM works as the administrator for closed formularies of drug insurance plans by processing and charging claims for reimbursement. They are also given

the task of developing and maintaining the drug plans, for contracting with pharmacies, and negotiating discounts and rebates with pharmaceutical industries or sellers. PBM companies cover a market of about 70% of all of the U.S. citizens both for employers and tax-paid insurances. PBMs also provide clinical expertise aimed at limiting unnecessary and inappropriate prescriptions.

This is an estimated of more than 210 million U.S. citizens (from 300 million) receiving listed pharmaceuticals administered by PBMs. The majority of workers, retirees and the poor (Medicaid, Medicare, and other state-run programs) have only access to pharmaceuticals via PBM. This particular management approach seems to attract stakeholders globally. In some countries, it is the market standard.

It seems to be necessary to distinguish between public or federal organizations and privately run for-profit-offers of such management. Since internationally many health insurances do not include drug coverage and if, only some, it is a problem both for doctors and the pharmaceutical industries to provide pharmaceuticals. This clearly needs a management solution, either by using the traditional pharmacies or by establishing a particular kind of services. This induces the comprehensive interest in a service product assessing pharmaceuticals, especially the medical benefit, the market share and a product's pricing.

But PBM is also interested in the pharmaceutical industries' mechanism of (hidden) advertisement and delivery channel.

The product offered by PBMs is more than traditional trading and discounting as described above. PBMs, for example, also offer

- product information and communication
- product assessment information
- drug utilization reviews
- benchmarking drug prescriptions for provider organizations
- diseases management programs
- guidelines for using the pharmaceutical
- cost-utility and cost-benefit assessment

• data banks on side-effects①

see Pharmaceutical Benefit Management Companies

Pharmaceutical Benefit Management Companies

These companies refer to the raise of PBM as an independent industry and its enormous international influence on healthcare management and market shares. There is concern about links between the PBM-Industry and the pharmaceutical industry regarding independency, product lobbying and product placement by anti-trust agencies.

In the U.S., the PBM-Industry holds a nearly unlimited and uncontrolled market power supposed to violate the national anti-trust legislation and with an uncontrollable international power (*PricewaterhouseCoopers*, *Study of Pharmaceutical Benefit Management Industry*, 2001).

The U.S. PBM companies operate on one of the biggest and powerful global markets. Even if designed for the U.S., the international extension of the pharmaceutical industries make PBM companies important actors globally. Analysts say that under the rules of managed care, some big players have acquired their own PBMs to channel purchase and market share. The same is true of big managed care organizations, big chains of drug stores and medical device providers.

Nowadays, PBM companies are massively competing for market fractions and are using nearly any tool available.

The core set of services of PBM companies offer the management of the costs and the utilization of drug prescription and promise not only to improve the gain of the drug benefit payers but also to lower the number of liability litigations. They also offer disease management programs in the interests of the companies' consumers.

The PBM industry particularly offers

---

① Government Accountability Office. Federal employee's health benefits: effects of using pharmacy benefit managers on health plans, enrollees and pharmacies, GAO-03-196. http://www.gao.gov/new.items/d03196.pdf, 2009; US Federal Trade Commission & US Department of Justice Antitrust Division. Improving health care: a dose of competition, 2004; United States. US pharmacy benefit management (PBM) industry report: 2011 Edition. http://www.researchandmarkets.com/research/db390e/us_pharmacy_benefi, 2011-11; http://www.ftc.gov/news-events/press-releases/2009/06/ftc-testifies-competition-issues-and-follow-biologic-drugs, 2009-06-11.

• pharmacy networks (networks of retail pharmacies to provide access to prescriptions at discounted rates)

• prescription monitor tools (regarding prescription safety or side-effects and interactions of multiple pharmacies)

• mail service pharmacies (mail-service drug provision by home-delivered prescriptions with substantial savings for third-parties and private payers)

• drug plan design and drug risk sharing arrangements (PBMs develop, propose and counsel their consumers about how to design drug insurance plans and drug lists efficiently)

• electronic prescribing (e-prescribing) (PBMs have pioneered the use of eprescribing technology providing healthcare organizations and paying parties with clinical and cost information; this knowledge allows them to control both prescribing doctors and the insurants of an managed care contract, and to calculate prospectively cost for capitation contracts),

• manufacturer discounts (the PBMs purchasing power enables substantial discounts from pharmaceutical manufacturers and to use the tool for the interests of competing pharmaceutical trusts)

• clinical management (PBMs handle advanced tools for drug utilization review procedures and disease management)

PBM companies are powerful market players. An estimated of 60 PBMs operate the majority of the prescription drug benefit expenditures as provided by insurance. The ownership is manifold and includes independent firms, while others are part of the established managed care industries or are established by other major players. Market competition for the best advantage of particular stakehol-ders, for example third-party-payers, pharmaceutical industries, market delivery chains are designing PBM.

The most common working tools of PBM are

• networking with retail pharmacies

• providing internet pharmacies

• developing formularies

• designing drug insurance plans

• offering e-prescribing

• negotiating discounts and rebates

• managing utilization and outcome[①]

see Disease Management Program

see Formulary

see Pharmaceutical Benefit Management

Prescribing Protocols

These protocols are to gather information on the risks of prescribing drugs by contracted doctors and hospitals and are to rationalize prescriptions in regard to quantity, to quality and to less costly generic alternatives. If installed, such protocols will be reviewed by experts and discussed with the prescribing doctors openly but typically with no sanctions.

The method is seen as an alternative to the Pharmaceutical Benefit Management Companies and, (if established) a regular discussion circle in close cooperation between pharmacists, doctors and administrations.

see Pharmaceutical Benefit Management

Potentially Inappropriate Medications (PIM)

This refers to a number of drugs which might be hazardous to groups of patients because of age (pharmacokinetics might be different from populations usually taken for study or testing, especially different from children and elderly) or because of co-morbidity.

There are trials to classify such drugs in a so-called PIM-list.

For countries not regulating such lists by national law or missing compromises among the scientific community, healthcare managers are highly recommended to develop such a list as a provider's policy in order to raise advanced scientific standards as much as possible. Especially regarding international medical tourism, it ought to be fundamental to classify such medications in order to prevent patients from harm, providers from liability trials and third-party-payers from wasting financial resources.

There are good and empirically proven examples that a certain kind of pro-

① Federal Trade Commission. Pharmacy benefit managers: ownership of mail-order pharmacies. http://ftc.gov/reports/index.htm#2005, 2005-09-06.

viders tries to avoid PIM lists through renaming inappropriate medications as experimental therapies and to advertise them worldwide①.

see Comparative Effectiveness Research (CER)
see Experimental Therapies
see Medical Tourism
see Off-label-Use
see Personalized Medicine

Self-medication

In general, one speaks of self-medication if substances of any kind and origin are self-applied but intended to work as remedies. One may classify these substances as goods bought on individual consumers' own decisions or by following recommended pharmaceutical product advertisements or because of being supposed to be appropriate but not covered by preferred drug lists (OTC). It might also be a decision because of earlier experiences, beliefs, hearings, cultural attitudes and more. It might finally be an individual decision to give such remedies to children or depending people.

Some groups discuss the making of self-diagnosed disorders as preconditioning for the definition of what self-medication is. But what self-medication in real life really is may remain internationally unclear and different and needs to consider the particular countries' conditions. Some see the issue of "indication" the crucial point, others agree that the self-application of vitamins and minerals would be a market for self-medication. Self-medication is often advertised as providing personal independence from established medicine. Strong industry lobbying fights for OTC while experts try to keep barriers high. Many countries have their own lobby associations.

The WHO tries to direct this problematic development with guidelines②.

Another example relates to the fact that taking pills regularly needs an indi-

---

① Beers M H. Explicit criteria for determining potentially inappropriate medication use by the elderly. Archives Internal Medicine, 1997, 157: 1531～1536; Fick D M, Cooper J W, Wade W E, et al. Updating the beers criteria for potentially inappropriate medication use in older adults: results of a US consensus panel of experts. Archives Internal Medicine, 2003, 163(22): 2716～2724.

② World Health Organization. Guidelines for the regulatory assessment of medical products for the use in self-medication. http://apps.who.int/iris/handle/10665/66154, 2012-06-17.

vidual's decision to do so or not, even if the related pharmaceuticals are prescribed by a doctor. However, most of the taken remedies are a kind of self-medication.

Any medication intervenes into an individual's body and functioning and might be followed by risks. There is few legal norms that will only legitimize professionals for these interventions with some few exceptions. These exceptions meet drugs that need continuing observation regarding effects and side-effects.

In general, any pharmaceutical, if not placebo, has physically intervening features and may cause harm by side-effects. Nobody knows how these self-applied medications may interact with others, even with prescribed drugs.

Self-medication internationally plays an enormous role for different reasons and finds tremendous support by producing and selling industries and is advertised by spending enormous sums. In Europe, self-medication sellers have settled their specifically dedicated lobby organization—the Association of the European Self-Medication Industry, but we find similar ones round the world①.

In Europe, self-medication is very common within the nations. But the patterns of consumptions are different. Substances against cough and cold have the largest market share from the total in Russia, Germany, Italy and the United Kingdom, and analgesics rank top in Russia, UK, Italy and Germany, while digestives rank the same as the ones for cough and cold. Skin products rank top in Russia, Germany UK and Italy. Vitamins and minerals are preferred in Russia, UK, Poland and Germany. Correlating that with populations' size and insurances' coverage, the picture might give illuminating insights into market strategies of pharmaceutical industries②.

As far as studies are available, in Africa and also in Asia antibiotics are on top of preferred and sold drugs.

Self-care becomes more and more advertised by promising well-being, anti-aging or preventing from later diseases. Aggressive advertisements try to make the use of pharmaceuticals a lifestyle choice. Even some illegal drugs might be used as self-applied medication.

The points of concern are wide ranging also for healthcare management. If a

---

① http://www.jsmi.jp/english/; http://www.nzsmi.org.nz/home/; http://www.wsmi.org/member_europe.htm.

② http://www.aesgp.eu/.

country lacks coverage of necessary healthcare, self-medication will be the alternative. But beyond that line, self-medication is a problem that might turn out hazardous but profitable[①].

The increase of the market and the difficulties to regulate it are closely correlated to the expansion of globally acting internet unethical sellers and pharmacies[②].

see Pharmaceutical Benefit Management

Therapeutic Alternatives

Alternative therapies replace other therapies, for instance using pharmaceuticals or other methods, which are likely to provide the same effect but are less risky and/or costly than the standard.

In case of medications, that might be an alternative to doses or an alternative to a brand name drug.

Such alternatives are usually discussed as one of the most favored methods to cut costs but may also be important for other reasons, for example clinical reasoning or lowering side-effects. Some patients' condition may make it unavoidable to seek for therapeutic equivalency, for example a case of allergic reactions or lacking of resources.

see Complementary and Alternative Medicine (CAM)

① World Health Organization. Guidelines for the regulatory assessment of medical products for the Use in self-medication. http://apps.who.int/iris/handle/10665/66154, 2012-06-17.

② Salmon J W, Jiang R X. E-prescribing: history, issues, and potentials. Online Journal of Public Health Informatics, 2012, 4(3).

XIII

Health Sciences for Managers

General Considerations

The following chapter is particularly for those not familiar with health sciences or without professional origins. It is to offer context knowledge to understand better what makes healthcare different from other business and industry.

Health sciences are any of the sciences contributing to the evidence of doing the right things in the right way in prevention, medical treatments, rehabilitation, nursing and permanent care, and other healthcare related services. Our understanding is that healthcare management is primarily to manage care to the benefit of patients rather than to manage a facility or an asset. Healthcare management is practising evidence based public health. If, as it is in some countries, many of healthcare providing organizations are run by professionals not primarily being familiar with medical and public health sciences, then it should be absolutely necessary to know something about related issues and language. That is the reason why the authors share the opinion that it would be most important for healthcare managers to be familiar with some of the related language and knowledge but particularly with those related to the public health sciences.

It is obviously and, for very practical reasons, clearly necessary to share internationally understandings of what an illness, a disease, an injury, impairment, disability or handicap is. The regarding classifications are mostly internationally compromised by WHO. But it is much more difficult to agree on what health is. The reason is simply the dependency of understanding and inter-

preting of what health is from the particular relation between an individual or group and its living conditions and daily necessities. Changes in living conditions and/or in the individuals' conditions will typically change the views and expectations in what health is. But health is also a cultural convention and may reflect the picture people paint by themselves as an ideal. The ideals may be a matter of some business offers but never of medicine itself.

People being ill need help by healthcare givers, those being healthy do not. And it is something different to intervene into a healthy individual for preventive or wellness reasons or into a sick person hoping for recovery. It is also different from supporting actively disabled person's life aiming at regaining or keeping independence in daily life activities. But indeed, preventing people from falling ill, or helping those with illness and giving support in case of disablement need knowledge to be provided by what is called in summary "the health sciences".

Each of the particular goals will show consequences for management practices, for legal regulations, for professionals' required qualification, for financial coverage strategies or for all a country's social, economic and environmental politics.

It is certainly also of interest to predict likely diseases and to research on factors explaining the in-homogeneity in the likelihoods to fall ill. Another aspect meets the explanation for the unequally distributed likelihoods of diseases' occurrence among defined subgroups of a population. Such different "forces of morbidity" for different groups and strata of a population is the key to understanding why healthcare services have to be distinguished from other services and their management. This kind of knowledge is of particular importance both for prevention and for predictive purposes as it is being used by some types of health insurance industries.

The different interests of preventive activities and of insurances may conflict in its intentions but share the same scientific basics. The sciences of health include the sciences of medicine but go far beyond. One may assume nearly any of the sciences part of the health sciences if contributing to the understanding of what the humans' nature is.

From a managerial point of view, healthcare management and its related sciences belong to the health sciences, which some also call life sciences, while others contemplate on differences. Such theoretical issues are not the compendium's objectives. The following chapter offers some very much selected basics

for the understanding of the health sciences. For that purpose, the chapter contains some of the fundamental terms which may not belong to daily routine and duties of healthcare managers but will hopefully help to understand providers' language. The authors decided to offer this chapter in order to widen the managers understanding of the particular character of the subject to be managed. A particular reason is that—according to our experiences—neither all the medical doctors nor the managers coming from other professions are familiar with the following terms, concepts and their issues. We want to help readers to understand differences between individual services and the macro-view of the classified and quantified world of the public health approach.

These, indeed, are matters of rapidly extending concern and also of changing interpretation particularly in the public and in the mass media. Even within the related sciences and their concepts, we see changes in interpretation which are tremendously influential on objectives of healthcare management. But just these changes are to be noticed by managers because they influence and eventually modify the entire branch of healthcare.

Any progress in health sciences will be followed by minor or larger consequences for managing healthcare. These consequences will definitely challenge the necessary organizational frames in order to help innovations to penetrate into practice and to build the roads for driving the improved evidence of treatments and interventions into the patients' benefits.

Age and Aging

This is to measure the time gone in individual's lifespan. The patient's age is basically important for healthcare management and the organization of its provision. A wide range of anticipated health risks, disease occurrence, needs for services and outcomes to be expected are closely associated with age. In health economics, the matter is close to considerations regarding the margin of benefit. For many diseases and disabilities, the risk of occurrence has to be seen as a function of time. Regarding life, time is measured both in terms of age and of aging. While age measures an interval between two points, aging describes a biological process modified by many internal and external factors and is measured in terms of intensity and dynamics as time functions. The individuals' sensitivity to risks depends on many factors but regularly also on age. That is the same with

the outcomes from preventive interventions or treatments and rehabilitation. Such outcomes are often measured as "years added to life". But patients may also ask for "added life to years" or quality added to years gained by healthcare.

The usual counting of age follows the calendar and assumes that the calendric age would be an appropriate estimator for the biological age. But in reality there is no reason to trust the calendric age would correctly estimate the true biological age. People sharing the same calendric age can be very differently aged in terms of their biological age. The difference can be of importance not only for any of the healthcare utilization but also for evaluating its outcomes.

Therefore, in the practice of medicine, the difference between the biological age and the calendared age is an important aspect. Any of the adjustments relating to age may be related to individuals sharing the same calendric age but may affect them very differently because of being inhomogeneous in biological age.

The followings have to be understood as something fundamental

• individuals sharing the same calendric age may differ in their biological age widely

• the distribution of the true biological age differs according to social classes: the worse the average living conditions are the faster are individuals' aging on average and vice versa

• any age-depending measurement may bias biological norms and risk adjustments, for example if used for capitated payments or norms for age adjusted rationing because of assumed marginal benefits

The mentioned phenomenon is due to the fundamentals of humans' biology, not only being determined by genes but also being modified by living conditions.

That is, for example, why it is not possible to transplant concepts of capitation from one region to another without considering the social reality of the regions. This problem can also turn out to be fundamental for reviewing utilization and for outcome research. It is also a basic problem in global disease occurrence's comparisons.

Aging is a fundamental ontogenetic process of change per time any individual passes through. The natural process of aging can be characterized by the change of nearly any of the parameters by which a human is characterized—physically, mentally and emotionally. But aging is not a continuum of changes per time unit passed. Aging differs among individuals and the patterns of discontinuity differ

among individuals. Individuals' aging differs both for biological and social reasons and depends on living conditions and life styles.

If a social group or the total population improves its average living conditions systematically by birth cohort, one regularly will experience a slowdown of the average speed of aging, too. There are many studies and databanks providing evidence that currently living people with the same calendric age are biologically younger than those belonging to earlier birth cohorts. The average changes are reaching 10, 20 and more years and show the remarkable variability of aging in reference to living conditions. Consequently, improved and healthier living-conditions will slow down the pace of aging. There is comprehensive evidence for this phenomenon in many countries. Even dramatic short-term disasters (like severe epidemics, natural and ecologic disasters or wars) will not necessarily change the trend even if of tremendous impacts on selected birth cohorts or selected groups.

The slowdown in average aging is doubtlessly combined with the increase in life expectancy but not necessarily simultaneously. Thus, it is true to conclude that on average, the gain of years is associated with a gain of life by which the biologically age-specific health burdens of elder people move into higher calendric ages. This process is also called "rectangularization" illuminating that aging will compress the specific health burdens on elder people to higher age without providing an age beyond given (biological) limits.

On that background, aging and anti-aging are assumed by some to become a large market for health-related services of tomorrow.

see Capitation
see Compression of Morbidity
see Dynamic Equilibrium
see Expansion of Morbidity
see Rationing
see Risk Adjustment

Avoidable Death

This is a concept which is to estimate and assess cases of death as being avoidable and to quantify the potential gain of life expectancy if avoided, and the loss if not avoided. The concept of this measurement uses the model of the life table method.

Regarding the public health frame, the following issues have to be noticed:

1. Only a relatively small number of causes of death is (independent from age and gender) completely avoidable.

2. Only a certain fraction of all the occurring cases is avoidable.

3. A number of causes of death may be called avoidable up to a certain age, while the same causes are unavoidable in ages beyond.

4. Causes of death are unavoidable as death is but prevention and medical intervention can postpone death to higher ages. This kind of death is called age-specific death.

Both public health and the health economics measure avoidable death in order to calculate the average gain of life expectancy through avoiding selected causes of death for selected years of age. The procedure is to decide on priorities under the statement that the higher the estimated gain is the better would be the evidence for decision-making on health political issues. But such measures are also influencing the risk pool calculations on insurance and are, therefore, loaded with interests rather than with scientific evidence. This is particularly important if such calculations are transferred from one population to another. Here the occurring problem is to measure the biological age and the aging.

The "avoidable death concept" is frequently used for regional and international comparisons and is also used as a benchmark tool.

It is evident that the measure depends on the quality of counting and approving the documented causes of death. While many countries have developed to record the number of age-specific death cases quite correctly, the quality of approving the causes of death is mostly poor, at least within those age groups most vulnerable to death. A further aspect to be considered is that death is principally unavoidable and every dying person will be passing away because of a disease by international convention. If one uses the concept of avoidable death, any of the cases assumed as being avoidable needs an assumption or a calculation regarding the risk to die of one of the remaining but unavoidable causes of death. Therefore, this useful concept should stay limited to younger age groups and much selected causes.

Example

One may ask what is going to happen with average life expectancy if a certain disease could theoretically become eradicated, totally or partly, for example the proportion of lung cancer due to causes like cigarette smoking or asbestos.

Indeed, researchers will find that people avoiding these causes but dying of other causes instead could gain a certain life span. This gain will not or not only depend on the avoidance of lung cancer but also of the characteristics of the remaining risks to life. Therefore, the results can only become interpreted under the specific conditions of the population under investigation. But given this case, the finding will also conclude that the impact of smoking is more severe than the impact of asbestos is.

The discussion on these results is definitely difficult for two reasons: If eradicating a defined cause, it has to be assumed that the individual will be still exposed to any of the other causes that are risky. Because the likelihood of death increases with aging, the effect of avoiding a certain risk will decline with age. It also leads to the phenomenon that the additional gain for life expectancy will decline with the increase of population's average life expectancy.

The other problem with the given example is a more ethical one. Because the number of lung cancer cases attributable to smoking will certainly be above the proportion attributable to asbestos (and the number of people exposed) one could draw the conclusion that preventing from tobacco has to be set prior to avoiding asbestos. Politicians may also argue self-responsibility on prevention is prior to improving working conditions. This is obviously a dilemma.

The concept of avoidable death is certainly helpful in some way but it will not replace the responsibility of decision-making as a political process and issue.

The same critical discussion can be necessary if avoidable deaths' concepts are used for assessing treatments in clinical studies.

see Age and Aging
see Health Technology Assessment
see Life Expectancy

Basics of Epidemiology for Healthcare Managers

Managers of Healthcare need a basic understanding of Epidemiology, which is a kind of science among all the health sciences researching on the occurrence of risks and diseases, their distribution within a population and on the causes, the mechanisms and the consequences of changing the quantitative patterns of diseases and disability.

To provide readers with some very few basics, the following formalized

model might be helpful despite simplifying the complexities:

The number of persons being potentially in need of healthcare at a given time (P = *prevalent cases*) is equivalent the number of persons falling ill in a defined time period (I = *incident cases*) and the average time interval depends on medical care (d):

$$P \sim I \times d$$

(This and the following do not consider that the number of individuals and the number of cases are only congruent if the targeted disease is not repeatable.)

The understanding of the dynamics of P simply needs measuring and understanding the dynamics of I and d per time interval. Any change has a direction (increase or decrease) and intensity (amount of change per time unit).

Modeling these variables, it has to be kept in mind that the *incidence* (I) records the new cases in a period and that d depends on the time interval between the time point during which I became diagnosed and the time point when the treatment ended up.

The following also has to be understood:

The time point of falling ill and the time point of being diagnosed for having a disease are distinct from each other. The interval is called the *diagnostic interval*. The interval between the time point of being diagnosed and the time point of the end of a therapy is called the *therapeutic interval*. The end of the therapy is defined as the time point when the patient is recovered or is dead.

Both the intervals and the numbers at each of the time points are changeable.

The number of new cases (incident cases) changes if

- the likelihood of falling ill increases temporarily or reaches a new stable but permanent higher level
- the likelihood of falling ill decreases temporarily or reaches a new stable permanent lower level
- the likelihood of becoming diagnosed as being ill increases
- the likelihood of becoming diagnosed as being ill decreases
- the diagnostic interval increases due to practicing an earlier diagnosis
- the diagnostic interval decreases due to practicing a later diagnosis
- the therapeutic interval increases due to longer treatment episode
- the therapeutic interval decreases due to a shorter treatment episode

All of these opportunities indicate very different causes of change:

1. *The number of incident cases rises up.*

Possible causes are

• Increased risks make more individual's fall ill.

• Improved access to medical service causes the discovery of more of those being ill.

• Changing diagnostics and norms lead to earlier detection about what will (eventually temporarily) increase the number of cases diagnosed.

2. *The number of incident cases declines*.

Possible causes are

• Declined risks make fewer individuals fall ill (due to prevention).

• Degraded access causes fewer diagnoses of those being ill (limited access).

• Changing diagnostics and norms lead to later diagnosis, which will (temporarily) decrease the number of cases diagnosed (changing scientific evidence).

3. *The therapeutic interval can prolong*.

Possible causes are

• therapy starts earlier

• therapy ends later

4. *The therapeutic interval can shorten*.

Possible causes are

• therapy starts later

• therapy ends early

By definition, any increase of the number of prevalent cases is an *epidemic*.

By definition, any decrease of the number of prevalent cases is a *regression*.

To illuminate the manifoldness and the meaningfulness of such dynamics, some few examples can be given:

1. The number of incident cases rises up due to increasing likelihood of falling ill, for example since vectors of infectious diseases extend, living, environmental and working conditions are worsening or individuals' life style risky to health is spreading among a population. In this case, one speaks of the spread of a *real epidemic*.

2. The number of incident cases rises up due to growing numbers of persons identified for necessary treatment due to factors like improved access, earlier diagnosis, new diagnostic methods, a changed norm-setting, screenings undertaken, improved awareness of medical policies and many more. In this case, one speaks of an *epidemic by diagnostics*.

3. The number of prevalent cases to be treated increases due to extended

therapeutic interval. This might be caused if a new therapy prolongs survival. But it might also be caused by a therapy, which is losing its effectiveness and indicating worsening quality. In this case, one speaks of an *epidemic by therapy*.

4. The number of incident cases decreases due to lowering the likelihood of falling ill because of decreased risks since vectors of infectious diseases become controlled or living, environmental and working conditions are improved or individuals' life style is going to be less risky than it was in past. In this case, one speaks of a *real regression*.

5. The number of incident cases decreases due to fewer numbers of cases identified as to be treated, due to factors like worsening access, later diagnostics, better sensitivity and specificity of diagnostic methods or a new kind of norm-setting. In this case, one speaks of a *regression by diagnostics*.

6. The number of prevalent cases to be treated slows down due to a shortened therapeutic interval. That might be caused by a therapeutic practice lowering survival or a new therapy being more effective in terms of improved healing chances. In this case, one speaks of a *regression by therapy*.

It is important to realize that there is no chance to explain the change of prevalent cases without monitoring and assessing either the particular reasons for the changing incident cases and/or the changing therapeutic interval.

All of the different reasons for such dynamics can be grouped into some few categorical factors, such as

- demographic factors
- epidemic factors
- preventive factors
- diagnostic factors
- therapeutic factors

Most of these influencing factors are man-made and can, therefore, also be called social factors. All of the resulting dynamics can be called the *epidemiological transition* if processing systematically as a trend over time.

see Epidemic
see Epidemiological Transition
see Measurement of Occurrence in Epidemiology
see Regression

Bias

This coins a problem occurring in research as well as in the management environment.

In epidemiological and clinical studies, a bias is the cause of a systematic deviance of the measured outcome from reality and results in systematic misleading conclusions. In this case, the result has to be assessed as an artifact.

Bias can, for instance, be the result of

- mistakes in data collection
- mistakes in the study design
- mistakes in data analyses
- mistakes in interpretation
- mistakes in publishing and quoting

Biases are a regular problem. For that reason, analyzing, assessing and reporting on bias is one of a study's preconditions and preconditions a Good Epidemiological Practice.

Many of the different biases also occur in managers' evaluation and assessment practices and can end up in the misrepresentation of benchmarks, incentives, quality assessments etc. This is an often occurring problem and particularly if managers are lacking in basics and experiences in public health matters.

see Assessment

see Benchmark

see Evaluation

see Incentives

Case in Epidemiology and Utilization

This refers to the definition of the "counting unit" in epidemiologic and utilization research. The main characteristic of a "case" is the length of the episode of a disease or a treatment episode according to the parameters defining the case (i. e. DRG). In healthcare, "case" is distinct from a "person" or "patient". Case refers to a classified characteristic or a group of characteristics and is used to generalize individuals.

see Case-Classification Schemes
see Epidemiology
see Measurement of Occurrence
see Utilization Research

Causality

This term coins the dependence of a result from its particular cause. Therefore, nothing can be called a cause without defining the particular outcome and no result can be understood without considering the causes. Cause and result are principally related to each other. The more complex a result is for which one may seek the cause, the more indefinite is what is assessed as the cause. This indefiniteness becomes quantified by risks or fractions of risks, also called attributable risks.

In the context of healthcare management, it is necessary to notice that some types of health insurances make benefits dependent from the particular causality of a disease, an injury or a disability. This includes the necessity to prove whether a service or treatment has to be covered by the insurance plan or not. These insurances regularly want to investigate causality before a bill is rewarded.

This is often the case if the insurance is restricted to particular risks like work-related diseases, accident insurance or in the context of liability litigations. For doctors and managers, it should be seen fundamental to recognize that something assumed to be a cause relates to the precise context of the question to be answered. To speak of a particular cause relating to a particular outcome does never allow speaking of guiltiness. Guiltiness is exclusively a decision allowed in consequence of professional investigations to be made by the jurisprudence.

According to risk selecting strategies, insurances might exclude benefits for persons who seem likely to cause a certain disease, for example through life-style patterns. But this is not really a causality approval. It simply is to approve given conditions by the insurance contract for whatever rational.

Facts which are evident for having caused a particular effect may have the potential to repeat the same effect if conditions repeat. Such potential causes, conditions and their indicators are regularly called a risk or a risk factor and become quantified in terms of likelihoods. For the reason that such likelihoods are difficult to be measured, they are usually estimates. The drawn interpretations

are prospectively used to calculate the probability of diseases' occurrence within the group of individuals under given pre-defined circumstances.

Such calculations are exclusively estimating the number of cases likely to occur within the group under observation but do not precisely forecast or explain the cause of an individual case. There is often no decision possible if an individual falls ill due to a certain risk factor as long as non-carriers also have certain, but eventually lower risk of falling ill. The difference in likelihoods is a predictor of additional disease occurrence among a group and becomes quantified in so-called ratios. These predictions are used in public health but are also used to calculate economic losses of insurances or other stakeholders' economic interests.

Frequently used ratios are

- the relative risks ratios
- the odds ratios
- the attributable risk ratios

In spite of the elegancy of constructed ratios, readers should fully understand the possibly occurring difficulties to interpret the figures in relation to their specific methodological backgrounds and to transfer the measurements from a given population to another.

see Responsibility
see Risk
see Risk Factor
see Risk Selection
see Social Epidemiology

Cause of Death

By definition, the cause of death is that event which is ahead of the chain of events or follows diseases having finally resulted in death.

According to scientific agreements, the cause must be defined by using the terms of the International Classification of Diseases and Health Related Problems. It is never allowed to describe a death as being caused by age related weakness or other undefined circumstances.

To look after the causes of any death and to certify these causes have primarily and in reference to its historical origin been established

- in order to prevent from dangerous epidemics and

• in order to distinguish "unnatural" and "natural" causes, and to identify criminal acts.

Therefore, the notification can also be seen as an "early detection" mechanism to prevent from epidemics, deadly accidence, manslaughter, suicide etc.

It is also a method of quality assessment regarding medical services and is also used for the calculation of avoidable death.

In general, the difference between the nominated cause of death by the treating of doctors and the outcome of investigating by performing an autopsy can differ widely. The difference may make one behave very cautious in using and interpreting corresponding reports on causes of death and avoidable death accordingly, especially if reporting on people's causes of death regularly not seen by doctors or pathologists.

The statement on a cause of death has to be given in a certificate of death in many countries before burial is allowed.

see Avoidable Death

see Statistical Classification of Diseases and Health Related Problems

Compression of Morbidity (CoM)

This is a theorem rather than a theory named by Fries around 1980. It refers to observations regarding the consequences of the increase of average life expectancy. The theorem stands for the observation that improving life expectancy will (on average) decrease the population's "burden of diseases" through "compressing" the burden to higher ages gained by the increase. The context meets well-documented observations around the demographic and the epidemiological transition already reported much earlier than the year of the term's origin.

In regard to the phenomenon of a slowdown in the average progress of aging within the following birth cohorts in company with extending life expectancy, it is quite universally reported that the age-related health burdens become postponed into higher calendric ages. These facts can only become understood if a slowdown in the average biological aging becomes accepted. In other words, with extending life expectancy people gain in average a slowdown in aging. This slowdown shifts the age-associated burdens of diseases and disabilities to higher calendric ages, and compresses these burdens into the additionally gained lifespan.

For that reason and in contrast to some opponents, the increase of life ex-

pectancy does not necessarily spiral the costs of healthcare. More than that, there is a lot of evidence given by an amount of studies that increasing life expectancy is accompanied with improved health. The process became also described as the "rectangularization of the survival curve" and "compressing" age-related health conditions to the end of the curve. The consequence is that increasing life expectancy (on average) means not only adding years to life but also life to years.

The counter position is the theorem of an Expansion of Morbidity. The controversy between both the theorems is most important. It tremendously affects the prognosis regarding the future costs for healthcare and on how to distribute these "burdens" within a nation's social groups and individuals.

Depending on the expert's positions regarding the CoM versus Expansion of morbidity debate, the consequences for calculating the future is obvious. It might be worth mentioning that most of the catastrophic scenarios in calculating the additional cost due to prolonging life expectancy relate to the theorem of the Expansion of Morbidity. Scenarios for the same issue but grounded in the Compression of Morbidity show extraordinary differences regarding the estimated costs and calculate that additional costs as marginal.

see Age and Aging
see Demographic Transition
see Epidemiological Transition
see Expansion of Morbidity
see Dynamic Equilibrium
see Marginal Costs

Confounder

In epidemiologic studies, it is a characteristic of the population under study which influences the study's objectives and outcomes. If a certain feature causes directly or indirectly effects but is not under study ,we call it confounder.

If uncontrolled, confounders produce effects not anticipated to be measured. It can result in hidden failures regarding the investigated relationship between a supposed cause and its results. In such a case, the result may correctly measure what is intended to measure but it can be mistakenly attributed and interpreted.

It is important not to mix up confounder and bias.

see Bias

see Effectiveness
see Efficacy

Decision Analysis (DA)

DA is a procedure used to support decision-making. It uses analytical and quantitative methods for its procedures. The underlying for the uses in practice sees scientifically proven and approvable decision-making essential for any kind of action both on an individual therapeutic level and on a healthcare provider level or on the level of health policy.

The procedure goes mainly back to the Decision-Tree-Analysis and grounds in so-called, Markov-Models. While Decision-Tree-Analysis is assumed to be beneficial for short episode decisions, Markov models are seen valuable for complex problems with a long-lasting horizon, for example regarding chronic diseases or disabilities, influenced by new and changing risks.

The analysis of sensitivity must be part of the procedure in order to ensure the results.

Decision analysis is not only a particular method regarding clinical decisions and evidence based medicine. DA can also be part of the decision culture on any managerial level.

see Evidence based Medicine
see Decision Tree Analysis
see Markov Models
see Sensitivity

Decision Tree Analysis

This is the analytic basic tool for decision analysis and the path of displaying the processing of sequences of a clinical decision problem. Parts of the procedure are three structural components:

1. the statement on alternatives that are available for the decision-makers

2. the probabilistic occurrences which follow proposed actions and which may affect them, such as new clinical parameters measured or the following clinical consequences revealed

3. the statement on alternative outcomes for the patient in relation to each of

the alternative scenarios of medical interventions and consequences

The decision tree methodology plays a profound role in the Cochrane world of evidence based medicine.

see Cochrane Library

see Decision Analysis

see Evidence Based Medicine

Delphi-Method

This is a mechanism of questioning experts, of using feedback mechanisms and of interacting among the experts. The ultimate goal is to narrow the experts' positions on a particular subject if diverse. The process can pass one round after the other up to the collectively accepted position.

The procedure is helpful in preparing guidelines, pathways, prognosis etc. regarding medical interventions or rehabilitation procedures. If the quantitative basis is too weak for decision tree analyses, the method is used to compensate for the lack of better evidence.

The method can also be helpful as a management technique to bring conflicting parties together or to compromise on a provider's future strategic concept. Until now, the method might be much more helpful in narrowing conflicting interests and opinions rather than in answering scientific questions.

see Decision Tree Analysis

see Evidence based Medicine

Demography

This is the science investigating the characteristics, the mechanisms, the causes and the consequences of a population's transition. It is based on a legally regulated and performed description culture, which counts both births and deaths and a population's biological and social characteristics, and migration as well.

Some basic knowledge of demography should be part of the educational standard of healthcare managers as it is standard for experts in the public health sciences and those researching on the utilization of healthcare within a population or sub-group.

Since morbidity, mortality or disability is unequally distributed within a

population, any change of the population will also occur in changing structures and volumes of the needs, the demands of healthcare and the patterns of utilization.

Therefore, demography is somewhat fundamental for understanding epidemiology, public health related problems or utilization of services demanded, offered or planned. At present, demography is also closely netted to health economics, resource allocation or outcome measure on a population level.

see Epidemiology

Dynamic Equilibrium

The term stands for the theorem that increasing life expectancy will not affect the population's "burden of diseases" on average. The theorem stands between the conflicting theorems of Compression and of Expansion of Morbidity.

see Compression of Morbidity

see Expansion of Morbidity

Follow-up and Follow-up-Study

This is a type of studies by which the group under study will be followed up trough time in order to measure time-related effects. Such studies are also called cohort or longitudinal studies.

In the context of utilization research, it is a kind of study conducted to follow up the outcome of treatment or guidelines or clinical pathways for the patients' careers, for example under the frame of different types of health plans. Such studies are particularly important for evaluating the quality of care within a treatment episode including out-and in-patient care or rehabilitation, and the cooperation of all of the providers.

see Patient's Career

see RAND Health Insurance Experiment

Epidemiology

This is the science investigating the occurrence, the distribution and the change of health related patterns among a population. Epidemiology is also to of-

fer evidence based recommendations on health promotion, prevention or on the needs for healthcare and allocating respective resources prospectively.

In healthcare systems aiming at equal access to the system's benefits, epidemiology is to provide the fundament for balancing needs and the allocation of resources, as well as assessing outcomes on the population level. Here, Epidemiology is the basic source for planning and prospective decision-making.

In healthcare systems with an insurance philosophy which calculates and assesses risk groups' premiums selectively, epidemiology is used to give evidence on the likelihood of health conditions' occurrence selectively within different groups of people applying for insurance. Under this particular frame of interest, epidemiology provides the fundament of risk selection methodologies.

Some see epidemiology also the application of statistics to medical studies, while others see epidemiology the scientific fundament of public health, health economics, utilization research and medical sociology and also a basic for healthcare management.

More systematically, epidemiology

- quantifies and displays the patterns and the distribution of risks, diseases, illnesses and disabilities by using relevant parameters and indicators
- researches on the change of health-related problems that specifically relate to gender, age, aging, living and health-related conditions at work etc.
- investigates the causes for inequalities in health problems' occurrence among different groups of a population
- recommends conclusions for prevention, for the settings of programs to facilitate necessary healthcare provision and evaluates the outcomes on a population level

Particular areas of scientific interests are

- the epidemiological transition
- social epidemiologic phenomenon
- risk assessment
- identifying priorities for public health matters
- utilization research
- evaluation research

The development and strength of epidemiology is closely related to the very nature of a nation's health services system.

Countries grounded in private health insurances tend to foster risk differen-

tiation and cluster individuals for groups sharing similar risks and utilization behavior prospectively; systems using planning for resource's allocation and commissioning are strengthening public health related epidemiology.

see Commissioning
see Epidemiological Transition
see Evaluation Research
see Healthcare Management
see Health Economics
see Health Insurance
see International Health Services Systems
see Measurement of Occurrence
see Public Health
see Risk Assessment
see Risk Selection
see Social Epidemiology
see Utilization Research

Etiology

The term coins the theory of the causes of diseases, illness and disabilities and is to distinguish from the diseases' pathogenesis. Etiology research is the evidence providing source for prevention, while research on a disease pathogenesis provides evidence on therapy and rehabilitation.

In healthcare management, etiology may play a role if insurance is depending on the particular cause of disease occurrence or liability.

see Epidemiology
see Pathogenesis
see Prevention

Expansion of Morbidity (EoM)

The term refers to the theorem that an increasing average life expectancy would severely extend the population's "burden of diseases" and would be the failure of "allowing" chronically ill and disabled people to survive. This mecha-

nism would drive nations into a "*black hole of economy*"①.

EoM, the moral hazard theorem and the above cited Milton Friedman's view are the currently most influential arguments used against social health insurances and public third-party-payments for healthcare.

Outlined by Kramer (1980), Olshansky (1985) and Verbrugge (1994), EoM states increasing life expectancy as worsening mankind's prospects both economically and for the nation's average health. The authors suppose increasing life expectancy a failure of outcome because of being constantly followed by dramatically extending burdens for a "healthy" economy.

Because the increase in life expectancy mostly goes back to decreased infant mortality and mortality rates of younger adults, the concept focuses the question of the fundamentals of medicine and public health and the ethical standards of a society in general.

The issue goes far back to history and can be seen in light of eugenic practices and the misinterpretation of Charles Darwin's writings on principles of the evolution. The argument neglects that economic progress and the increase of life expectancy are closely netted and that there is no chance of improving a nation's economy without improving life expectancy and the population's average health.

see Compression of Morbidity
see Demographic Transitions
see Dynamic Equilibrium
see Epidemiological Transitions
see Responsibility for Health Insurance

Health Impact Assessment (HIA)

HIA is a "*combination of procedures, methods and tools by which a policy, program or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population*". (WHO, 1999, Gothenburg consensus Paper)

HIA is to provide with information about health consequences and risks to health specifically caused by policy decision-making and ending up in wanted or unwanted effects on the life of people. HIA is a tool of health promotion policy

① Friedman M. How to cure healthcare? Public Interest, 2001, 3～30.

and asks for evidence based information to improve proposed projects relevant to public health matters. The WHO fosters this concept in order to improve the individuals' health by improving the fundament of activities which are likely to have influence on health[①].

see Health Promotion

see Prevention

Health Reports

Such reports sample and present (mostly secondary) data to inform politics, agencies and the public about occurring health problems of a defined population in a defined region and in a defined time period. These reports are a fundament of healthcare management and health promotion as well, especially if addressing the concerns of people.

As difficult as it regularly will be, to collect data regarding the health of the target population, the problems of Health Reports are usually much deeper rooted and meet issues like

- the selection of the concerning topics
- the interpretation of the data
- the conclusions drawn from change
- the participation of the people being affected

Health Reports usually use surveys, expertise, vital statistics, data from sick funds, reports on disasters and accidents, work-related health issues, environmental problems and also questionnaires of citizens and experts.

Often taken data and occurrences measures are

- infant mortality
- data on the physical, mental and educational growth of children
- life expectancy
- incident cases of infectious diseases
- work-related diseases
- environmental conditions
- access to prevention programs, medical services, rehabilitation, care and

① Health Canada. The Canadian handbook on health impact assessment. http://www.hc-sc.gc.ca/ewh-semt/pubs/eval/handbook-guide/, 2010-03-17.

social support

- social inequality of health related burdens
- access to fundamental living resources like food, water, clean air, housing, education, healthcare
- disabilities and handicaps
- the individual's satisfaction with daily life
- the social situation of children and women
- the living of the elder generation

Surveys are a set of methods which are to prepare health reports. Such methods are

- to collect data from existing documentation
- data pools
- questionnaires
- observations
- self-assessments of people
- asking for expert opinions

see Health Reports

High Risk Strategy

The term coins a management strategy for preventive programs focusing the program's objectives on groups identified as high risk carriers.

High risk strategies often show problems with the calculated effectiveness and efficiency. This is due to the experience that not only persons at high risk will fall ill but everybody characterized by low risks will. But if, as it usually is, the prevalence of the high risk group is marginal compared to low risk carriers' prevalence, it may happen that the absolute majority of new cases will not occur among the high risk but among the low risk group. In that case, the effect of the high risk strategy on the total population might be marginal. *Rose, G.* (1992): *The strategy of preventive medicine. Oxford, Oxford University Press*

But in some cases of an infectious disease it can be absolutely necessary primarily to focus on high risk strategies. Small groups with high risks are very often the initial of an epidemic spreading over to those with a minor likelihood to become caught by the disease. But this low risk group may be very likely to develop a high number of incident cases due to the high prevalence of the low risk

carriers.

see Excess Risk

see Measurement of Occurrence in Epidemiology

see Paradox of Prevention

Inverse-Care-Law

It coins the empirically well-proven facts of the inverse inter-relationship between social class and access to appropriate healthcare. This has made most of the advanced healthcare systems establish rules which are designed to overcome these inverse conditions.

see Social Epidemiology

Life Expectancy and Length of Life

The measurement of human's length of life is one of the fundamental measurements of the quality of living conditions, social security and of the access to prevention and healthcare. It is also a measure for the economic development of a country and its population. While the counting of a single individual's life time only needs to know the dates of birth and death, the measurement of a population's life time is a more complicated procedure by using the life table method. The result can only become expressed by the distribution of a population's or a particular birth cohort's life time. This distribution of the individuals' life time can become described by a number of parameters. The most known parameter is the average life expectancy.

The Concept of Measurement

The usual measurement of the length of life of a country's population or its subgroups is the life expectancy measure. This is used to describe the age distribution of the cases of death occurring among a cohort of people with the same year of birth.

Because it is mostly impossible to reconstruct such a distribution of the life span for a complete cohort of about 100 years or more, scientists have developed the life table method in order to calculate the distribution through taking the cases of death of a year as the estimator for the total of a cohort.

In this way, the observed likelihood of dying within the year of observation is taken as the estimator for the distribution of the cohort's life time. The method and its particular applications, are nowadays globally used to compare the risks for death among populations and for the changes of that risk over time. The concept is simple: Because everybody will die, not the number of people dying is the right risk measurement but the length of live is. That is why the life table method provides the best description of mortality in any population.

The needed data input for constructing such tables is the age-specific probabilities to die off. Unfortunately, these basic data does either not exist or is unstable because of incompleteness or severe errors of reporting in most of the countries. Therefore, most figures of life expectancy are (sometimes highly sophisticated) estimations. Readers should be fully aware of potential bias and are recommended to be careful with interpretations.

The most common methods used for estimating life expectancy are (1) the UN Model Life Tables, (2) the Coale-Demeny Model Life Tables, (3) the UN Model Life Tables for Developing Countries, (4) the Ledermann's System of Model Life Tables and (5) the Brass Logit System. It can be assumed that most countries with poorly developed population administrations underestimate the probabilities of death for infants and children. That is particularly true for data of low class people and people living in rural areas or slums. These countries often also overestimate the true age of the elder individuals. In some countries, one may also expect that the correctness of date differs between gender, social classes, ethnics, cultural subgroups and religions. Consequently, for many countries, especially for the economically less developed countries, the estimated life expectancy figures are assumed to be remarkably different from reality.

Some very few preconditions have to be fulfilled to give a suitable picture of life expectancy:

- it has to be defined what the characteristics of the particular data delivering (sub-)population, the referring region and the time-period of observation are
- it has exactly to be defined the correct age and the length of life for each of the individuals
- each of the cases of death has to be counted the same way (this can turn out to be difficult especially in regard to matters defining what in real life practice "infant mortality" is

• the number of living people, the referring region and the time-period of observation must be known

• it has to be taken into consideration the reality of migration

If doing so, the life table method provides the opportunity to construct the distribution of cases of death according to age but independent from the varying influences of the numbers of birth in the course of years and affecting the birth cohorts differently. Under this procedure, it is assumed that each of the dying individuals of any age group of a two year's interval belongs to a fictive cohort of people dying in the cohort's complete course of life. That is approximately a period of about 100 years.

The constructed distribution shows regularly and typically the followings:

• There is a high likelihood of dying for the infants.

• The likelihood of death declines with people's growing older but will often slightly increase with a peak at the border between the (male) teenagers and the adults but will slow down again afterwards.

• The probability of dying increases again late in the forties up to the highest age humans can reach.

On the given background, there are three characteristics of the distribution of the individual's length of life for interpretation:

1. the arithmetic mean of the cohort, called *average (cohort) life expectancy* (*which might be a true cohort or a fictive, a cross-sectional or an artificial cohort*)

2. the age where 50% of the cohort is still alive and 50% is already dead, also called *the likely length of life*

3. the age with the highest number of people dying called the *normal or typical length of life*

The average life expectancy is typically the lowest measurement among these three figures, the likely length of life is the next highest and the highest one is the normal length of life.

Example: Taking German data as an example, the males' life expectancy daring 2007～2009 was 77.3 years, the likely length of life 79.2 and the normal length of life was about 84. The same figures for women are 82.0, 84.2 and 87 years.

Since the cohort-distribution of the cases of death mostly depends on the infant mortality, the normal or typically average length of life has only changed

slightly in history, while the life expectancy data have doubled or more for many countries in the course of some few decades.

For that reason, the increase of the average life expectancy and the likely length of life are not primarily seen as a process of prolonging the humans' life. It is most of all a mechanism of providing the chance to make the biological potentials of the humans length of life a reality for most individuals. The increase of the average is the result of lowering the difference between the biological potentials and the true length of life of a population's individuals. It is a process of making long life a privilege of the majority with some experience being offered and can therefore be seen as a process of social equalization.

From the point of healthcare manager's view, there are at least three aspects to be discussed briefly.

1. There is a controversial debate around the assumed reasons for the increase of life expectancy. The controversy goes along the question if the improvement of the common living conditions would prevent from early death (nutrition, housing, education, working and environmental conditions, standards of hygiene etc.) or if the increase is mostly due to the advantages of the latest medicine. The discussion may affect the decision on how to allocate investments in healthcare facilities prior to improvements of living conditions or vice versa. Anyway, any kind of access to healthcare is surely a social progress in itself.

2. There are many concerns on the general consequences of the increase of life expectancy. They regularly initiate some fundamental discussion on theorems like the expansion of morbidity, the compression of morbidity, the so-called dynamic equilibrium or the expanding burdens of diseases to a nation's economy. The matter is very important for any discussion regarding health insurance, healthcare reforms and any of the conflicts around the employers' co-financing of health insurance or around tax-funded health plans.

3. Another question of fundamental concern for managers follows assumptions stressed by some scientists and politicians. These assumptions are grounded in the many applications of the life table method. The assumption is that figures of life expectancy measures could be taken as fundamental measurements to assess new pharmaceuticals and health technologies. The assumption is also that life expectancy measures could be helpful for making decisions on rationales for effectiveness and efficiency, or could guide evidence based policy decision making.

Causes for Increasing Life Expectancy

Thomas McKnown (*The Role of Medicine*, *London* 1976) has made the point that most of the dangerous epidemics had slowed down in Europe earlier than pro-active preventive or therapeutic measures could contribute to improved health. Also infant mortality has already declined remarkably long before today's standard medicine could actively intervene. The consequence was to assume improving general conditions for daily life and education more important for individuals' life than medicine.

The increase of life expectancy is indeed the result of eradicating a comparably small number of causes of death but particularly hurting children, youngsters and the younger adults and of overcoming the burdens of all tuberculosis, famine and of lacking water supply in some privileged countries.

One can also describe the mechanism of increasing life expectancy as the exchange of causes of death which mostly affect early age by causes of death typical for old age. Another reason is that there are a number of causes of death not really avoidable but postpone into higher age. At least partly, this effect results from advanced medicine.

But it is also true that medicine contributes its part in countries with already high life expectancy. It is also of enormous importance to hold the high level stable. One may also argue that modern medicine only contributes to gains in life expectancy if people have access to it. Modern medicine of today will only have an influence on the length of life of the population if the majority has access to it. This is, of course, a remarkable social advantage and progress. Access to healthcare is part of social progress and one of its major indicators.

Consequences of the Increasing Life Expectancy

Increasing life expectancy has tremendous impacts on a nation's development as decreasing life expectancy would have on the contrary.

The designated impact meets both the prospects for a nation's socioeconomic development and the change in utilizing healthcare.

Concepts to Assess the Change of Life Expectancy

Based on the life table method, many models have been developed to assess

life expectancy and its changes through including measurable qualitative parameters into the life table method.

The principle is: The so-called survivors of a cohort at any age-group become differentiated though measures for the quality of their life. Doing so will result in measuring the gains in quality or in quantifying the losses. The gains are described as improvements in health, the losses are described as burdens or as potentials for future actions to improve health on a population's level.

Such often used characteristics are

• activity:

(*Active Life Expectancy-ALE*)

• happiness:

(*Happy Life Expectancy-HLE*)

• disability:

(*Disability Adjusted Life Expectancy-DALE*, *Disability Adjusted Life Years-DALY*, *Disability Free Life Expectancy-DFLE*, *Life Expectancy Free from Disability-LEFD*)

• good health:

(*Healthy Life Expectancy-HALE*)

• independence:

(*Independent Life Expectancy-ILE*)

• quality of living:

(*Quality Adjusted Life Years-QALY*)

• loss of potential years of life:

(*Potential Years of Life Lost-PYLL*, *Years of Potential Life Lost-YPLL*), *Cumulative Rate of Potential Life Lost*, *Declining Exponential Approximation of Life Expectancy*)

• causes of death:

(*Death Cause Specific Life Expectancy*, *Death Cause Specific Losses of Life Expectancy*)

All of the mentioned figures play a spreading and substantial role in the manager's world of evidence based decision making and evidence based policy, and the mostly used is the Quality Adjusted Life Years (QALY) particularly in health economic issues.

The usual goal is to decide arguments on priorities, rationing, effectiveness, efficiency and quality. The regularly occurring problem is the weakness of the

empirical data and the tendency to over-interpret the figures with possibly substantial consequences.

While some few countries round the world can utilize a fitting empirical basis for such studies, the majority cannot. But even the minority is obviously not deeply involved in the methodological matters around evidence based health policy decision-making. Consequently, politicians have to trust in the information and interpretation as given by experts.

There exists obviously a gap between the elegantly constructed methods and their empirical fundament. All these measurements will often fail the demands for empirical accuracy and the knowledge on how to interpret and to handle the figures.

Markov Model

In the context of Evidence based Medicine, the model is seen useful when

- a decision problem involves risks which are continuous over time
- the timing of events is important
- events under observation may happen more than once

Representing such clinical settings with decision trees may require simplifying the assumptions. In contrast, "*Markov models assume that a patient is always in one of a finite number of discrete health states, called Markov states. All events are represented as transitions from one state to another.*"①

A Markov model will be evaluated by matrix algebra, as a cohort simulation, or as a Monte Carlo simulation. A newer representation of Markov models, the Markov-cycle tree, uses a tree representation of clinical events and may be evaluated either as a cohort simulation or as a Monte Carlo simulation. The ability of the Markov model to represent repetitive events and the time dependence of both probabilities and utilities allows for more accurate representation of clinical settings which involve these issues.

Markov models are also tools available to managers for analyzing complex problems of deciding on the future requirements of a provider organization, related investments and more. They might also be combined with a balanced

---

① Sonnenberg F A, Beck J R. Markov models in medical decision making: a practical guide. Medicine Decision Making, 1993, 13(4): 3222～3281.

score card.

According to Sonnenberg et al, the assumption of the usefulness of Markov modeling seems to be as follows and adoptable to many of the problems facing healthcare management of any kind:

"*Given the current state of reality, the future change of the system is independent on its history. The Markov property is assured if the transition probabilities are given by exponential distributions with constant failure or repair rates. In this case, we have a stationary, or time homogeneous, Markov process. Any trial to adopt Markov Models to a decision problem has extensively to prove true that this assumption will fit the case in question.*"

There may be the concern that the assumption would not meet any of the clinical problems, but it can more easily fit decision making on managerial levels.

see Decision Tree

Mass Strategy

This concept refers to a management strategy in preventive programs prospectively targeting on persons defined as individuals belonging to a low-risk group but being very prevalent among the total population. Thus it might occur that the low probability of falling ill multiplied with the specific population at risk will produce a high number of cases. To prevent from these occurring cases or at least from a remarkable fraction of them, one needs to direct the preventive measures to the "mass" of people despite the majority will never fall ill(Rose, 1992).

The particular problem regarding mass strategy occurs if the preventive measures also provide risks which may harm healthy individuals or may put them under permanent control by medicine.

see Defensive Medicine

see Measurement of Occurrence in Epidemiology

see Paradox of Prevention

Measurement of Occurrence in Epidemiology

This measurement addresses the methodic requirements on how to quantify health related data.

The following gives a short overview about the most used terms and their definition which should also be known by healthcare managers:

Prevalence

is the number of individuals suffering from a defined disease in a population at a defined point of time or the average occurring number of cases in a time-period.

Example: In a given region and year the number of people suffering from diabetes was 150.000.

Average Prevalence Rate

is the average number of individuals suffering from a defined disease in a population in a time-period divided by the average population in that time-period.

Example: In a given region and year the average prevalence rate for people suffering from diabetes was 6.5%.

Point Prevalence Rate

is the number of individuals in a population at a defined time-point divided by the population at the same time-point.

Example: In a given region the prevalence rate for people suffering from diabetes was 6.0% at a defined time-point of a year.

Incidence

is the number of new cases in a defined population and time-period. The number of new cases can estimate the number of people falling ill in that period if the likelihood of becoming diagnosed can be assumed high.

Example: The number of new discovered cases of breast cancer among women in a defined region and time-period was 5000.

Cumulative Incidence Rate, also Attack Rate

is the number of cumulated new cases of a defined disease in a defined population and life-time period divided by the population at risk at the beginning of the life-time period considered divided by the sum of the person at risk. This figure is

the only real measurement of disease-specific risks or probability.

Example: Among a number of 1000 healthy man aged 40, 5 will get a Myocardial Infarct within the next 10 years.

Incidence Rate

is the ratio of new discovered cases of a disease in a region and a given time-period and in the population of the same region in the same time-period.

Example: In a given region and time-period the average incidence for people with a newly diagnosed lung cancer was 30 per 100.000 man.

Instantaneous Incidence Density, Instantaneous Incidence Rate, also Hazard Rate

is the number of incident cases of a defined disease in a defined population in a "moment of time" divided by the population at risk at the same moment. The measure is used to determine a so-called force of morbidity and the force of a risk. It can possibly be interpreted as a measurement for the intensity of a defined hazard or its indicator.

Example: After having been exposed to a hazardous substance, 10 persons from 100 exposed felt ill in the time point of 50 hours after exposure.

Average Incidence Density, Person-Time Incidence Rate

is the number of incident cases of a defined disease in a defined population in a defined time-period after the occurrence of a risk divided by the sum of the person-time of each of the persons at risk in the time period under observation up to the time point of falling ill.

Example: After having been exposed to a hazardous substance, 50 persons from 100 exposed felt ill up to the time point of 50 hours after exposure.

Attributable Risk, Attributable Fraction

counts the proportion of incident cases of a defined disease, estimated as related (possibly caused) to a defined risk factor or a combination of such factors. It is an incidence attributed to a defined risks and can be used to predict the number of cases avoidable. The measure is also used for calculating average group's risks and adjustments for health insurance premiums.

Example: From 1000 occurring cases of lung cancer among a defined population and time, 800 are estimated as attributed to smoking.

Mortality Rate, also Crude Death Rate, also Death Rate

is the number of deaths in a defined population and time-period divided by the average population (or the population at midyear). Death rates can also be tabulated according to age, gender or the cause of death etc.

The figure may be used to compare and balance the numbers of births and deaths in a time-period to calculate changes in the population (growth or decline).

The figures are also used for comparisons of occurrence if adjusted to the different age structures of the population by standardization. It is not a figure to calculate risks.

Example: In a given region, 8.2 died on average per 1000 people.

Infant Mortality Rate, also Infant Death Rate

is the number of children dying under a year of age divided by the number of live births that year.

The infant mortality rate is an important measure for the socioeconomic conditions and public health practices, the quality and the access to medical care among a population or groups of a population.

Example: From 1000 infants 10 die in the first 12 months of life in a defined region and time-period. For this figure, it is important to define the borders between stillbirth and live birth.

Force of Morbidity

see Instantaneous Incidence Density

Fatality Rate

is the number of deaths among a group of individuals suffering from the same disease related to the number of the incident cases at the beginning of the time period under observation. The fatality rate is a real likelihood.

The fatality rate can be used as a good measure of the quality of healthcare in a medical facility. Mistakenly this rate is also called mortality rate.

Example: From 100 incident cases of an Acute Myocardial Infarct after referral to a hospital, 20 died under therapy.

Lethality Rate

is the number of deaths per time period among a defined number of individuals suffering from the same disease and divided by the average number of people suffering from that disease in that time period of observation.

The lethality rate can be taken as an estimator for the fatality rate and will be used for similar purposes. Mistakenly this rate is also called mortality rate.

Example: From 10.000 prevalent cases of COPD (chronic obstructive pulmonary disease) in a given region and time-period, 40 died at the same time period.

Odds, Odds Ratio

is a term related to Epidemiology and is also frequently used in the manager's environment.

It is the proportion of the quantity of positively expected and negatively not wanted but occurring cases, effects or incidences among those affected by an exposure, a diagnostic test or a treatment and those not affected.

Odds are not likelihoods of the occurrence of an incident case but are widely used as estimators for such likelihoods.

Example for odds:

Among 100 persons being treated, one positive result occurs for 60 Patients but for 40 not. The odd is 1.5.

Among 100 persons suffering from lung cancer, there are 80 cigarette smokers but 20 non-smokers. The odd is 4.

Example for odds ratio:

Among 100 cigarette smokers, 5 develop a lung cancer in life-time but 95 not. Among 100 non-cigarette smokers, one individual will develop a lung cancer but 99 will not. The odd for the smokers can be calculated to about 0.05. The odd for the non-smokers can be calculated to 0.01. The ratio of the smokers to the non-smokers is 5, or the probability of cigarette smokers for getting a lung cancer exceeds the probability of the non-smokers at the factor 5 and can

therefore be estimated being 5 times higher.

Survival Rate

is the proportion of individuals with a defined disease who have survived the disease up to a time-point distinct from the beginning of treatment of all of the individuals with the same disease in relation to the non-surviving patients. The result is usually used in comparison to another group with no or different treatments.

The measure is often used to evaluate treatments or the quality of care.

Survival Time

measures the average time survived by a cohort under observation, for example, because of the outcome measure of a treatment.

The method to calculate this figure is the life table method or some of its applications. The problem is that the survival time not only depends on treatments but also on many other circumstances such as the age at the beginning of the treatment, the stage of disease, the motivation and cooperation of the patient and more. Interpretations will always need a control group which will raise difficult concerns and restrictions in use and interpretation.

Morbidity

refers qualitatively to the proportion of diseased individuals among a defined population.

There is no concept to measure such a proportion quantitatively. The reasons are manifold and due to the widely different characteristics of the occurring diseases such as prognosis, the need to be treated, the potential severity, the duration or the different individual and social interpretation of health conditions.

Occupational Health

Occupational health investigates health and safety related problems at workplaces, the particular problems' definition, monitoring and prevention. It also includes proposals and developing norms on how to adapt working conditions and places to the specific needs of the working individuals, possibly including

disabled people and individuals with chronic conditions. The topic is one of the key areas of Public Health and related sciences. Most countries have legally regulated norms for occupational health but with different mechanisms for supervising and (if necessary) fining the regulations.

Internationally, issues of health and ergonomics are substantial requirements of the development and construction of processes at work and technologies. These requirements may also meet national regulations regarding prevention, the inclusion of disabled people into labor or also regarding liability in case of occurring work-related diseases and injuries.

Problems are closely related to the level of development of a country's economy, the legal rights of workers and the power of workers' associations. Children and woman are a particular problem of occupational health even if clearly regulated by national law.

Occupational health programs include the employer's activities to protect and to promote the health and safety of employees, including minimizing exposure to physically, chemically or biologically hazardous conditions at work. Psychic stresses and strains are problems of growing concern at today's work conditions. These matters are also subject of concern for health workers' rights. Excessive working time and intensity of work per time unit, mobbing, burnout, sexual violence and the deregulation of working conditions by mechanisms of subcontraction work forces to the contracted individuals own risks are part of tremendous changes in many occupations, including lowest standards of prevention and workers' rights.

But many employers also offer occupational health consultations as well as occupational health screenings, treatments and case-management. Some or many also use these methods to create healthy working conditions, which regularly also improves the productivity and workers' motivation. The history of industrialization gives deep and impressive examples about the employers' advantages in competition if caring for occupational health but also about the many of employers' disadvantages if not.

Employers often, but in some countries mandatory and strictly regulated by law, agree responsibilities to improve working conditions, to manage the related worker's compensation through case management and rehabilitation programs. In those countries, this is one of the reasons for high productivity. Here most of the traditional occupational health problems could become eradicated or slowed

down, but employees are faced with new ones predominantly like mental stress, increasing density of workload and emotional conflicts.

The European Union has settled the Occupational Safety and Health (OSH) program as a multi-disciplinary activity improving safety and health for any employee and its family. Within the EU, occupational health is of particular concern in countries whereby governments decided to raise the mandatory working lifetime before getting access to pensions or whereby demographic changes reduce the potentials for workforces.

see Health Promotion
see Prevention
see Rehabilitation
see Social Epidemiology

Paradox of Prevention

Preventive intervention programs often experience that programs' outcome measurements do not meet the assumed results. Among others, this can be due to what is called the paradox of prevention. The mechanism behind is as follows:

The number of occurring incident cases is equivalent to the probability of disease occurrence multiplied with the population at risk. If the probability is very high, the related population is often very small while the population facing a low probability may be rather large. So it can happen that the absolute number of incident cases occurring among the low risk carriers will tremendously exceed the absolute number of new cases among the population at high risks.

If prevention measures are dedicated to high risk groups, the effect of prevention might be immeasurably small despite very high costs for the program. It can also happen that there is no alternative because low risk carriers are hard to be motivated to take part in preventive actions. This particularly can occur if the preventive measures are combined with possible unwanted side-effects. Despite very low risks, the number of people harmed by prevention might be unacceptable and hard to be communicated to the public.

The paradox of prevention very often occurs in medical preventive actions via testing and screening followed by preventive interventions using pharmaceuticals, biopsies, surgery or others. Often quoted examples are medications against cholesterol, borderline blood pressure or acetylsalicylic acid taken in order to prevent

from myocardial infarction

see Defensive Medicine

see High Risk Strategies

see Mass Strategies

Pathogenesis

This is by definition the process that a disease is passing through from its beginning to its end. The pathogenesis can be described and measured on an anatomical, a morphological, a regulatory or a functional level etc. It is precisely to distinguish from the etiology of diseases, illness and disabilities.

Research on a disease pathogenesis provides evidence on therapy and rehabilitation or prevention by using medical strategies, while etiology provides knowledge that might ground Public Health strategies of prevention and health promotion.

Healthcare management has precisely to distinguish programs grounded in etiology or pathogenesis.

see Etiology

Population

This is a number of people which share common characteristics like state, region, nationality, age or gender, social characteristics, ethnic features and many more.

Populations change their numbers and structural patterns through birth, death and migration. For the understanding of such changes among a nation's population, the life expectancy and its decrease or increase is of particular importance.

In regard to matters of health, also people who share risks and exposures or people suffering from same diseases or also individuals covered by health insurance and those missing any third-part-payer may be called a population or a sub-population.

In any case, identifying individuals as a population needs to describe it with the help of its structural characteristics and related numbers at a given time and region.

Since the occurrence of diseases, the preexisting health risks, the effectiveness and the efficiency of services may depend on the population's characteristics. Managers have to understand that the change of a population simultaneously also means expecting a change in the needs to be covered or the outcomes to be expected. To know the population's features for healthcare management means to know the target population to be covered. This may provoke developing strategies on how to select preferred populations for service offers, and for profiling portfolios and inducing new demands.

see Demography
see Epidemiology
see Life Expectancy

Public Health

This is by definition "*the science and art of preventing disease, prolonging life and promoting health through the organized efforts and informed choices of society, organizations, public and private, communities and individuals.*"①

Public health measures, assesses, reports and proposes programs related to a country's, a nation's or any other community's population and its health.

It typically summarizes many of the human sciences contributing to knowledge about human's health, such as epidemiology and social epidemiology, health services and utilization research, medical sociology, psychology, occupational health, medicine, life sciences, anthropology, health policy research and others.

There are at least two principal characteristics of public health:

1. It focuses on preventive rather than curative aspects of health and on the access to healthcare or the issues related to disabilities and rehabilitation.

2. It argues and practices on issues of population level.

The focus is directed on the change of living conditions and encourages and motivates people, groups, industries, organizations and initiatives, finally governments and international bodies to do the best and appropriately for the considered population's health.

The key experience of Public Health can be summarized as follows:

---

① Winslow C E A. The untilled fields of public health. Science, 1920, 51: 23.

1. The burdens for health are unequally distributed in any population, which lives under conditions of labor division and work-related distribution policies. Because both these factors are the fundaments of social-economic progress, it is necessary to further develop labor division and related distribution policies and to ensure access to fundamental requirements for life.

2. Economic progress will improve health, if improving fundamental requirements for life which may include access to education, social coherence, or reduced social inequality, as well as the regulation of working conditions, social justice and anti-discrimination policies.

3. People's health profits from monitoring and assessing major factors having impacts on health and making figures and problems matters of the public. The most negative impacts are poverty, bad work and environment related risks or social exclusion. The most positive impacts are education, self-determination, inclusion and active public services for the needy.

4. It is of substantial importance to implement both health promotion strategies for those most vulnerable and to keep living conditions healthy.

5. It is also of substantial importance to provide people with access to healthcare services at the level of necessity and appropriateness.

see Health Promotion
see Social Epidemiology
see Social Medicine

Quality-of-Life Measures

These measures are constructed and used as an assessment tool of individuals' perceptions of quality of life and of how interventions are effective in coping with diseases, disabilities or in tackling every day's life activities. Measurements use standardized and well-evaluated instruments like Quality of Life Measurement (QOL) or especially adopted short forms of these comprehensive tools. The instruments measure different dimensions of life quality in regard to physical, psychic or social aspects. If questions of quality refer to psycho-emotional aspects, the so-called "Nottingham Health Profile" is recommended by many researchers.

These measures are not pre-dominantly a performance indicator for a provider's outcomes but a measure of the individual's circumstances, management re-

sources, motivation and comprehensiveness to lower handicaps and to participate in daily life pro-actively.

It might also become used to evaluate and compare therapeutic and rehabilitative programs and strategies.

Randomized Controlled Clinical Trial (RCT)

It refers to quasi-experimental clinical studies with patients randomly divided into the intervention and the control group. Both groups are followed up prospectively to measure outcomes among each of the groups under study. Usually both groups are blinded both for the individuals under study and for the researchers.

In Evidence based Medicine, the RCTs are ranging highest due to this particular methodology.

Users are asked to consider the following: The results of such studies are dedicated to patients sharing the same characteristics as the persons included in the RCT did. Despite researchers should be interested in including persons which are likely to represent all the patients, for example by pooling similar studies and reviewing them systematically (systematic review) the persons under study are very often different from the daily medical practice, especially if treated in an outpatient scenario.

For managers, it has to be noticed that RCT represents the very best evidence of treatments currently available and promises the best standards of medicine in terms of efficacy but not necessarily in terms of effectiveness. This can cause problems if contracts relate to pay for performance rule by considering RCTs the contracted standard.

Under the likely development of personalized medicine, RCTs can also be reduced in importance at least in case of some particular diseases if caused by genetic reasons or because of being seldom.

see Effectiveness
see Efficacy
see Evidence based Medicine
see Personalized Medicine

Relevance

If a statistical significance for a certain occurrence scenario or observation is given, the practice of decision-making is challenged to decide on the relevance of the statistical testing. Decision makers have to answer the question if something proven to be significant is also relevant to the particular practice and its surrounding conditions.

This, indeed, can turn out to be a serious problem, since the statistical procedures to determine the *significance* depend on the number of cases measured, while the *relevance* often depends on some more factors of importance for managers than statistical considerations.

The difference between significance and relevance can cause confusion in communications between science and practice or providers and patients. Significance and relevance are to be considered according to different considerations and consequences.

see Significance

Risk Communication

Estimating, measuring and assessing risk is mostly the task of experts. Information on risks is potentially influencing the daily life of patients deeply. The competences to assess risks and to communicate them are two sides of the coin but they often stay in opposition to each other. Many of those responsible for communicating risks to patients or to the public have never been involved in the sophisticated procedures to measure risks, to interpret or to assess them.

It has turned out to be difficult and controversial to discuss matters of risks also between experts but much more difficult is the communication if done to the public. Any discussion also signals different interests, anticipations and hopes, preferences and concerns in health services. That is why risk communication is not only a matter of competence; it is also a matter of research and particular responsibility and has to clarify different assessments and its motivation.

see Communication

see Risk

Risk Factor

This term is used to describe a feature formally associated with a particular likelihood of a group's disease occurrence or health condition. To speak of a risk factor ultimately needs a comparison against another group not sharing that characteristic. There is no chance to identify factors associated with disease if the disease is randomly distributed among people.

The research on risk factors is one of the research fields of Epidemiology. Risk factors may be likely to cause a disease or do simply indicate the deviance of a group from another. Such factors are also used to analyze the variance around the average likelihood of the concerning cases among a population through determining different subgroups' variations around the average (Niehoff and Schneider, 1993).

Such characteristics are to describe different event's likelihoods for different groups which are featured by their specific social, environmental, biological, physiological, psychological conditions or behavioral patterns. Risk factors do indicate such differences but do not necessarily cause the difference. But they can do. But also in such a case, the cause of a difference may be different from the cause of the particular disease an individual of the group is suffering from. Despite belonging to the risk group of smokers, an individual's having lung cancer is not necessarily caused by smoking. It can also due to a long-lasting exposure to asbestos or something else.

Risk factors are widely used to predict gains and losses for numberless objectives. The assessments of risks use different concepts and are forced by different underlying interests.

These "factors" can also become taken as benchmarks if it is intended to equalize differences among groups of people by diminishing characteristics which indicate differences among the groups.

Regarding healthcare and healthcare management, risk factors are widely used in (private) insurances contracts for health plans but in-and excluding particular groups of people. Risk factors are also to describe groups of high priority for preventive actions, for triage procedures, for risk selection policies etc.

If the statistical variance of a number of incidents among groups is zero, there is no chance to identify risk factors but there are still incident cases and re-

lated causes. In other aspects, as long as individuals and their living conditions and individual preferences are different, there will be "risk factors" to be identified.

The qualitative evaluation of a factor as a risk depends on the specific goal. The same factor may be seen as a chance in relation to other objectives of concern.

Example:

The total population shows an average rate of disease occurrence (incident cases) of 40 per 100.000 among the population at risk. There are two subfractions of the population identified with a number of 20 per 100.000 and another with 80 per 100.000. Any of the characteristics describing the difference of both the subgroups from the average or between each other can be called the earmarking factor. If the difference is unwanted, a factor may be called a risk, but if the same factor may be assessed as wanted it is a chance. In other words, under different frames the same factor can be seen as a risk or a chance.

Having identified such factors, individuals can become classified as belonging to one or another group which is a risk group. Methodologies to classify and to group people are used, for instance, to legitimize preventive programs and standardized therapies. Another purpose can be to calculate for health plans which assess insurances' risks equivalent to premiums. Here, higher premiums become adjusted for groups identified as risk carriers for an insurer's losses, and lower premiums will be calculated for non-risk factor carriers because of promising gains.

The term Excess Risks is used to define a risk exceeding what is estimated as the average of risk or what is assumed to be an ideal or acceptable risk level. The definition of excess doubtlessly depends on what is used as the norm. Because there is not really a standard, the amount of excess risks can easily become manipulated for any interest.

The problem is not to compromise on what a risk is but to compromise on the bottom line taken as the reference for assessing the risk of a group as exceeding the risk of another.

see Risk
see Epidemiology
see Health Insurance
see Measurement of Occurrence

see Paradox of Prevention
see Prevention
see Risk
see Risk Selection
see Triage

Significance

This coins a statistical measure ensuring that two measurements are distinct from each other not by accident. Consequently, there are reasons to search for the causes of the differences.

In case a difference is statistically proven true and is significant, this result has additionally to be qualified by calculating its likelihood in terms of confidence and by the intervals of confidence. Stating significance gives principal arguments for further studies on the subject.

Significance has not to be mixed with "relevance", a term most important for managers' decision-making.

see Relevance

Social Epidemiology

Social Epidemiology is a trunk of epidemiology but one of its origins, too. This science is closely connected to the public health sciences. Researches in the field of Social Epidemiology are studying

- the causes, the mechanisms, and the dynamics of the transition of population's health and
- health related social inequality within a nation's population

The studies' results are fundamental to evidence based health politics with is overall goal to manage risks for health, the access to and the delivery of treatment and the social support for disabled people.

The overall lessons from social epidemiology for healthcare managers can be summarized as follows:

- the lower the individuals' social position the more snowballing are the burdens of poor health and the chances to get support and access to healthcare
- most important for groups' poor health are bad working conditions

and poverty

• poor health may result from low social positions but may also result from losing or downgrading a better social position

• growing inequality of health indicates both worsening health for a country's population and worsening social coherence

• improved health patterns indicate changes in social conditions due to raising economy and population's integration.

These lessons have been empirically proven by uncountable amounts of studies in any country's history and present; they are basics for healthcare policies internationally. The central lesson for international healthcare managers is that effective healthcare needs an overall social-economic and political climate making people's health a societal and political goal and responsibility but not a burden or a waste of money①.

see Public Health

Social Group, Social Strata and Social Class

Classifying individuals by using social characteristics leads to some fundamental and controversial arguments regarding the understanding of what makes people different and what those differences may explain. The positions vary widely. That relates also closely to issues of Public Health and Social Epidemiology when inequalities in risks to health, in access to healthcare or in opportunities to cope with burdens of disability have to be explained and to be transferred into practical steps for improvement.

It is commonly accepted that a social group is a number of individuals sharing some similar characteristics or attitudes. That is why every person will belong to many social groups independent from social strata and position and might change groups' memberships many times in life. The members of such a

---

① Marmot M. Social determinants of health inequalities. Lancet, 2005, 365: 1099～2104; Wilkinson R G. Health, redistribution and growth. *In*: Glyn A, Miliband D. Paying for Inequality: The Economic Cost of Social Injustice. London: Rivers Oram Press, 1994; Niehoff J-U, Schneider F, Wetzstein E. Reflections on the health policy of the former German democratic republic. International Journal of Health Sciences, 1992, 3(3/4): 205～214; Wilkinson R G. The Impact of Inequality: How to Make Sick Societies Healthier. London: Routledge, 2005; Olshansky S J, et al. Differences in life expectancy due to race and educational differences are widening, and many may not catch up. Health Affairs, 2012, 31(8): 1803～1813.

group do not necessarily inte-ract. Regarding issues of Public Health, also risk group or groups of people suffering from the same disabilities or members of social health insurance may become defined as a social group. When health related interventions focused on specific social groups, it might be helpful to adapt prevention strategies and active healthcare provision to the particular patterns of the targeted social groups. This can particularly be necessary for addressing any of the intended health services precisely if wanted outcomes depend on the groups' characteristics and interaction.

Social strata are defined and used differently both in social sciences and in social political practices of many countries. They are to identify different parts of a population by socio-economic characteristics like education, profession, labor, income etc. Social strata may help to identify people sharing similar potentials, or access to chances to education, labor, healthcare, housing etc. Commonly used parameters are income or indicators of education and profession.

Social strata are used in sociology to describe patterns and strengths of inequality or social ranking. In Social Epidemiology, social strata are used to describe the vertical inequity in health related issues. As Social Epidemiology and Public Health impressively show, people's health is closely related to social strata and divides people's health much more than any other characteristic①.

Social strata are also important background for social mobility. The relationship between health and social strata has many aspects because health might be of tremendous importance for the risk or for the chance to change social strata. Scientists also use these criteria to give long-term reports on social changes and may use health measures as indicators for social change.

Some countries use social strata concepts for determining the individuals' right to get social subsidiaries, for example for healthcare coverage. To give an example, UK uses the following grouping

I professional occupations
II intermediate occupations
III non-manually skilled occupations
IV manually skilled occupations
V partly skilled occupations

---

① Olshansky S J, et al. Differences in life expectancy due to race and educational differences are widening, and many may not catch up. Health Affairs, 2012, 31(8): 1803～1813.

VI unskilled occupations

Social strata may also define social classes. The difference is that social classes assume the individuals' position in production, finance industries and the distribution of results as important for social inequality. This concept distinguishes people into those owning the productive forces and into those exclusively owning their individual capability to sell its labor forces.

The USA is reporting its social classes yearly and is using the concept in order to determine the Federal Poverty Level which may give rights to get access to the Medicaid health plan's coverage. For that reason, there are regular reports on the average income of individuals and families based on the yearly distribution curve of income regarding family size. Each of the classes represents the average income of one of the quintiles of income as reported by tax authorities. Accordingly, the U.S. distinguishes

- upper class
- upper middle class
- middle middle class
- under middle class
- under class

according to the number of family members.

Other countries have developed different criteria often to meet the requirements of social legislation and health coverage for the poor.

see Epidemiologic Transition

see Social Epidemiology

see Risk Group

Salutogenesis

see Health

Sense of Coherence (SoC)

see Health

Sensitivity and Specificity

These are measures used to describe the quality of diagnostic tests by counting the proportion of any of the diseased individuals who are correctly identified as being diseased or as being healthy (and "as not being diseased").

Sensitivity quantifies the number of person correctly identified as having a particular disease from all those suffering that disease. It should be understood that the sensitivity does not only depend on the test's parameters but also on the number of cases prevalent among all the population being tested. Since an unselected population usually contains a very small proportion of individuals targeted by a screening, the sensitivity will be lower than in selected samplings under clinical conditions. That is why it is incorrect to use clinically precise working tests for screenings in a public health setting without particularly proving for sensitivity.

Example:

The measured sensitivity of 90% under clinical conditions says that the test recognizes 90 from 100 diseased persons correctly as being diseased. But the same test may show only a sensitivity of about 30% or less under screening conditions.

Specificity quantifies the number of persons correctly identified as being healthy (and "as not diseased") from all of those not having the target disease.

Also specificity does not only depend on the test's parameters but also on the number of persons being healthy among the tested population. Since an unselected population usually contains a high proportion of individuals not targeted through screening, the specificity may be better than the sensitivity but will nevertheless produce a remarkable number of persons tested as being healthy but being ill in fact.

Example:

The measured specificity of 80% says that the tests marks 80 of 100 healthy people as being healthy correctly but 20 individuals not.

see Defensive Medicine

see Screening

Standardization

The term is differently used in statistics and in product management. For healthcare managers, both of the meanings may be of interest.

The first meaning issues, for example, the problem of comparing arithmetic means but taking data from two differently structured groups of individuals, like patients under hospital treatment. To compare both such groups will easily lead to the dilemma to compare not comparable groups due to different structures, for example by age. These different structures can lead to some dilemmas if the management wants to set benchmarks. To avoid these difficulties, statistical procedures of (direct and indirect) standardization should be regularly used.

The second meaning issues a current mainstream of healthcare provision, namely the standardization of treatments, procedures and pathways as the method of quality improvement and adjusting healthcare to microeconomic considerations like product medicine or market competition.

While the standardization of treatments and procedures is mostly the task of healthcare professionals, the standardization of pathways and of the internal processes of a provider's organization is mostly a task of the healthcare managers.

see Clinical Pathways
see Guidelines
see Product Medicine
see Quality Improvement

Demographic Transition

The term coins the mechanisms, processes and consequences of the populations' pattern's change because of changing birth rates, life expectancy or migration.

Because the number of people likely to fall ill from specific diseases or likely to develop disabilities depends on demographic facts, any change of the population in number and structure will influence the needs for health services and the distribution of resources.

The calculation of such changes will be of major concern for strategic plan-

ning of needs, offers, reimbursements and coverage by third party payers.

see Age and Aging

see Demography

see Epidemiology

see Life Expectancy

Epidemiologic Transition

Similar to the demographic transition, this transition is the subject of researching explicitly on the related changes in health risks' distribution, diseases' and disabilities' occurrence within a defined population over time. These changes may regularly become described by time trends or by cohort analysis.

The theory of epidemiologic transition is in many respects fundamental to the understanding of the causes and the consequences of the changing health patterns within a certain population. The process is closely related both to the demographic transition and the changes in social structures as described by patterns of social groups and social strata(Niehoff and Braun, 2010).

see Compression of Morbidity

see Transition, Demographic

see Expansion of Morbidity

Validity

Validity defines the accuracy of a particular method of measurement. It measures the likelihood that an observation did not occur accidentally or was caused by bias or confounder.

Validity is an issue of concern in any research, such as epidemiology or clinical studies, as well as in utilization research. It has also to be taken into account in the environment of healthcare management.

The monitoring of utilization needs data. These data have to be independent from "feelings" and "impressions" of experts and need decisions based on "hard" facts. But the question of validity has to be asked and to be answered as validly as possible.

The designated problem may be especially important if the provider's management team is not educated in using tools of research and is lacking in the op-

portunity to involve experts closely familiar with the problems of measurement.

Managers using such data should ask, at least, if small numbers and comparisons (for example for benchmarking purposes) are interpretable or not. It can easily happen that the lacking of accuracy of measurements is already explaining differences totally. In such a case, there is no need of further interpretation and there are no actions to be taken.

see Bias

see Confounder

Variability

The variability of all the individuals around the globe and among a population as well is one of the basic characteristics of humans and mankind's true wealth.

Regarding the mankind's evolution, its history and future, variability has to be seen as an off-spring. The variation is due to many factors like biological, social and cultural reasons. Variability makes people unique and be individuals as it makes individuals undergo changes in lifetime.

For healthcare management, the acceptance of variability and the respect dedicated to it is fundamental to managing health services independent from national or international focusing.

That meets two further aspects of management:

1. As pioneers of evidence based medicine always outlined, it is taken as a principle to adopt evidence based guidelines of treatments and services according to individuals' background both culturally and socially. It can become a problem, if the providers offer pre-defined products but not explicitly tested for its cultural acceptance.

2. The other problem occurs if ideal norms for body functions are taken as the wanted outcome of preventive programs in order to correct them against an ideal measure but not accepting variability.

see Personalized Medicine

see Prevention

see Product Medicine

see Utilization Research

Wilkinson Theorem

The Theorem by Wilkinson assumes the social structure and social relations would determine the health status of populations. That is drawn from social epidemiological and sociological research supporting the conclusion that the greater the social inequality (e.g., education or income disparity) within a society is, the poorer will be health, for example measured in life expectancy. Wilkinson has given a lot of empirical evidences and suggests potential solutions to the problem.

He particularly addresses the issue of how and why inequality negatively affects individuals and social strata and concludes that "*differences in inequality as small as those found between different market democracies or different U.S. states produce very substantial social and health effects.*"①

His theorem says that empirical evidence strongly indicates that the more unequal a society is, the worse its health: "*The pathway runs from inequality, through its effects on social relations and the problems of low social status and family functioning, to its impact on stress and health.*"

His research and conclusion focus on examples like violence, death rates and also highlight prevalent social issues like social stress, social well-being, nutrition, obesity and their interdependency with social strata through the path of the epidemiologic transition.

The influence on current social epidemiology and public health is tremendous and states' health is one of the very fundamental social issues of current social development particularly in the Western countries

Work Related Diseases

The term coins risks and diseases as being related or even caused by work and its conditions. The term is determined by the WHO. Some countries have legally regulated what a work related disease or a "disease caused by work" is.

Work related diseases imply issues of

- prevention
- work related treatment plans

① Wilkinson R G. Unhealthy Societies: The Afflictions of Inequality. New York: Routledge, 2002.

• workers' compensation in case of suffering from work related diseases

Some countries and their employer organizations have developed a specific work related health services system in order

• to diagnose and to cure work related diseases and emergencies

• to prevent from work related diseases

• to rehabilitate employees and to prevent workers from losing jobs because of not meeting the job's requirements and

• to lower employers' liability if diseases and disability are caused by working conditions.

Some countries' employers and employers' organizations have established highly specialized hospitals to diagnose and to treat work related diseases.

The topic in question also implies many aspects for research on norms to limit exposures and risks. It is also a matter of concern to clarify the fraction of risks due to work or to individuals' life. Such research can set the standards for assessing risks.

see Etiology

see Occupational Health

see Prevention

XIV

Classifications and Indices in Healthcare Management

General Considerations

Any systematic approach of thinking and acting presupposes the classification of its subjects. We cannot think and act without distinguishing what we think and do. That is why classifications are fundamental in medical care and its management, too.

Classifications in healthcare constitute the common language of any of the professionals involved within medicine, a particular provider organization, nationally or globally. But as any language classification has its own "vocabulary" and "grammar". Users have to learn both at first. It also has to be understood that classifications are some kind of an artificially constructed language depending both on scientific insights into the subjects classified for practical purposes. Insights and purposes may vary between users and change over time. People who is not familiar with the particular "languages" of his profession will stay outside his relating community, for example the community of healthcare professionals.

Medical coding by using universally accepted medical classifications is one of the keys to describe the professionalism of healthcare and its management. That is why the following key-understanding has always to be taken into account:

no classification-no profile-no research-no teaching-no evidence based medicine-no exchange of information-no comparison-no benchmark-no evaluation-no

quality measure-no improvement of healthcare-no anything

What are classifications of healthcare like? They are systems made to categorize the manifoldness of health related knowledge, actions and practical purposes. The wide range of such classifications mirrors the current understanding of a health or a medical problem and the related actions to intervene into the identified health related problems. Consequently, if somebody knows the classification systems, he can use them as the language to exchange information with patients or professionals.

A classification consists of classes grouping the manifoldness of related subjects in a way that the variance of the subjects covered under a single name is as small as necessary for the intended purposes. Any class of a classification carries a name distinguishing matters from each other. The use of a classification is basically the process of coding, which means transforming the description of an issue like a diagnosis, a status of functioning or a procedure of treatment or care or its related products and costs into a universally concerted and understood system of codes with names and numbers. The "coders" might be the prime observers or actors but can also be persons or technical systems using prime documentations for following groupings. Therefore, the quality of grouping might turn out to be vulnerable against the quality of observation, documentation and the groupers' qualification.

The coding in healthcare has many purposes, such as

- identifying diseases and health related problems for purposes of healthcare, research and teaching
- describing reproducibly the needs to be covered by healthcare in relation to the classified health condition
- relating classified health problems to appropriate treatments and medications and standardized treatments
- implementing structures and processes of the appropriate utilization of services
- evaluating access, utilization, therapeutic actions and outcomes
- contracting and reimbursing services
- knowledge-based decision-making
- organizing staff-cooperation
- prevention and disease control or the control of epidemics

Classifications are pre-conditioning for data collection, archiving them and

re-detecting them in data storage systems.

One has to distinguish the internationally edited and accepted classifications from those classifications adapted to the special interests of a particular provider, an insurer or a producer. Such classification systems are used for

• the analysis of the frequency of occurrence of defined health conditions and healthcare actions

• the grouping of resource consumption in healthcare and the prospective resource allocation or for the charging for treatment and services

• evidence based decision support

• monitoring the dynamics of risks, the occurrence of diseases or the consumption of services and related outcomes

The most common families of classifications are

1. Classifications on diseases, health conditions and their consequences, such as

• Statistical Classification of Diseases and Related Health Problems (ICD)

• International Classification of Diseases for Oncology (ICD-O-3)

• ICD-10 Procedure Coding System (ICD-10-PCS)

• International Classification of Functioning, Disability and Health (ICF)

• International Classification of Headache Disorders (ICHD-II)

• International Classification of Sleep Disorders (ICSD)

• Diagnostic and Statistical Manual of Mental Disorders (DSM)

• Application of the ICD to Dentistry and Stomatology (ICD-DA)

• International Classification of Functioning, Disability and Health for Children and Youth (ICF-CY)

• International Classification of Mental Disorders

• International Classification of External Causes of Injury (ICECI)

• Online Mendilian Inheritance in Man,database of genetic codes

• Systematized Nomenclature of Medicine-Clinical Terms (SNoMed-CT)

2.Classifications of medical procedures and products, such as

• International Classification of Procedures in Medicine (ICPM-in future the ICPM will become replaced by the International Classification of Health Interventions-ICHI)

• International Classification of Health Interventions (under design)

• International Classification for Nursing Practice (ICNP)

• Anatomical-Therapeutic-Chemical Classification System, ATC-System

• Current Procedural Terminology (CPT-4)

• Healthcare Common Procedure Coding System (HCPCS)

• Logical Observation Identifiers Names and Codes, standard for identifying medical laboratory observations (LOINC)

• Universal Medical Device Nomenclature System (UMDNS)

• Clinical Risk Groups (CRG)

• Diagnosis Related Groups (DRG)

• Medical Dictionary for Regulatory Activities (MedDRA)

• Risk Adjustment Models (RAM)

• Risk Adjusted Categories (RAC)

• Adjusted Clinical Groups (ACG)

• Diagnostic Cost Groups (DCG)

• Pharmacy based Cost Groups (PCG)

• Episode Risk Groups (ERG)

• Disability Payment System (DPS)

• Classification of Pharmaco-Therapeutic Referrals (CPR)

• Medical Dictionary for Regulatory Activities (MedDRA)

• Nursing Interventions Classification (NIC)

• Nursing Outcome Classification (NOC)

3. Classifications of Utilization, such as

• International Classification of Primary Care (ICPC)

• International Classification of Health Problems in Primary Care (ICHP-PC)

• International Classification of Processes in Primary Care (ICPPC)

• Reason for Visit Classification of Care (RVC)

• Technical aids for persons with disabilities. Classification and terminology (ISO 9999)

Both the construction of classifications and the transformation of the practice of healthcare utilization are closely correlated. The reason is very simple. The mainstream towards what we call the *product medicine* basically needs to develop a concept of all the healthcare products to be utilized. But products are nothing else than clusters of different treatments, nursing and additional services, which are classified by a single scheme expected to meet the patients', the providers' or the purchasers' expectations best.

The agreement on such classification of healthcare products is principally the

agreement about the objective and the content of the pre-defined product to be delivered on demand. The classification of these products will be the basic for calculating and negotiating the product's particular acceptance and price. The other way round, any of the given product classifications will operate as a guideline that is concordant or in conflict with the guiding concepts of medicine like the evidence based medicine. Managers ought to be aware of the conflicts around three related concerns, as there are

• the possible use of these products to supervise professional staff performance by the providers' management

• the opportunity to adopt such products to different purchaser markets and the interests of provider markets and insurance markets

• the demand to regulate, to control, to supervise, to specialize, to assess and to adopt any of the particular products permanently.

It is unlikely to assume such product-classifications of healthcare would lower costs. But they increase the transparency of healthcare for the stakeholders tremendously. The concept of "product-classifications" in healthcare will potentially but fundamentally redistribute the division of power between patients, medical staff, managers and purchasers. But the "risk" is never transparent; the "risk" is the missing access to data for one or some of the stakeholders. It is the fear of some that not the provider but the purchaser could come into power to decide on healthcare to be delivered. The doubtless running process towards the classification of healthcare delivery into some kind of pre-classified products seems to be irreversible. But everybody involved should share at least one principle, namely to leave the construction of product classifications to independent, transparent and scientific bodies.

A particular kind of classifications is the many medical indices listing, ranking and measuring subjects related to needed healthcare and nursing. They may also be used in healthcare practice for setting norms, indicating necessary and appropriate utilization, assessing the physical, psychic or mental status of patients in triage procedures or may be used to list performances, to register observation etc. The term is introduced and plays a role particularly in healthcare management in order to evaluate and to assess patients' needs and the interventions' outcomes. The use of specific indices is widespread and common in healthcare. This is especially of practical importance in the case of chronic and long-term care and for measuring a patient's status before and under rehabilitation. Here some

indices are part of professionals' language. Such indices follow mostly experience rather than systematic research. Thus the ground is often weak and hardly compromised within the scientific community. This results in trials to adopt such indices in new targets and conditions, which may raise the difficulties in comparing understanding and results.

But their existence signals the practical need in managing healthcare to have lists and indicators for assisting caregivers' and managers' tasks, such as

- profiling offers and staff
- contracting and rewarding healthcare services by listing needed utilization
- pre-assessing and approving third-party-payer's coverage and portfolio profiling
- evaluating outcomes both internally and externally

That is why indices used in medical services and nursing may play an important role in "product definition" of services. Managers should feel encouraged to make acquainted with these concepts of thinking and to evaluate the concepts as used in a given contractual surrounding.

The following classifications and indices may be taken as some selected examples for such product groupings.

Adjusted Clinical Groups (ACG) or Ambulatory Care Groups (ACG)

The ACG System offers a person-classification scheme for healthcare analysis assumed beneficial for healthcare providers, purchasers, and third-party-payers. It is used under the managed care frame as a predictive risk adjustment method both for prospective payment calculations and for risk selection. Considering health condition, age and gender, the system is to predict the need for ambulant care for different groups of individuals.

The system is widely used in the US both in the tax funded and in the privately charging sector. It obviously is also attractive internationally, particularly for stakeholders wanting to transform the nationally existing healthcare systems.

ACG methodology is used

- to predict high-risk users
- to predict budgeted payment for health plan providers
- to allocate resources within healthcare programs

• to calculate capitation payments for provider groups

• to assess the efficiency of provider practices

• to monitor outcomes, especially provider related outcomes

• to profile doctors and providers according to resource consumption and costs

The concept behind assumes that clusters of persons suffering from similar diseases would predict costs better than any other method. Adjusted Diagnostic Groups (ADGs) of a year are used to classify each of the persons considered. According to the grouping, the costs are calculated prospectively.

The ACGs schemes can also be seen as a combination of a case-and a person-classification scheme but additionally using age and gender characteristics relevant for the therapeutic episodes, the classified severity, the diagnosis, the etiology and the consumption of qualifications necessary to treat the patient per given time unit.

In this scheme, any of the diagnosis treated is grouped into 32 clusters, allowing a differentiation up to 5 levels. This way 93 risk groups are clustered, which are, for example, used for the purpose of capitation①.

see Adjusted Diagnostic Groups

see Capitation

see Case-Classification Schemes

see Managed Care

see Person-Classification Schemes

see Risk Adjustment

see Risk Selection

Anatomical-Therapeutic-Chemical (ATC) Classification System

The system is used for the classification of pharmaceuticals. It was developed by the Nordic Council on Medicines and was first published in 1976. The further development of the ATC is in the hands of the WHO Collaborating Centre for Drug Statistics Methodology in Oslo.

The system is a hierarchical classification scheme. It is used to investigate the use of pharmaceuticals according to therapeutic and pharmacological criteria

① http://www.acg.jhsph.org/.

and standards. The drugs are classified into groups at 5 different levels:

• The first level contains 14 groups according to anatomical structures, like C (standing for the cardiovascular system).

• The second level indicates the therapeutic main group by adding two digits to the letter, for example C03 (Diuretics).

• The third level indicates the therapeutic/pharmacological subgroup and consists of one letter, for example C03C(High-ceiling diuretics).

• The fourth level indicates the chemical/therapeutic/pharmacological subgroup and consists of one letter,for example C03CA (Sulfonamides).

• The fifth level indicates the chemical substance and consists of two digits, for example C03CA01 (Furosemide)①.

Case-Classification Schemes

They refer to a family of product classifications focusing on diseases and procedures and taking heed of the severity of a disease.

Such schemes are used to pre-define products of care for purposes of resource allocation or reimbursement or for budgeting expenses. They can also become used to define "benefits" selectively for many contracted purposes or to calculate a mix of different cases, their average "production costs" and the charged revenues.

The methodology of the different schemes to classify "cases" varies widely. But the key is always the same, namely to define cases in order to pre-determine what can be called a "product". The main goal is to reduce the variance of cases both before the coding and thereafter.

The regular critique focuses on the exclusion of the patients' individuality and their bio-social-psychological conditions. There is a discussion that these schemes could not easily consider the patients as "co-producers" of the wanted outcomes.

Nevertheless, the current mainstream of industrializing medical care and setting it under the stress of competition unavoidably demands the definition of products and this is what such schemes are made for, namely the so-called "Failures of Competition".

---

① http://www.who.int/classifications/atcddd.

These schemes are most powerful tools for transforming a nation's traditional healthcare system to markets and are more effective than any political declaration. The same is true of another particular product of classification concepts, the person-classification schemes.

see Benefits

see Clinical Risk Groups (CRG)

see Diagnosis Related Groups

see Diagnosis and Treatment Combinations (DTC)

see Disability Payment System

see Failures of Competition

see Person-Classification Schemes

see Utilization Research

Clinical Risk Groups (CRG)

This concept for the management and prospective risk assessment is based on classifying "cases". It can also become earmarked as a product-classification system.

CRG has been developed by the 3M① trust. It calculates

- the diagnosis
- the severity
- the cost profile and
- the necessities for the case management

The model follows a multifunctional concept for treatment, management and reimbursements but is particularly to prevent from adverse selection's incentives, clinical efficiency, benchmarking, and risk profiling and utilization research②.

see Case, Epidemiologic

see Case, Utilized

see Diagnosis Related Groups

---

① 3M refers to Minnesota Mining and Manufacturing.

② http://solutions.3m.com/wps/portal/3M/en_US/3M_Health_Information_Systems/HIS/Products/CRG/,2012-01-08.

Current Procedural Terminology (CPT)

This is a classification for coding medical, surgical, and diagnostic services by physicians. The concept is the consequence of the fact that payments for medical doctors are usually not covered by Diagnosis Related Groups or other payments if to be reimbursed by Medicaid or Medicare. The code is made to give information about medical services and procedures among physicians, coders, patients, accreditation organizations, and the paying parties.

The CPT allows classifying services regarding

- evaluation and management
- anesthesia
- surgery
- radiology, pathology and laboratory and
- medicine①

Diagnostic Cost Groups (DCG) or Hierarchical Coexisting Conditions (HCC)

The Diagnostic Cost Groups are a classification scheme belonging to the family of Managed Care techniques. They define a risk score for any person that applies for a health insurance contract. They are also used to quantify the risk mix of the insured gathered under a capitation contract.

Starting in 1980, the development was originally forced to develop a score for the predictive measurement of the demands for hospital care (Principal Inpatient Diagnostic Cost Groups-PIP-DCG).

Today's version covers any utilization risk for a paying party independent of the kind of utilization. DCGs result in a scheme exclusively depending on individuals' parameters. The independency from medical services consumed is to avoid any danger of up-coding incentives, a problem being very serious for Diagnoses Related Groups and Ambulatory Care Groups. On the other hand, this concept sets sharp incentives to implement methods being followed by under utilization.

---

① Abraham M, Ahlman J T, Boudreau A J, et al. CPT 2012 Professionals Edition. Contexo Media, 2011:760.

The developer of DCG stress five areas of classification's purposes:

• the definition of markets through defining selected segments of the population under risk (the aim of risk selection)

• the prospective risk profiling for medical products and portfolios (the aim of prospective risk profiling)

• the long-time control of the doctor's profile of decision-making (the aim of cost-containment)

• the measurement of effectiveness and efficiency (the aim of outcome profiling)

• resource allocation (the aim of internal planning)①

see Ambulatory Care Groups

see Diagnoses Related Groups

see Effectiveness

see Efficacy

see Efficiency

Diagnosis Related Groups (DRG)

This classification is an in-patient case classification system used to reward or, alternatively, prospectively to allocate budgets for hospital treatments. The scheme classifies an in-patient health condition according to its diagnosis, the severity of disease and the medical procedure as utilized.

This concept signals the most remarkable trend towards the goal to shift the utilization of medical care into a system of pre-classified medical products, and into an industry like production of medical services.

The key-goal is to limit the variance of treatments through excluding the individual characteristics, except diagnosis, procedure and severity. Groupings of diagnostic categories but modified by the use of medical procedures according to the International Classification of Health Interventions (ICHI), the patient's age, the presence or the absence of significant co-morbidities or complications, and other relevant criteria are taken to define the DRG products.

According to the system, any class of the DRG-scheme is associated with a

---

① Ellis R P. Ash a refinements to the diagnostic cost group (DCG) model. Inquiry, 1995, 32(4): 418～429.

relative price that is above or below a standard DRG which is 1. Additionally, the contracting partners (typically the third party payer and the regional provider organization or single hospitals) negotiate a base rate (that can also become set by law) that is all the same for any of the cases. The price of the single case's treatment is the product of the cost weight and the base rate. It can also become used to make a budget by multiplying the base rate and the arithmetic average of all the different cost weights of any of the cases treated, which mirrors the case mix of a hospital.

The system is used under prospective payment systems for reimbursing hospitals, regardless of the providers' costs for providing hospital services. Used this way, the DRGs give a definite incentive for risk selection through pre-determining the costs that a case is likely to cause. To avoid the consequences of the given incentives by this fee-for-service mechanism, third-party-payers have developed lots of regulations and systems of coding approval round the world.

Using DRGs for making budgets aims to avoid risk selection and intends to leave the responsibility to care for all the regional population to the hospitals.

The system is widely and internationally used and knows a wide range of national adoptions. For that reason, the impacts on the hospital vary widely, too.

The different DRG classifications, also called the DRG family, are used worldwide. But they are adapted to national conditions. The use is manifold, such as

- identifying the needs among the population
- the regulation of capacities offered, and resources allocated
- profiling the portfolios of hospitals
- contracting volumes and prices prospectively
- prospective adjustment of budgets
- planning of facilities and devices
- benchmarking
- reimbursements per case or through case-mixed budgets

Example:

In Germany, the healthcare system uses a basic model that consists of 1192 different DRGs in 2009. It allows treating 1687 different diseases in hospitals according to the ICD codes. About 60% of all the diseases treated in hospitals are less frequent than 1.000 cases per year all over Germany. Only 228 diseases (representing 282 DRG classes from all the 1192 DRG classes) have more than 10.

000 cases among the 80 million German populations. This unequal distribution of cases per class has some remarkable impacts on quality, economy and concentration policy. One can also conclude that most reasons for hospital treatments are seldom. But regularly, high prevalent cases are financially much more attractive to hospitals than seldom diseases are. (Niehoff, 2011)

The very early formation of such related groups goes back to the U.S. in 1965 when Medicare and Medicaid became established and traditional fee for service existed in the Roemer's Law. This "law" was seen hazardous for third-party-paid benefits. To avoid the danger of "supplier induced demands", the need of a prospective payment system was seen evident. First concepts became outlined by Fetter and Thompson in 1972. Later concepts have been developed by the 3M trust.

Meanwhile, nearly all of Europe, North America and Australia and many more countries are using the concept. But the purposes and mechanisms vary widely.

see Case-classification Schemes

see Fee for Service

see Roemer's Law

Diagnosis and Treatment Combinations (DTC)

This particular classification is used as an instrument of the regulated (managed) competition policy in the Netherlands. It is the philosophy that transparent product-information and classification would be preconditioning if policy wants to implement (regulated) market rules around the offer and the use of products in healthcare. The concept is that without (pre-) defined products both competition and transparency would be impossible. These DTCs are intended to establish negotiations between the paying party and the provider about price, volume and the features (quality) of the products as contracted.

The mechanism of that particular product-classification is comparable to the Diagnosis Related Groups. The difference is the inclusion of clinical aspects and some conditions of day-care in the treatment of a patient.

The authors see this classification as very innovative, as having a fundamental impact on the entire Dutch health services systems but closely depending on the frame-setting by legislation. But they also confirm the implementation as a

matter of high controversy.

Providers stand in conflict with the classification. The providers' fear is that more competition would decrease quality and raise cost dramatically, which obviously and reportedly is evident. On the contrary, insurers are in favor of that model because of giving them the instruments to buy healthcare actively, selectively and prospectively by holding full responsibility for the account of costs. But the insurers also discuss disadvantages such as growing competition among insurers.

see Diagnosis Related Groups
see International Healthcare Systems-The Netherlands
see Managed Competition

Global Risk Assessment Model (GRAM)

This is a model developed by Kaiser Permanente (a non-for-profit health plan provider in the U.S.) for the purpose of predicting costs for services by using a person-classification scheme.

The model assesses

- age and gender
- pre-existing diseases and pre-existing conditions
- pre-existing illness, health conditions and disabilities
- the individual's utilization behavior
- attitudes to life style seen risky to increase utilization (Meenan et al., 1999).

Indices and selected examples

Activities of Daily Living (ADL)

ADL is a scale used to measure a person's daily routine activities and is necessarily performed as part of independent living such as physical performance, bathing, dressing, toileting and eating and self-care for housing.

The scale measures the extent of dependency of disabled people and is to assess necessary and appropriate help and assistance.

Originally, it was designed to evaluate the outcome of therapeutic and reha-

bilitative interventions in treating chronically ill people.

Nowadays, the concept plays an important role in measuring the necessity of permanent care to be provided, and to be compensated by healthcare insurance organizations financially.

The index was originally developed to measure the results of rehabilitation and was first published by A. Katz.①

Assessment of Mobility by Tinetti

The test is used to measure a patient's mobility and measures the pro-active mobility and the physical balance.

The test is to evaluate the risk of falling ill and to decide on support in daily life. The test should only be executed by staff especially trained and certified and may play a role in third-party-payers examination to cover support②.

DMF-Index

It is a measure of oral health, where

- D indicates decayed teethes
- M indicates the missing teeth
- F indicates the filled teeth

It has to be understood by users that the same overall figure can represent very different status of teeth's health.

Functional Independent Measure (FIM)

FIM is a widespread index scheme to measure the independency and autonomy of disabled persons from assistance and nursing. It became developed by Granger.

The measure issues 14 different items, mostly focusing on the physical independency.

The critique is that needs of help and support because of mental conditions

---

① Katz S. et al. Studies of illness in the aged. The index of ADL: a standardized measure of biological and psychosocial functions. Journal of American Medical Association, 1963, 185(12): 914～919.

② Tinetti M E. Performance-oriented assessment of mobility problems in elderly patients. Journal of American Geriatrics Society, 1986, 34(2): 119～126.

such as dementia are not sufficiently assessed by FIM①.

General Health Status

This index refers to the general state of an individual dependent on help and support. There are many different models for measurement available.

The WHO supports the followings:

0 = unlimited physical activity

1 = partly limited activity and working capabilities

2 = not able to work but able to live independently

3 = unable to care for oneself, care home necessary if an alternative is not available (family etc.)

4 = 100% dependent on fundamental and vital functioning

Geriatric Depression Scale

This is an instrument to measure and assess depression in older adults. Persons are questioned for evidence regarding items on satisfaction with life, change of activities regarding motivation, self-assessed mood to participate in daily life and some more. Each of the answers (yes or no) is assigned one or no point. The higher the number of points is, the higher is the level of depression②.

Mini Mental State Examination (MMSE), also Folstein Test

This is a test to screen for dementia or diagnose the grade of cognitive impairment, and to follow up the change if time passes. It is also used to measure and to describe results of therapy. Patients are asked for orientation to time and place, for attention and calculation, the patient's language becomes assessed, and some complex commands are to be followed by redrawing shown figures. The

---

① Granger C V, Deutsch A, Russell C, et al. Modifications of the FIM instrument under the inpatient rehabilitation facility prospective payment system. American Journal of Physical Medicine & Rehabilitation, 2007, 86(11): 883～892; Granger C V. Quality and Outcome Measures for Rehabilitation. Physical Medicine & Rehabilitation. Philadelphia: WB Saunders Company, 1996: 239～253.

② Yesavage J A, Brinck T L, Rose T L, et al. Development and validation of a geriatric depression screening scale: a preliminary report. Journal of Psychiatric Research, 1983, 17(1): 37～49.

lower the number of given points is the more severe is the particular impairment assumed①.

Health Utility Index (HUI)

This is a score used to assess the health status of patients in relation to interventions. The quality of life can also be assessed by scoring personal preferences. The index can be used in clinical trials for measuring utility scores, health status and health related quality of life. One may also decide to use HUI for rationing.

The classification samples seven dimensions, which are sensation, mobility, emotion, cognition, self-care, pain and fertility by three to five levels between the poles "normal" and "extreme disability".

For the use, three different versions are available, each scoring utility according to a health status classification system.

see Utility Weight

see Rationing

Weight

Utility Weight

It is the scaled quality of life measure ranging from "perfect health" (1) to death (0) according to a Visual Analogue Scale (VAS). It is used to quantify the quality of life related to health status in relation to circumstances, like social conditions, healthcare interventions, rehabilitation, social support, participation in daily life etc.

It is also proposed to interlink Utility Weight measures to the Quality Adjusted Life Years (QALY).

see Health Utility Index

see Quality Adjusted Life Years (QALY)

Notthingham Health Profile (NHP)

The NHP is developed to offer primary healthcare, rehabilitation and the

① Folstein M F, Folstein S E, McHugh P R. Mini-mental state: a practical method for grading the cognitive state of patients for the clinician. Journal of Psychiatric Research, 1975, 12 (3): 189～198.

outcome measure of chronic treatments the opportunity to identify physical, social-mental and emotional problems and improvements. The tool uses 45 items which are comprehensively tested for reliability and validity[①].

International Classification for Health Accounts (ICHA)

It is a classification particularly for matters of health that the EU commission has developed since 2000. The classification is to define health in light of the systems of national accounts, answering three main questions:

- Who pays?
- For what?
- Who provides the services?

For these purposes, the classification contains the following classification schemes:

- Classification of Healthcare Provider (HP)
- Functional Classification (HC)
- Health Related Functions (HCR)
- Classification of Healthcare Financing (HF)[②]

The classification is the consequence of the process towards the unification of Europe which also demands to develop a common understanding of the governments' fundamental functions. These functions are seen as follows:

- General public services
- Defense
- Public order and safety
- Economic affairs
- Environmental protection
- Housing and community amenities
- Health
- Recreation, culture and religion
- Education
- Social protection

---

① http://cj/algoritmo/Nothingham Health Profile/htm (3di3),2001-04-30.

② http://www.oecd.org/health/health-systems/1841456.pdf,2013.

International Classification of Functioning, Disability and Health (ICF)

It is the follower of the International Classification of Impairments, Disabilities and Handicaps (ICIDH) and was published first in 2001. The classification is to classify health and health-related domains.

"*These domains are classified from body, individual and societal perspectives by means of two lists: a list of body functions and structure, and a list of domains of activity and participation. Since an individual's functioning and disability occurs in a context, the ICF also includes a list of environmental factors.*" (*WHO*)

The goal is to describe health and disability for purposes of defining the need of support. It measures disability by using indicators on a population level. The final goal is to adopt support systems and to allow international comparisons.

The principles of the ICF relate to the concept of the Sense of Coherence (see) and are putting the notion on 'health' and 'disability' in a new light. The classification acknowledges that every human being can experience a decrement in health and thereby experience a certain degree of disability. Disability is not something only likely for a minority of humans. The ICF "mainstreams" the experience of disability and recognizes it as a universal human experience. By shifting the focus from the cause of a disability to its impacts, it places all health conditions on an equal basis. This allows them to be compared by using a common metric—the ruler of health and disability.

Furthermore, ICF takes into account the social aspects of disability and does not see disability only as a 'medical' or 'biological' dysfunction or abnormality. Including Contextual Factors in which environmental factors are listed, ICF allows to record the impact of the environment on the person's functioning①.

see Sense of Coherence

International Classification of Primary Care (ICPC)

It is a utilization classification for primary care activities. The goal is to

① http://www.who.int/icidh/.

document the patient's intentions for encounter, the problems managed by the staff, and to allow a structured picture of the episodes of care.

ICPC was published first in 1987 and revisited in 1998 (ICPC-2-E). The classification is structured into 17 chapters, referring to the body's systems and social problems. Each of the chapters summarizes (1) the reasons for encounter, (2) the processing of primary care and (3) health problems in primary care.

Each of the three comes from a classification of its own,

- the Reason for Encounter Classification, published 1981,
- the International Classification of Process in Primary Care (ICPPC), published 1985 and
- the International Classification of Health Problems in Primary Care (ICHPPC-2-d), published 1983[①]

see Primary Care
see Secondary Care
see Tertiary Care

International Statistical Classification of Diseases and Related Health Problems (ICD)

The classification is the language of professionalized medicine and provides codes to classify diseases and a wide range of signs, symptoms, abnormal findings, complaints, social circumstances and external causes of injury or disease.

Any health condition can be grouped to a unique category and be given a code this way, up to six characters long.

The internationally compromised classification system is released by the WHO and accepted and internationally signed by most of the states.

The current edition is the ICD-10, version 2006. The version 11 is expected for the year 2014 or 2015.

The system is designed to promote international comparability in the collection, processing, classification, and presentation of documentations on diseases. The ICD is a core classification of the WHO Family of International Classifications.

The ICD is parted into three volumes

① http://www.who.int/classifications/icd/adaptations/icpc2/en/,2013-02-20.

Volume I: Systematic directory

Volume II: Rules and Regulations

Volume III: Alphabetical Index

The ICD-10 is a single-axis and hierarchical classification system. It is divided into:

• a three-digit overall scheme (for example, A95: yellow fever)

• a four-digit detailed classification (e.g. A95.0: Busch yellow fever)

• sometimes five-digit refinements (M23.31, for example: other menisci lesions, anterior cruciate ligament or anterior horn of the medial meniscus)

The notation is alphanumeric. The first digit is a letter followed by two to five digits; the fourth place is separated by a dot. The areas of U00-U49 or U50-U99 are reserved for expansions and / or research purposes.

ICD-10 includes:

• 21 Disease Chapters

• 261 Groups of Diseases

for example: E10-E14 = Diabetes Mellitus

• 2037 three-illness classes (categories)

for example: E10 = primary insulin-dependent diabetes mellitus (type I diabetes)

• 12,161 four-digit classes of diseases (sub-categories)

for example: E10.1: primary insulin-dependent diabetes (mellitus [type I diabetes] with ketoacidosis)①

Medical Product Classification

Such schemes can be divided into three different types:

• a classification of persons according to the likelihood to consume resources prospectively and

• a classification of cases according to the resources consumed retrospectively or

• a classification of products according to the allowed consumption of resources

While the first type can be used for predictive purposes exclusively, the

① http://www.who.int/whosis/icd10/,2013-02-20.

second one is of use both for prospective and retrospective groupings for whatever purposes. Both will be used for contracting benefits and prospective capitation, utilization reviewing, budgeting and billing. The third one is used in some organizations to control and benchmark doctors' decision-making.

Such medical product classifications can become developed as person-classification-schemes or as case-classification-schemes.

Person-classification schemes are, for example,

- Adjusted Average Per Capita Cost
- Adjusted Clinical Groups
- Diagnostic Cost Groups
- Global Risk-Assessment Model

Case-classification schemes are, for example,

- Clinical Risk Groups
- Diagnosis Related Groups
- Disability Payment System

see Case-classification Scheme

see Person-classification Scheme

Person-Classification Schemes

They refer to groups of classifications used for the prospective calculation of risks of a group of individuals sharing similar characteristics. The overall goal is to separate subgroups of a population according to particular risks. It is to characterize certain diseases and relating groups of individuals under risk according to the relating demands for treatments and care prospectively.

Such schemes are used for adjusting insurance premiums and prospective payment systems to bind providers. They are traditionally widely used in private insurances and in the managed care industry for prospective budgeting.

In a first step, the methodology is using different data concepts like age, gender, education, social features, ethnic, medical risk factors, life style and many more. In a second step, the amount of data becomes usually reduced due to the general purposes of the user.

see Adjusted Average Per Capita Cost

see Adjusted Clinical Groups

see Capitation

see Diagnostic Cost Groups
see Global Risk-Assessment Model
see Risk

Resident Assessment Instrument (RAI)

RAI is a highly sophisticated instrument to assess and to permanently evaluate the functional deficits of an independent life as well as to reward the necessary services. It works like a fee-for-service scheme but under permanent supervision by the paying party. It was developed in the U.S. around 1990.

Selected Literature

Antonovsky A. 1979. Health, Stress, and Coping. New Perspectives on Mental and Physical Well-being. San Francisco: Jossey-Bass.

Bartelsmann E, ten Cate P. 1997. Competition in healthcare: a Dutch experiment. CPB-Report, (4): 34～38.

Becker M H. 1974. The health belief model and personal health behavior. Health Education Monographs, 2: 324～473.

Beveridge W. 1942. Social Insurance and Allied Services. London: Her/His Majesty's Stationery Office.

Bhopal R S. 2002. Concepts of Epidemiology. Oxford: Oxford University Press.

Black D. 1980. The Black Report. London: Department of Health and Social Security.

Blumengold J G, Zeman M M. 1993. Healthcare in an era of managed competition. The CPA Journal, 63(11).

Borgers D, Niehoff J-U. 1995. Die weltgesundheitslage. Jahrbuch fürkritische Medizin, 25(6): 32.

Burns L R. 2002. The Healthcare Value Chain: Producers, Purchasers, and Providers, Wharton School Colleagues. San Francisco: Jossey-Bass.

Busse R, Schreyögg J, Gericke C. 2007. Analyzing Changes in Health Financing Arrangements in High-Income Countries—A Comprehensive Framework Approach. Washington D C: World Bank.

Cantor M D. 2002. Telling patients the truth: a systems approach to disclosing adverse events. Quality in Healthcare, 11(1): 7～8.

Carey R, Lloyd R. 2001. Measuring Quality Improvement in Healthcare: A Guide to Statistical Process Control Applications. Milwaukee: American Society for Quality Press.

Chadwick E. 1842. Report on the Sanitary Condition of the Labouring Population Og Great; Britain: Supplementary Report on the Results of Special Inquiry into the Practice of Interment in Towns. London: British Journal of Industrial Medicine.

Clark A M, Savard L A, Thompson D R. 2009. What is the strength of evidence for heart failure diseases-management programs? Journal of the American Collage of Cardiology, 54(5): 397～401.

Cleverley W O, Cameron A. 2006. Essentials of Healthcare Finance (6th ed.). Sudburg: Jones & Bartlett Publishers.

Coburn D. 2000. Income inequality, social cohesion and the health status of population: the role of neoliberalism. Social Science and Medicine, 51: 135～146.

Cochrane A. 1972. Effectiveness and Efficiency: Random Reflections on Health Services. London: Nuffield Provincial Hospitals Trust.

Crawford R. 1977. You are dangerous to your health. The ideology and politics of victim blaming. International Journal of Health Services, 7: 663～680.

Daniels N. 1991. Is the oregon rationing plan fair? The Journal of the American Medical Association, 265: 2232～2235.

Detels R, McEwen J, Beaglehole R. 2002. Oxford Textbook of Public Health(4th ed.). Oxford: Oxford University Press.

Devlin N, Parkin D. 2004. Does NICE have a cost-effectiveness threshold and what other factors influence its decisions? A binary choice analysis. Health Economics, 13(5): 437～452.

Dhaval D, Kaestner R. 2006. Health insurance and ex ante moral hazard: evidence from medicare. National Bureau of Economic Research Working Paper, No. 12764, Cambridge, Palo Alto, New York City.

Dobrow M J, Goel V U, Upshur R E. 2004. Evidence-based health policy: context and utilisation. Social Science & Medicine, 58(1): 207～217.

Donabedian A. 1966. Evaluating the quality of medical care. The Milbank Memorial Fund Quarterly, 44(3): 166～206.

Donabedian A. 1980. The Definition of Quality and Approaches to Its Assessment. Explorations in Quality Assessment and Monitoring. Ann Arbor Michigan: Health Administration.

Drever F, Whitehead M. 1997. Health Inequalities: Decennial Supplement: DS Series No. 15. London: The Stationery Office.

Drummond M, Sculpher M, Torrance G, et al. 2006. Methods for the Economic Evaluation of Healthcare Programmes (3th ed.). Oxford: Oxford University Press.

Edmondson A, Roberto M A, Tucker A. 2007. Children's hospital and clinics. Harvard Business School.

Enthoven A. 1978. Consumer-Choice-Health-Plan: a national health-insurance proposal on regulated competition in the private sector. New England Journal of Medicine, 298: 709～720.

Enthoven A. 1988. Theory and Practice of Managed Care in Healthcare Finance. Amsterdam: North Holland.

Enthoven A. 1993. The history and principles of managed competition. Health Affairs, 12: 24～48.

Etheredge L. 2003. The need for evidence-based health policy to address health care variations. Health Affairs, 3: 366～368.

Evens R. 1997. Going for gold: the redistributive agenda behind market-based healthcare reform. Journal of Health Politics, Policy and Law, 22: 427～465.

Finkler S A, Ward D M. 1999. Essentials of Cost Accounting for Health Care Organizations(2nd ed.). Burlington: Jones & Bartlett Learning.

Fogel R, Costa D. 2006. Chronic Disease and Disability from 19th to 21st Centuries: Interview. Bethesda: National Institute of Health.

Fries J F. 1998. Reducing cumulative lifetime disabilities: the compression of morbidity. British Journal of Sports Medicine, 32(3): 193.

Fries J F, Crapo L M. 1981. Vitality and Aging: Implications of the Rectangular Curve. San Francisco: W. H. Freeman.

Fritsch M, Wein T H, Ewers H J. 2005. Marktversagen und Wirtschaftspolitik: Mikroökonomische Grundlagen Staatlichen Handelns. München: Vahlen.

Gilmer T, Kronick R, Fishman P, et al. 2001. The medicaid RX model: pharmacy-based risk adjustment for public programs. Medical Care, 39(11): 1188～1202.

Gladwell M. 2005. The moral hazard myth. The bad idea behind our failed healthcare system. The New Yorker, 29: 44～49.

Goodman J, Musgrave G. 1994. A primer on managed care. NCPA Policy Report, No. 183.

Gray J A M. 1997. Evidence Based Healthcare. How to Make Health Policy and Management Decisions. London: Churchill Livingstone.

Gruenberg E M. 1977. The failure of success. Milbank Quarterlys, 44: 3～34.

Herder-Dorneich P. 1994. Ökonomische Theorie des Gesundheitswesens: Problemgeschichte, Problembereiche, Theoretische Grundlagen. Baden-Baden: Nomos Vertlagsgesellschaft.

Herzlinger R. 1997. Market-Driven Health Care: Who Wins, Who Loses in the Transformation of America's Largest Service Industry. Reading: Addison-Wesley Publishing Company, Inc.

Hillestad S G, Berkowitz E N. 2004. Healthcare Market Strategy(3rd ed.). Sudbury, Massachusetts: Jones and Bartlett Publishers, Inc 1.

Hope T. 1996. Evidence-Based Patient Choice. London: King's Fund Publishing.

Hornbrook M C. 1998. Global risk-assessment model (GRAM). Proceedings of the 14th PCS/E international working conference, Manchester, 9: 386～397.

Illsley R, Baker D. 1997. Inequalities in Health: Adapting the Theory to Fit the Facts. Bath: University of Bath, Centre for the Analysis of Social Policy.

Janz N K, Becker M H. 1984. The health belief model: a decade later. Health Education Quarterly, 11: 1～47.

Karin N. 1997. Towards a new healthcare paradigm patient-focused care: the case of Kingston Hospital Trust. Journal of Management in Medicine, 11(6): 357～371.

Karp T. 2006. Transforming organisations for organic growth: the DNA of change leadership. Journal of Change Management, 6(1): 3～20.

Keith D. 1996. 9 ways to create an atmosphere for change. HR Magazine, 41(10): 76～81.

Kotler P, Armstrong G. 2006. Principles of Marketing(11th ed.). London: Prentice Hall.

Kotter J. 2001. What Leaders Really Do? Harvard Business Review, 79(11): 85～98.

Kramer J P. The house-fly mycosis caused by entomophthora muscae: influence of relative humidity on infectivity and conidial germination. Journal of the New York Entomological Society,

1980,236～240.

Krugman P. 2005a-11-14. Health economics 101. New York Times.

Krugman P. 2005b-04-29. A private obsession. New York Times.

Lee T H, Mongan J. 2009. Chaos and organization in health care. Cambridge,Mass: MIT Press.

Legido-Quiley H, Mckee M, Nolte E, et al. 2008. Assuring the quality of healthcare in the European Union. European Observatory on Health Systems and Policies,Observatory Studies,12.

Lei D, Slocum J W. 2002. Organization designs to renew competitive advantage. Organizational Dynamics,31(1):1～18.

Lohr K N,United States. Department of Health and Human Services,Rand Health Insurance Experiment. 1986. Use of medical care in the RAND health insurance experiment:diagnosis-and service-specific analysis in a randomized controlled trial. Santa Monica:Rand.

Magretta J. 2002. What Management Is? New York:Free Press.

Mango P, Shapiro L. 2002. Hospitals get serious about operations. McKinsey Quarterly, (2): 74～85.

Manton K G. 1982. Changing concepts of morbidity and mortality in the elderly population. Milbank Memorial Fundation Quarterly,60:183～244.

Meenan R T,Keeffe O,Rosetti C,et al. 1999. The sensitivity and specificity of forecasting high-cost users of medical care. Medical Care, 8(37) :815～823.

Mills R W,Robertson J,Print C F,et al. 1999. Fundamentals of Managerial Accounting and Finance(4th ed.). Lechlade:Mars Business Associates.

Murray C J,Lopez A D. 1996. Evidence-based health policy—lessons from the global burden of disease study. Burden of Disease Unit, Harvard School of Public Health,Cambridge,USA.

Myles G D. 1995. Public Economics(charpter 2,9～11). Cambridge:Cambridge University Press.

Niehoff J-U. 2006. Die transformation des systems der krankenversorgung in den USA—ein medizinisches versorgungsmodell zwischen hoffnung und befürchtung. http://www. forum-gesundheitspolitik. de/dossier/PDF/Krankenversorgung-USA. ppt.

Niehoff J-U. 2011. Sozialmedizin Systematisch(3rd ed.). London,Boston:UNI MED Verlag Bremen.

Niehoff J-U,Braun B. 2010. Handwörterbuch Sozialmedizin and Public Health(2nd ed.). Baden-Baden:Nomos Verlag.

Niehoff J-U,Schneider F. 1993. Epidemiology and the criticism of the risk factor approach. *In*: Lafaille R,Fulder S. Towards a New Science of Health. London,New York:Routledge.

Nuscheler R. 2003. Risk Selection in Die German Health Insurance System. Mimeo: On-Line Printing.

Oberlander J,Marmor T,Jacobs L. 2001. Rationing medical care: rhetoric and reality in the oregon health plan. Canadian Medical Association Journal,164(11):1583～1587.

Olshansky B,Mazuz M,Martins J B. 1985. Significance of inducible tachycardia in patients with syncope of unknown origin:a long-term follow-up. Journal of the American College of Car-

diology, 5(2s1): 261～223.

Olshansky S J. 2006. Can a lot more people live to one hundred and what if they did? *In*: Perls T. Exceptional Longevity. Baltimore: Johns Hopkins University Press.

Olshansky S J, Ault B. 1987. The fourth stage of the epidemiologic transition: the age of delayed degenerative diseases. *In*: Perls T. Margaret P B. Should Medical Care be Rationed by Age? Ottawa: Rowman & Littlefield Publishers.

Oregon Health Services Commission. 2002. Prioritized list of benefit packages for OHP standard: interim report to the Governor and Legislative leadership. Salem: Oregon Health Services Commission.

Overholt M H. 1997. Flexible organizations: using organizational design as a competitive advantage. Human Resource Planning, 20: 22～32.

Pauly M V. 1968. The economics of moral hazard: comment. The Information Services American Economic Review, (58): 531～537.

Pauly M V. 1971. Medical Care at Public Expense: A Study in Applied Welfare Economics. New York: Washington, London, Praeger Publishers.

Perelman M. 2003. The Perverse Economy—The Impact of Markets on People and the Environment. New York: Palgrave Macmillan.

Poisal J A, Truffer C, Smith S, et al. 2007. Health spending projections through 2016: modest changes obscure part d's impact. Health Affairs, 26(2): w242～w253.

Popp P L. 2002. How to-and not to-disclose medical errors to patients? Managed Care, 11(10): 52～53.

Porter M E, Teisberg E O. 2005. Redefining Healthcare: Creating Value-Based Competition on Results. Boston: Harvard Business School Press.

Preker A, Harding A. 2003. Innovations in Health Service Delivery: the Corporatization of Public Hospitals. Washington D C: World Bank.

Pricewaterhouse Coopers(Frim), United States Health Care Financing Administration. 2001. Study of pharmaceutical benefit management. New York: Pricewaterhouse Coopers, HCFA Contract, No. 500-97-0399/0097.

Qing Y. 2008. Pharmacogenomics in Drug Discovery and Development. New York: Humana Press.

Ransom S B, Joshi M S, Nash D B. 2005. The Healthcare Quality Book: Vision, Strategy & Tools. Chicago: Health Administration Press.

Roemer M I. 1961. Bed supply and hospital utilization: a natural experiment. Hospitals, 1(35): 36～42.

Rose G. 1992. The Strategy of Preventive Medicine. Oxford: Oxford University Press.

Rosenstock I M. 1966. Why people use health services? Milbank Memorial Fund Quarterly, 44: 94～124.

Sackett D L. 2000. The sins of expertness and a proposal for redemption. British Medical Journal,

320(7244):1283.

Sackett D L, Straus S, Richardson S, et al. 2000. Evidence-Based Medicine: How to Practice and Teach EBM (2nd ed.). London: Churchill Livingstone.

Salmon J W. 1990. The Corporate Transformation of Healthcare. Issues and Directions. New York: Bay Wood Publishing Company.

Salmon J W. 1994. The Corporate Transformation of Healthcare. Perspectives and implications. New York: Bay Wood Publishing Company.

Savard L A, Clark A M, Thompson D R. What is the strength of evidence for heart failure disease-management programs? Journal of the American Collage of Cardiology, 54(5): 397～401.

Shastry B S. 2006. Pharmacogenetics and the concept of individualized medicine. Pharmacogenomics Journal, 6 (1): 16～21.

Shoemaker, Paul J H. 1995. Scenario planning: a tool for strategic thinking. MIT Sloan Management Review, 36(2): 25.

Spear S. 2005. Fixing healthcare from the inside, today. Harvard Business Review, 83(9): 78～91.

Starr P. 1984. The Social Transformation of American Medicine. New York: Basic Books.

Telis G J, Gilder P N. 1996. First to market, first to fail? Real causes of enduring market leadership. MIT Sloan Management Review, 37(2): 65～75.

Thompson A A, Strickland A J, Gamble J E, et al. 2008. Crafting and Executing Strategy: The Quest for Competitive Advantage-Concepts and Cases (15th ed.). New York: McGraw-Hill/Irwin.

Torrington D, Hall L, Taylor S. 2005. Human Resource Management (6th ed.). London: Prentice Hall.

Vagerö D, Illsley R. 1992. Inequality, health and health policy in East and West Europe. International Journal of Health Sciences, 3(3/4): 205～214.

van de ven W P P M, Ellis R P. 2000. Risk adjustment in competitive health plan markets. Health Economics, 17: 755.

Verbrugge L M. 1984. Longer life but worsening health? Trends in health and mortality of middle-aged and older persons. Milbank Quarterly, 62: 475～519.

Verbrugge L M, Jette A M. 1994. The disablement Process. Social Science & Medicine, 38(1): 1～14.

Weiner J P, Starfield B H, Steinwachs D M, et al. 1991. Development and application of a population-oriented measure of ambulatory care case-mix. Medical Care, 5(29): 452～472.

Weiner J P, Tucker A M, Collins A M, et al. 1998. The development of a risk-adjusted capitation payment system: the maryland medicaid model. Journal of Ambulatory Care Management, 4 (21): 29～52.

Whitehead M. 1994. Life and death over the millennium. *In*: Drever F, Whitehead M, Wilkinson R G. Unfair Shares: The Effects of Widening Income Differentials on the Welfare of the Young. Ilford: Bernardos.

Whitehead M, Diderichsen F. 1997. International evidence on social inequalities in health. *In*: Drever F, Whitehead M. Health Inequalities: Decennial Supplement: DS Series No. 15. London: The Stationery Office.

WHO. The world health report 2005. http://www. who. int. whr/2005/.

World Health Organization. 1999. Health impact assessment (HIA), main concepts and suggested approach. Gothenburg consonsus paper.

Wilkinson R G. 1994. Health, redistribution and growth. *In*: Glyn A, Miliband D. Paying for Inequality: The Economic Cost of Social Injustice. London: Rivers Oram Press.

Wilkinson R G. 2005. The Impact of Inequality: How to Make Sick Societies Healthier. London: Routledge.

Wong S H Y, Linder M W, Valdes R. 2006. Pharmacogenomics and Proteomics: Enabling the Practice of Personalized Medicine. Washington D C: American Association for Clinical Chemistry.

Yukl G. 2006. Leadership in Organizations(6th ed.). Englewood Cliffs: Prentice-Hall.

APPENDIX

Agencies Relevant for International Healthcare Management

General Considerations

There exist a number of international agencies and movements considering health as an issue of international concern. The following selected examples can only highlight the diversity. We do not comment on the particular agencies' visions, targets and objectives, political matters involved or their financing rules. If readers want to use them, we will recommend looking at these matters closely.

In general, it should be understood that all these agencies come from very different backgrounds. While some are constructed as agencies governed by the international family, others are made by single or some few nations intending to build pathways for their own economic and political interests. Others again are projected to give humanitarian support through helping people or nations to overcome the enormously and unequally distributed economic chances or to help with tackling catastrophes.

The chapter also wants to show examples of some selected national agencies which are most influential internationally. Here, a particular aspect is the networking between such agencies and healthcare industries, even if classified as independent or non-profit or an authority run by states and governments.

Agency for Healthcare Research and Quality (AHRQ)

AHRQ is a U.S. agency of the Public Health Service responsible for enhan-

cing the quality, appropriateness and effectiveness of healthcare services within the U.S.

The AHRQ is an agency of the Department of Health and Human Services and "*is dedicated to improving the quality, safety, efficiency, and effectiveness of health care for all Americans*".

"*The agency's focus areas are*:

- *Comparing the effectiveness of treatments.*
- *Quality improvement and patient safety.*
- *Health information technology.*
- *Prevention and care management.*
- *Health care value.*"

The agency is often also seen and fostered as a worldwide model for measuring and assessing healthcare and licensing methods of treatment. But the World Health Organization is related to the U.S. healthcare system and its particular legal construction①.

Commonwealth Fund

The fund is a private charitable foundation established in 1918. The foundation aims at promoting better performing healthcare system in terms of improving access, healthcare quality, and efficiency.

"*The mission of The Commonwealth Fund is to promote a high-performing health care system that achieves better access, improved quality, and greater efficiency, particularly for society's most vulnerable, including low-income people, the uninsured, minority Americans, young children, and elderly adults.*

The Fund carries out this mandate by supporting independent research on health care issues and making grants to improve health care practice and policy. An international program in health policy is designed to stimulate innovative policies and practices in the United States and other industrialized countries."

For its ultimate mission, the foundation offers nine programs:

1. Healthcare Quality Improvement and Efficiency
2. The Future of Health Insurance
3. Patient-Centered Primary Care

① http://www.ahrq.gov.

4. State Innovations
5. Quality of Care for Underserved Populations
6. Child Development and Preventive Care
7. Quality of Care for Frail Elders
8. International Program in Health Policy and Practice①.

Directorate General for Health and Consumer Affairs (DG-SANCO)

It is a political body of the European Union responsible for the preparation and implementation of laws regarding the safety of food and related products, consumers' rights and the protection of people's health.

DG-SANCO works with three independent Scientific Committees:

- The Scientific Committee on Consumer Products (SCCP)
- The Scientific Committee on Health and Environmental Risks (SCHER)
- The Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR)

These Committees are to provide the European Commission with the scientific basics when preparing any policy and proposal relating to consumer safety, public health issues and the protection of environment.

The fundamental philosophy is

- to empower consumers
- to protect and to improve public health
- to ensure food safety and
- to protect the health and welfare of farm animals and
- to protect the health of crops and forests

To fulfill these goals, the agency is

- monitoring realities within Europe
- listening to stakeholders
- acting with actions, proposals and support for stakeholders②.

European Agency for Safety and Health at Work (OSHA)

OSHA is a European Union's agency located in Bilbao, Spain and was foun-

① http://www.commonwealthfund.org.
② http://ec.europa.eu/dgs/health_consumer/.

ded in 1996. It is the agency's purpose to address the issues of safety and risk prevention at work for employees and unions mainly through providing information for users. Its targets are

- promoting a risk prevention culture at work
- analyzing workplace risks
- conducting the European Risk Observatory

The idea behind is that societies change under the influence of new technologies and the shift of economic and social environments. But these changes also influence the realities at workplaces and the demands to perform the practices and the processes of work. These fundamental transformations will both help to overcome risks to workers' health and bring with them new risks, which have to be regulated by legislation, economic incentives, political actions and technical solutions. To make work places safe, places will, according to that philosophy, help to improve health productivity.

For that approach, some selected groups are of particular priority, such as

- aging workers
- migrant workers
- people with disabilities
- woman and
- young people

One of the activities is the Community Strategy for Health and Safety at Work which focuses on the particular health risk issues especially among healthcare workers[①].

European Centre for Disease Prevention and Control (ECDC)

ECDC was established by the European Union in 2005 and is settled in Stockholm, Sweden. It is an independent body and is targeted to prevent from communicable diseases at the EU level. The particular mission is to monitor and to identify risks by infectious diseases, as well as to assess and to communicate them. For that purpose, the center cooperates with the comparably responsible national agencies across Europe.

"*Within the field of its mission, the Centre shall:*

(a) search for, collect, collate, evaluate and disseminate relevant scientific

① http://osha.europa.eu/.

and technical data;

(*b*) *provide scientific opinions and scientific and technical assistance including training*;

(*c*) *provide timely information to the Commission, the Member States, Community agencies and international organizations active within the field of public health*;

(*d*) *coordinate the European networking of bodies operating in the fields within the Centre's mission, including networks arising from public health activities supported by the Commission and operating the dedicated surveillance networks*; *and*

(*e*) *exchange information, expertise and best practices, and facilitate the development and implementation of joint actions.*"①

European Food Safety Authority (EFSA)

The EFSA is a European Union agency providing advice and information for the political bodies of the EU, the member states and the public regarding food associated risks, including the total chain between production and consumption, animal health and living, plant protection and plant health and nutrition.

The agency was founded in 2002 and is seated in Parma, Italy.

European Foundation of Quality Management (EFQM)

The principles of the foundation's concept are the self-analysis of structures and processes by all of those working in the service chain and were first introduced in 1988.

The concept comprises what is called the PCDA-cycle, making PLAN-DO-CHECK-ACT a permanent process of (healthcare) improvement and a tool of a comprehensive management system of total quality management.

The fundamental idea behind is that in saturated (healthcare) markets, survival of providers will only be possible through intensive competition for consumers and constantly offering improved quality.

In the case of healthcare, this pre-conditions need some particular adaption for some few reasons:

① http://www.ecdc.europa.eu, 2012-12-20.

1.It must be clarified what particular aims have to be contracted and measured as "quality".

2.It must be clarified who the contracting partners for quality are.

3.It must be clarified what the consequences and the alternatives will be if the indicators of quality fail the standards①.

see Competition

see Total Quality Management

European Medicines Agency (EMA)

The Agency is a European agency responsible for evaluating and assessing medicinal products. Jointly funded by the European Union and the pharmaceutical industries in 1995, the agency is mostly to harmonize the national regulating bodies. The goal is to reduce the producer's cost for cross-border approval of drugs and to internationalize the market within Europe. The EMA is based in London②.

Food and Drug Administration (FDA or USFDA)

It is an agency of the U.S. Department of Health and Human Services. The agency regulates and supervises the safety of foods, dietary supplements, blood products, medical devices, radiation-emitting devices, pharmaceuticals, vaccines, veterinary products, and cosmetics. It also regulates sanitation requirements on interstate travel as well as specific rules for the control of products being risky to health and approves assisted reproductive medicine techniques.

The FDA is worldwide most influential because its regulations are norm-setting for many countries and any product sold on the U.S. market must meet its rules.

As any similar powerful agency, the FDA is very critically watched regarding dependencies from political interference and from industries' independency③.

---

① http://www.efqm.org.

② http://www.emea.europa.eu/.

③ http://www.fda.gov.

International Organization for Standardization (ISO)

It is a norm setting agency for the European Union and preconditions the criteria for certifying organizations.

Also in healthcare the ISO standards play an enormous role①.

International Red Cross and Red Crescent Movement

The movement gathers about 100 million individual volunteers round the globe aiming at protecting and safeguarding humans' life and health.

They all are sharing the fundamental principles of humanitarianism and respect life independent of nationality, ethnic, age, gender, religious beliefs, behavior, social class and political opinion. It is a movement not an organization but consists of nationally distinct organizations, being independent from each other but sharing the same fundamental principles, visions, objectives and statutes.

The movement is built by:

• The International Committee of the Red Cross which is a private institution founded in 1863 in Geneva, Switzerland by Henry Dunant. Its 25-member committee has a unique authority to save life and dignity of the victims of armed conflicts.

• The Red Crescent Movement is the Islamic pendant to the Red Cross. It is a humanitarian network, which started its existence in Turkey in 1868. In 1919, it got the same status as the Red Cross according to the Convention of Geneva. Nowadays, there are 28 national organizations sharing the same values as the Red Cross Movement does and are being netted in the "International Red Cross and Red Crescent Movement" since 1986.

• The International Federation of Red Cross and Red Crescent Societies coordinates the activities of the 186 National Red Cross and Red Crescent Societies within the Movement.

• National Red Cross and Red Crescent Societies exist in nearly every country round the globe. In many of the globe's countries, they are closely netted to the national healthcare system providing emergency service and also

---

① http://www.iso.org.

care for disabled and depending people[①].

Joint Commission on the Accreditation of Healthcare Organizations (JCAHO)

Founded in 1951, the JCAHO evaluates and accredits healthcare organization in the U.S., including hospitals, health plans, and other care organizations, which provide home care, mental healthcare, laboratory, ambulatory care, hospital care and long-term services

The organization is the peer review commission that provides the primary review of hospitals and healthcare providers. Many insurance companies exclusively accept providers that have the JCAHO accreditation in order to get third-party-payment. But indeed many small hospitals cannot afford the cost of accreditation.

JCAHO surveys organizations frequently, but often without any announcement and sending in a medical and administrative team to review policies, patients' records, professional credentialing procedures, governance and quality improvement programs. JCAHO revises its standards annually.

Internationally, some countries are following this model. One concern is that JCAHO could limit the role of the WHO or similar internationally independent organizations[②].

National Institute for Health and Clinical Excellence (NICE)

Founded in 1999, it is an England and Wales institution of the National Health Service (NHS) to provide authoritative guidance on clinical management. It has a norm and standard setting function for tax paid services and for setting standards for healthcare management. Britain's National Institute for Health and Clinical Excellence (NICE) is the regulatory body in healthcare that all of Europe looks to for guidance in evaluating medical treatments. It is frequently in the center of political controversy, because it might support a certain new treatment that has a vocal patient lobby but no scientific evidence. Its decisions are almost always upheld even when challenged in the courts.

Originally, a Commission of Health Improvements (CHI) had been part of the construction but because of severe conflicts it is set out of power in 2004.

---

① http://www.redcross.int.

② http://www.jointcommission.org.

NICE is to appraise medical interventions and procedures as the guidelines for the National Health Service (NHS) for providers coining

- health technology assessment
- clinical guidelines
- monitoring clinical performance

The performance measurement uses, for example

- audit procedures
- referral protocols
- benchmarks for nursing
- disease management programs and protocols
- care pathways
- guidelines for clinical cooperation

The results of NICE can be grouped as follows:

- *Technology Appraisals* regarding drugs and treatment methods
- *Clinical Guidance* for the necessity and appropriateness of disease-specific treatments and care procedures
- *Interventional Procedures* regarding the use and the conduct of diagnostic and therapeutic procedures
- *Cancer Service Guidance* for treating and caring patients suffering from cancer
- *Public Health Guidance* recommending concepts for health promotion and prevention on a public level

Some of the most important experiences with such an agency are:

1. It is most important to develop and to implement procedures of conflict management with all the stakeholders involved and to care for total public transparency concerning the procedures of decision-making by the agency.

2. The hearts of the agency's methodology are cost-utility-analyses and cost-effectiveness-analyses, with its measurement of Quality Adjusted Life Years (QUALYs).

But the elegancy of the method very often exceeds the quality of data taken for calculating the additional gain of "QUALYs". It is also important to realize that the estimate of costs per gained year through a new therapy can be biased through many factors and is often not internationally comparable.

3. The methodology leads to mechanisms of prioritizing therapeutic concepts depending on the calculated costs. The used mechanism can lead to some dilemma

if the groups of patients are not really homogenous.

4. The decision-making does regularly not distinguish between "effective" and "non-effective" but between below or above a cutting point of cost-effectiveness.

5. It turns out to be a reality that conflicts between scientific rationality and power-groups of stakeholders are binding together industries and patients initiatives and are initiating arguments against the agency.

The work of NICE is closely committed to the concept of Evidence based Medicine and to that of the Cochrane Collaboration.

NICE is such an organization with powerful capabilities that include (1) conflict management, increasingly complex (2) economic analyses, (3) methods for engaging the public, patients and industry, and (4) an ability to promote a research agenda①.

see Cochrane Collaboration

See Cost-Utility-Study

see Critical Appraisal

see Evidence based Medicine

see Clinical Guidelines

See Health Promotion

see Health Technology Assessment

see Life Expectancy

World Bank

The World Bank, funded by the U.S. and the UK in 1944, is a powerful international financial institution providing loans for poor countries but is also controversially seen in its actions exclusively forcing market rules even in social services. Among others, it also focuses actions on promoting healthcare internationally.

The goals are

• consultancy for governments and government officials

---

① http://www.nice.org.uk; Davies E, Littlejohns P. Views of directors of public health about NICE appraisal guidance: results of a postal survey. Journal of Public Health Medicine, 2002, 24(4): 319～325; Devlin N, Appleby J, Parkin D. Patients views of explicit rationing: what are the implications for health service decision-making? Journal Health Service Research and Policy, 2003, 8(3): 183～186.

• implementation of legal and judicial systems for the encouragement of market business, the protection of individual and property rights and the honoring of international contracts

• the establishment of strong systems capable of supporting endeavors

• support for countries' efforts at eradicating corruption

• to provide platforms for research on development issues, consultancy and conduct training programs open for those who are interested in academia, students, government and non-governmental organizations

Related to health, the following fields of the World Bank's programs are to be mentioned:

• improvement of sanitation and water supply

• support of immunization programs for the reduction of communicable diseases such as malaria and the HIV/AIDS pandemic

• improving education

• health, nutrition and population

• labor and social protections

• poverty reduction

• public sector governance

• social change

Critics claim in particular the World Bank's neo-liberal economic agenda, imposing policies on developing and emerging countries, which have been damaging, destructive and anti-developmental as some current realities show.

Especially its policy on water privatization shows tremendous impacts on people's health in poor countries. That is due to the policy that "*an indebted country cannot borrow capital from the World Bank or the International Monetary Fund without a domestic water privatization policy as a precondition*"①. The World Bank is forcing many countries to privatize their water resources instead of supporting the access to clean water as a universal human right and an essential public and governmental task. This policy is one of the most important causes for the loss of lives in many of the poor countries and of immense impacts on—especially-children's life②.

---

① Goldman M. The World Bank and Struggles for Social Justice in the Age of Globalization. New York: Yale University Press, 2005.

② http://www.worldbank.org.

United Nations Organization (UNO or UN)

The United Nations are an international organization founded in 1945 after World War II. The organization is committed to

- maintaining international peace and security,
- developing friendly relations among nations and
- promoting social progress,
- better living standards and
- human rights.

According to its charter, the organization can take action on a wide range of issues, such as health and protecting people.

The organization works on a broad range of fundamental global issues, ranging from sustainable development, environment and refugees' protection, disaster relief, counter terrorism and disarmament, to promoting economic and social development, democracy, human rights, governance, as well as international health, expanding food production and more.

UN wants to achieve its goals by coordinating efforts for a safer world both for current and future generations.

For health related issues, the UNO shares same visions of the World Health Organization (WHO)①.

see World Health Organization

United Nations Children Fund (UNICEF)

UNICEF was created by the United Nations Assembly on December 11, 1946 and was originally to help children to survive in countries vandalized by World War II.

Today it provides long-term help and developmental assistance for children and mothers in developing countries.

For its work, it has currently set the following priorities:

- child survival and growth
- education and gender equality
- immunization programs

---

① http://www.un.org.

- protection from violence, exploitation, and abuse
- HIV/AIDS and children
- policy advocacy and partnerships for children's rights

World Health Organization (WHO)

Founded in 1946, the WHO is the international organization of the UNO aiming at supporting health promotion, prevention, disease monitoring, medical services and its access, norm-setting/proposing and rehabilitation on a global scale and is an institution of international healthcare management.

The WHO members are governments and the decision of governments is required in order to set the WHO's documents, such as its international classifications on health or disablements, into action.

WHO supports and coordinates

- biomedical and health service research,
- proposes international classifications regarding matters of health,
- establishes observatory groups on national deployments and
- encourages health promotion both scientifically and culturally

Its working base is worldwide settled both in cooperation with states and with cooperating reference center of science and teaching[①].

① http://www.who.int/.