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Special issue of the Geneva Papers on Health

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RESEARCH SUMMARY

Major concerns are generally directed at the rising health costs resulting from technological advances and the changing demographic structure whereby the population aged over 60 largely exceeds that of other age groups in most developed countries. Importance is placed on two major issues. First, the change in demographic structures leading to the perceived “ageing society”. And, second, technological advances, which are thought to result in increasing health costs. It is important to view these issues from the proper perspective. We are not ageing as a society but benefiting from an extended period of good health, which is largely a consequence of technological advances and healthier life styles. It is not the increased spending on health that should be the concern but what it is spent on. It is crucial that the nature of spending is well analyzed and the benefits clearly understood.

Current health systems in almost all countries are mainly non-funded pay-as-you-go systems with more or less pronounced intergenerational redistribution. Faced with a shrinking tax base and an increase in health costs, they are bound to experience greater and greater difficulties. Private systems and funded systems that allow accumulation of funds are slowly appearing as alternatives. This evolution raises many unknowns, especially in terms of financing and participation but also of solidarity and equity.

As the life cycle is getting longer, people have the opportunity to be productive for a longer period of time than before, which will therefore extend the period of wealth accumulation. This can allow funds or premiums to build up over a long period in order to cover the cost of care in the later stages of life. A majority of countries have already combined both public and private schemes in a bid to create a health financing system that could cope with the increasing difficulties it faces.

The Geneva Association Research Programme on Health and Ageing seeks to bring together facts, figures and analyses linked to issues in health. The key is to test new and promising ideas, linking them to related studies and initiatives in the health sector and trying to find solutions for the future financing of healthcare.

We are particularly interested in:

- The impact of an ageing population in health insurance systems.
- The effect of technology on health insurance.
- Development of health care systems and the capitalization issue.
- The interaction of public and private systems in health provision.
- Performance of health systems
- Health issues for an ageing population in the workplace.
- Factors that influence health status.
- Factors responsible for the increase in health spending.
- Factors that contain the increase in health cost.

The Geneva Association Information Newsletter – Health and Ageing is linked to the Research Programme on Health and Productive Ageing and is published biannually in April and October.

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On the impact of retirement on health status

By Christophe Courbage

The links existing between retirement and health status raise some important issues, in terms of both public and private financing of life risks.

It is often recognised that career disruption or the decision to retire can be caused by deteriorating health. Such adverse change can lead to temporary or permanent layoff or to an early departure from the labour force. For instance, in many surveys, poor health ranks as one of the most frequently reasons given for retirement. The size of the labour market is naturally tied to the health status of its workers. Bad health reduces the tax-base that finances pay-as-you-go systems and increases spending both in terms of health expenditure, and in terms of pensions as previously mentioned. Bad health also impacts capitalization-based systems as it reduces revenues and makes it harder to pay premiums. Maintaining workers in good health is an obvious way to cope with the financial deficit of health systems, in particular pay-as-you-go systems, since it allows keeping people longer in the labour market. By voting laws that impose the respect of rigorous safety procedures and a healthy environment in the working place, governments and other stakeholders have an important role to play. Also, nowadays employers are more and more aware of the importance of the good health of their employees. Healthier workers are more efficient workers. Many companies are thus trying to develop structures and programmes so as to improve the health status of their employees (sport facilities, healthy meals, help in giving-up smoking, and so on). Besides, insurers play an active role in offering its expertise in risk assessment and in providing incentives to develop health mitigation measure. At the end, better health means less public spending on social security systems, and the possibility to develop other public policies that would favorably impact the general health of the population, such as environmental policies.

However, it is possible that retirement or early retirement is not only a consequence, but also a cause of adverse health. If on the one hand, retirement may promote a sense of well being, as workers move out of demanding or/stressful career jobs; On the other hand, the retirement passage itself may lead to diminished well-being, as individuals lose their occupational attachment, their social network of co-workers, and a major anchor of their identities.

At the moment, still too little is known about the effect of retirement on health status. This may come from the methodological difficulties in studying this question. Existing evidence is mixed, with some studies reporting retirement as positively related to well-being and others reporting a negative relationship or none at all. Yet, better knowledge about that relationship is of importance as it may impact the financing of health systems, whether publically or privately funded.

Regarding public funded systems, in the case of a negative effect of retirement on health, it would reinforce the actual extending working life policy. As a matter of fact, the longer individuals are able to stay on as part of the labour force the healthier they would be and the more they would sustain the tax base on which relies the financing of social security systems. In the case of a positive effect of retirement on health, the financial advantage on a pay-as-you-go system of prolonging the working life would be offset by the increase in health costs and by the exit from the labour market of a higher number of workers due to bad health.

As for the private insurance market, in various countries, health insurance is partly provided through the employer. Thus people retiring no longer benefit from a collective health insurance. This means that they usually have to pay more for the same insurance. In addition, if indeed being retired has an impact on one’s health status, it may be the case that insurance companies, on actuarial grounds, would differentiate premiums on the basis of the position on the labour market (a phenomenon that seems to be already occurring). In the case of a negative relationship between being retired and ones health status, insurers would increase their premium for retired persons. In such a situation, being retired would have a triple effect on health expenditure. Firstly, it would increase health care costs as health status decrease. Secondly, it would increase premium for retired people, as they would have to switch from a collective contract to an individual one. Finally, retired people would face a higher premium set by insurers, as they would have become high-risk individuals.

In the light of these arguments, knowing more on the impact of retiring on health status becomes evident.
II. INVITED ARTICLE I

Private health insurance: implications for developing countries*

By Neelam Sekhri and William Savedoff

Introduction

As policy-makers consider how to move towards financing mechanisms that will protect their citizens from the financially catastrophic effects of illness, they have three broad options to consider: taxation, social security, and private health insurance (which consists of non-profit and for-profit plans as well as community health insurance schemes).

Unlike taxation and social security, which are commonly viewed as promoting equity, private insurance often conjures up visions of unequal access, large numbers of uninsured people, and elite health care for the rich. Experience indicates that unregulated or poorly designed private health insurance systems can indeed exacerbate inequalities, provide coverage only for the young and healthy, and lead to cost escalation.

However, when appropriately managed, there are several ways in which private health insurance can play a positive role in improving access and equity in developing countries. First, out-of-pocket spending on health services is the most common form of health financing in developing countries and represents a significant financial burden for households. To the extent that private insurance gives households an opportunity to avoid large out-of-pocket expenditures, it can provide access to financial protection that is otherwise lacking.

Second, many developing countries have public expenditures for health of less than US$ 10.00 per person per year; however, the Commission on Macroeconomics and Health advises that it costs US$ 34.00 per person annually to provide a package of essential health interventions. Developing countries also have large informal sectors, which makes tax collection difficult. This limits their ability to generate sufficient tax revenues or fund social insurance systems to provide broad financial protection for health care. Private coverage, when appropriately regulated, may be one way to move towards prepayment and risk pooling until publicly funded coverage can expand sufficiently. It also allows policy-makers to aim limited public resources at the most vulnerable groups, while those who can afford to contribute towards their medical costs are required to do so.

Third, history shows that the social insurance systems in many developed countries evolved from voluntary private insurance schemes based on those of professional guilds or communities. These historical lessons in the gradual expansion of financial protection and the development of institutions may be useful in informing policy debates in developing countries as they consider moving towards public insurance systems.

Finally, private health insurance continues to be important even in countries where universal coverage has been achieved. Policy-makers who plan ahead for this supplementary role will be better prepared to ensure that private coverage complements public systems as they develop.

This article provides a short overview of the extent of private coverage around the world and highlights how widespread private insurance has become: It is intended to encourage policy-makers and researchers to pay attention to private coverage and the role it can, and does, play in health-care systems.

* This text is based on an article published in the Bulletin of the World Health Organization. The full reference is: Sekhri, N; Savedoff, W; (2005), Private Health Insurance: Implications for Developing Countries. The Bulletin of the World Health Organization 83:127-134

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The international situation

Variations by income level

In 2001, 39 countries in the world had private insurance markets contributing to more than 5% of total health expenditure, with almost half (46%) of these nations belonging to the low-income and lower-middle income categories.

The role of private insurance differs depending on the country’s wealth and institutional development. In many lower-income and middle-income countries, private insurance is the only form of risk pooling available and provides principal coverage, largely to those who are employed. Historically, this is not unlike the situation in Western Europe in the 19th century when the only significant forms of insurance were provided by mutual associations, employers, guilds or unions. For example, in 1885 10% of Sweden’s workforce was covered by voluntary private insurance schemes called friendly societies, and in Germany, Bismarck established the first national social insurance system by knitting together voluntary, pre-existing occupationally and industrially based sickness funds.

By contrast, in most high-income countries, private insurance provides supplementary coverage to predominantly publicly funded systems. In France, for example, 86% of the population purchases private policies to pay for co-payments, while in the Netherlands more than 90% of the population purchases either principal or supplementary insurance plans. In high-income countries, private insurance, particularly when it provides principal coverage, is stringently regulated. Australia and Ireland strictly regulate their large supplementary insurance markets as well.

Countries with the highest private insurance expenditures

In 2001, seven countries stood out for funding more than 20% of their total health expenditure through private coverage. Each of these countries used private insurance to provide principal coverage for a segment of its population. Interestingly, these countries included Zimbabwe, a low-income country that spent US$142.00 annually per capita on health care (in international dollars, which are US dollars adjusted for purchasing power parity), and the United States, which spent the highest amount on health care in the world (US$4887.00 per capita). Three of these seven are adjoining nations in sub-Saharan Africa (Namibia, South Africa and Zimbabwe) and three are in South America (Brazil, Chile and Uruguay). These six countries all received significant numbers of European immigrants, but the countries in the Americas won their independence much earlier, and consequently developed health insurance institutions over a longer period of time and in parallel with similar developments in Western Europe. By contrast, health insurance schemes in the African countries, which were established under colonial governments, have developed independently for only a few decades.

Implications for policy-makers in developing countries

As this article shows, private health insurance is more widespread than public debate may lead us to believe. Many developing countries have private insurance schemes that serve their middle class and may also afford some degree of financial protection for the poor. Many developed countries use supplementary private insurance to fill gaps in their publicly funded systems and to pay for an increasing demand for health services.

As policy-makers in developing countries consider whether they will allow private insurance to emerge or, if it already exists, how they can better manage the market, a few lessons are worth noting. First, no high-income or middle-income country uses private coverage as the primary method for insuring populations who are poor or at high risk. Even in the United States, which has the largest private insurance market in the world, poor people and elderly people are covered through large, publicly funded programmes. Thus, private insurance, like many social insurance programmes, provides an opportunity for those who are employed and those who can afford it to contribute directly to the costs of health care, and it serves as a mechanism to capture private funds to finance growing demands on the health-care system. In countries with limited public resources it allows tax revenues to be targeted at services to provide health care for the poor.

Second, government stewardship of health insurance markets is critical to their effective functioning. Developed countries that rely on private insurance to cover large segments of their
population, or in which private insurance plays a prominent role, intervene significantly in the market to ensure adequate consumer protection and equity. Through policies, incentives and regulations they essentially “conscript private insurance to serve the public goal of equitable access. Although we recognize that the institutions necessary for stewardship are often weak in developing countries, it can be argued that the challenge of regulating health insurance markets is no more complex than operating an efficient, high quality public system of hospitals and clinics. Indeed, the oversight of private insurers may conform more closely to the comparative advantages of government.

Finally, the experiences of Germany, the Netherlands and Sweden show that as countries move towards universal coverage the role of private health insurance may change. When public funding is low, private insurance can serve as a transitional mechanism by building capacity and providing financial protection for certain segments of the population, thus allowing limited tax revenues to be directed towards the public goods and vulnerable groups. The institutional capacity, information systems, and skills involved in regulating private health insurance may later be useful in managing publicly funded schemes as they expand.

Whether a country considers private health insurance to be a transitional measure on the road to developing a comprehensive publicly funded system, a predominant form of insurance coverage in future, or an unwelcome but irrepressible guest, private health insurance will be a factor in health financing. The challenge is to choose how to use it wisely.

References


III. INVITED ARTICLE II

Technology for tele-care services supporting elderly citizens living independently at home (“aging in place”)

*By Nicolas Pangher*

Introduction

The demographic changes in the developed countries, which are leading to the so called “inversion of the demographic triangle”, will have a most dramatic impact on these societies. An increasing number of older citizens, with reduced physical and mental abilities and most often also with chronic and degenerative diseases, will need support in order to remain independent and “age in place” in their homes. Independent living is an important target not only because it usually represents an important wish of the older person, who would like to maintain a good quality of life, but also because it reduces the burden on hospitals and long term care facilities, which represent expensive care settings. “Aging in place” represents an important element of a new strategy for increasing the quality of healthcare while keeping costs under control: moving from what Andy Grove, Chairman of Intel Corp., calls the “mainframe age” of healthcare to a more distributive model, where each single house becomes a setting for preventing or managing diseases.

A fundamental issue in developing an “aging in place” strategy must consider the incidence of disabilities and diseases: caregivers have to face a complex challenge, where preserving a good health status is necessary in order to allow elderly citizens to remain independent.

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570 billion USD
Year 2000

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<th>Break down of spending by disease in Europe</th>
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<td>Spain 39</td>
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<td>Acute diseases</td>
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Increase due to:
- Aging Population
- Lifestyle

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<th>Break down of spending by care providers</th>
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<tr>
<td>Social Service</td>
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<tr>
<td>13%</td>
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<tr>
<td>Drugs and medical devices</td>
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<td>19%</td>
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<td>Hospitals</td>
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Figure 1. Annual healthcare spending in Europe: US$ 570 Bln
Source: OECD, World Health Organization, Center for Disease Control USA, 2000 data

In most countries the organization of social and health services are separated, but home care services are composed by social and healthcare element in a unique framework. In this article the technological framework necessary to support elderly citizens aging in their homes will be presented.
The technological framework

Two key components make up the framework for tele-home care services:
- the Operations Centre,
- the E-Health backbone.

The operations centre is a call centre where skilled operators are constantly following elderly persons at home and offering increasingly complex services. A basic set of services is based on the communication between the centre and the citizen:
1. Tele-emergency: the person has an integrated microphone and panic button that allows the immediate contact to the centre, where the problem can be described talking.
2. Tele-control: the operators call regularly the persons at home, checking their general condition and identifying possible social and health problems.

The simple panic button can be integrated with other environmental sensors that allow the monitoring of dangerous situations and alarms: movement sensors allow the detection of falls or gas sensors can detect the presence of dangerous emissions from a kitchen or the presence of an excess of carbon monoxide in the house.

The operations centre can also become the key component to a more coordinated approach where common social and health care protocols are shared between the social services operators, the healthcare services operators, the family and the patient.

Some examples of these tele-services are listed below:

1. Therapy support: the operators check that the person is following specific therapies prescribed by their family doctors.
2. Diet support: the operators check that the person is following the diet designed for them to prevent or keep a specific disease under control.
3. Social Service support: coordinate the different social services interventions, such as warm food delivery program, social assistant visits, socialisation programs and communications to family and friends.

4. Chronic care management: support the patient in following specific protocols for the management of chronic diseases, also organise the agenda for specific diagnostic tests and medical visits.

5. Complex services that are a combination of different activities, always delivered in agreement with the different social and healthcare organizations.

All these services are based on a ICT backbone, the E-Health solution. The E-Health solution is the system supporting all the activities by the operations centre, the social and the healthcare organizations. All patient data are recorded in a unique repository, therapy and disease management agendas are supported, communication procedures between the different operators are managed also allowing direct booking of medical services, medical guidelines are implemented to prevent possible acute complications, check points can be programmed to prevent medical errors.

Figure 3. The E-health solution

The basic components of the E-Health solution are

1. The Electronic Healthcare Record: the data repository is the gate to the clinical history of the patient, where medical data, signals and images are available to all operators.

2. The Communication Engine: most often there are legacy IT systems resident in different Health and Social care institutions. There is the need to ensure interoperability between
these different systems: an integration system is necessary to ensure that the right information is delivered where needed.

3. The Workflow Management System: complex processes like care protocols, medical guidelines and quality procedures need to be supported. A configurable workflow engine, where the processes can be mapped, supports all operators in following the proper path.

Telemedicine

The next step in advanced tele-care services is represented by the actual availability of biomedical sensors in the homes of the patients. It is possible to set up a virtual outpatient care setting, where the physiological signals can be easily collected and sent to the operations centre: the centre will manage the intervention of medical specialists, who will be able to evaluate the data, write the referrals and suggest eventual changes in the course of actions.

![Figure 4. The telecardiology model: following the cardiopathic patient](image)

There are systems available for the measurement of heart beat rate, respiratory rate, blood pressure, blood glucose, spirometry, pulsoxymetry, ECG: this small dimension equipment is connected to the telecommunication network. The biomedical data is forwarded automatically to the operations centre and to the medical specialists: the availability of intelligent ICT systems allows the immediate detection of anomalies, by ringing alarm bells and starting up emergency protocols. Checking these data is fundamental to monitor common diseases, such as

- Heart Failure
- Arrhythmia
- Ischemia
The operator becomes the director of operations for the disease: having under control the complete picture of the health status of the patient, he can access the different resources. This approach allows the pursuit of specific objectives:

- monitor the consumption of resources, plan the care path, define exactly the cost of patient care and therefore measure indicators of efficiency in the use of healthcare resources, a most important element in checking the increase of healthcare costs and avoid the unplanned rationing of Healthcare services resulting from the pressure to reduce costs;
- monitor the quality of medical services, implement medical guidelines and evidence-based medicine and aim to a total quality model in the healthcare services.
- follow a business process reengineering approach in order to improve the cost/benefit ratio for healthcare services.

Telemedicine also allows a completely new approach to post-acute and rehabilitation treatment, enabling early discharge from hospital settings and avoiding the need for long stays in rehabilitation institutions. Integration with simple web-based teleconferencing systems can enable direct communication between the patient and the caregivers: the possibility of visualizing the patient, together with the remote physiological monitoring data allows real time analysis of the health status of the patient and the tuning of the rehabilitation procedure.

These technologies already allow the deployment of effective tele-care services, which can enable elderly persons to “age in place”, and bring about a set of remarkable results:

- decrease in the use of acute care facilities;
- reduction of the use of healthcare institutions;
- reduction of disabilities;
- reduce complications of chronic diseases;
- delay in the need for residential care facility.

A look into the (near) future

Many technologies that are already available now or could be available in the near future will lead to a more integrated approach where tele-health care will develop into “personal wellness management”, and where complete sets of wearable sensors managed by pervasive computing tools will result in a sort of “guardian angel”: the physiological signals will be evaluated in real time by wearable intelligent systems, which will decide which procedures to activate in response to changes in the systems.

A first component of this “guardian angel” approach is the presence of wearable biomedical sensors:

- piezoelectric pressure sensors available in the form of watches are available for measuring heart and respiration rates, blood pressure;
- smart textiles are developed where electrodes, temperature and other sensors are an integral part of the textile fabric, allowing the measurement of ECG signals, body temperature and other physiological signals. A full development of inexpensive smart textiles technologies could represent a dramatic step forward towards the complete usability of telemedicine by elderly citizens: diagnostics tests will be performed just by wearing the underwear;
- wearable computing systems, with the computational capabilities to analyse vital signals and detect dangerous patterns, activating communication procedures;
- full integration with GPS technologies allow the instantaneous activation of tracking procedures in case of need of localisation when the patient is not able to communicate;
- full integration with wireless communication technology, integrating GSM or UMTS communication capabilities in the wearable
• voice recognition and automated call centre response systems will allow the inexpensive integration of biomedical data with the storage of the patient description of their state of wellness/disease.

A second element would be the full deployment of the domotics approach in the houses of the patients - here are some examples:

• bed monitoring systems, monitoring the circadian rhythm and detecting changes in sleep habits, that may be linked to wrong eating habits or negative side effects of drug therapies;
• sensors embedded in furniture, that allow the monitoring of the activities of the person, delivering important information to caregivers about physical impairments or other disabilities with respect to normal habits;
• smart cameras, with the computational capabilities to analyse directly movement patterns of the elderly persons at home and identify danger situation or even the onset of mental and physical disabilities: onset of dementia or other neurodegenerative diseases can be detected through changes in the pattern of daily activities;
• smart pill boxes, that can be programmed to remind users about their therapies, thereby avoiding adverse drug combinations and communicating directly to caregivers about the end of medication supplies;
• smart tv sets will serve as a interface for delivering reminders about social life and wellness management, such as personalised diet planning, or instructing patients with memory loss, dementia or other neurodegenerative diseases about their daily activities: if the sensors embedded in the furniture and the smart cameras detect a difficulty in a normal activity, such as preparing some hot tea, the smart tv set will start to interact with the patient, asking if help is needed and presenting a complete description on how to perform a specific activities like preparing a cup of tea.

Great expectations are connected with the development of micro and nanotechnologies: from non-invasive blood analysis to all sorts of implantable devices that can monitor and support in real time our body functions; already now pacemakers can be programmed and can communicate to external systems. The external and implanted sensors will become an integral part of the wearable and home sensor networks.

The other revolution underway is the development of personal medicine, based on the increasing knowledge in the field of molecular biology: knowing how the “molecular engine” of each individual is working will allow the definition of a personal risk profile based on that person’s genetic structure and therefore the design of a prevention strategy that reduces the risk of actually developing a disease. Moreover the pharmaceutical therapy will be tailored to the molecular responsiveness to drugs: it is expected that drug development will result in molecules which are beneficial only to persons with specific genetic characteristics. This will result in a great role of ICT, which will inform all healthcare operators on the molecular characteristics of the patients: of course older patients will also benefit from this approach, since their molecular profiles will be available within the e-health framework.

Conclusions

The important question is: why are these tele-care services not developing at a fast rate in all aging societies? The main issue is organizational: different organizations are following the health and social problems of elderly persons, investments in technologies are usually flowing to hospitals and there is an ever increasing pressure to control the cost of healthcare; the burden of supporting elderly citizens rests with the family. One organisation investing in tele-home care is not necessarily the same one that is reaping the benefits of a technological investment. Public authorities will have to tackle this complex issue and find the real costs of the aging society, including those resulting from family care: these numbers should serve as a basis for developing public-private partnership models together with insurance companies, where insurance policies offering tele-care services should be jointly financed by the public sector and from out-of-pocket payments by the citizens. A common “aging in place” roundtable, where political authorities, insurance companies, social and healthcare services providers and technology companies sit
together, could be an important step toward the solution: these organizations should propose care models at the regional level, which represent in most developed countries the proper dimension for healthcare organization and planning. The efficacy of telecare models should be monitored scientifically as all other healthcare procedures: keeping a specific model or changing it will have to depend only on the outcome and the related costs.

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Developments in self care and its support in England

By Geoff Royston and Ayesha Dost

Health care systems are increasingly supporting and enabling self care. In England self care is being supported by improving access to health information and advice at home through the use of modern information and communication technology as in NHS Direct, a telephone and online service available nationally, and the introduction of the NHS Expert Patients Programme, which provides training to help those with chronic illness to manage their condition better themselves.

Self care and professional care

Self care has a place throughout the whole system of care, from maintenance of health and wellbeing to treatment of acute illness and management of long term conditions. It has been estimated that self care accounts for as much as 80% of all health care. Indeed in terms of care time that is almost certainly a conservative figure; in the UK for instance an average diabetic will be in contact with a health care professional for about 3 hours a year – leaving the remaining 8757 hours, over 99.9% of the total, for self care. Indeed, virtually all care has a self care element, which will tend to increase as the complexity of cases decreases and the setting becomes nearer to home (See Fig 1).

Drivers for self care

Shifts in health care have a number of underlying social, economic, technical and other drivers. Self care is no exception and the factors driving moves to more self care include people’s desire for more choice and control over their own lives, views of shared responsibility for health, pressures on the traditional health care system, the increasing availability of health information and self care skills training, and developments in health and medical technology for the home.

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* The views contained in this paper are those of the authors and should not necessarily be ascribed to the Department of Health.

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Benefits and risks of self care

The evidence base for self care is growing. There is a remarkable similarity in the effects of self care and self management interventions across a range of conditions (notably asthma, coronary heart disease, diabetes and congestive heart failure). Various research studies provide examples of benefits of self care interventions: visits to GPs can reduce by over 40%; hospital admissions can reduce by 50%; outpatient visits reduced by 17%; hospital length of stay reduced; medication intake, e.g. steroids, reduced; A&E visits reduce significantly and days off work can reduce by as much as 50%.

There are of course also risks in self care. Clinical risk is an obvious area for assessment. This extends to protecting the public against unsafe commercial self care products and services – there are for instance, safety concerns over innovations, such as genetic testing kits, or the purchase of medicines over the internet. Other hazards such as social exclusion of those with poor access to self care resources (including access to information and technology) need to be guarded against.

Supporting self care

Support for self care includes information and knowledge, training and networking and facilities and equipment (see table hereafter).

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<td>CARE</td>
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<tr>
<td>Prevention/promotion</td>
</tr>
<tr>
<td>Diagnosis</td>
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<tr>
<td>Decision on action to take</td>
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<tr>
<td>Treatment/medication</td>
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<tr>
<td>Maintenance and rehabilitation</td>
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<tr>
<td>Monitoring and evaluation</td>
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In England perhaps the most prominent example of nationally organised support for self care is the NHS Expert Patients Programme (www.expertpatients.co.uk). This programme, the first national programme of its kind in the world \(^\text{10}\) is to provide training in self care for people with chronic illness (one in three people in the UK have one or more long-term conditions). The aim is to enable people to manage their conditions better for themselves through developing problem solving skills and through the opportunity afforded by the group to members to network to exchange ideas and give mutual support. The Programme aims for equality of access to all groups of people whatever their long term condition, age, ethnicity or geography. The course materials are translated in different languages and also available in audio and braille. Early results are promising \(^\text{11}, \text{12}\).

Modern communication systems and information technology can help empower and support people to care for themselves and their families \(^\text{13}\). In England the development of NHS Direct - national health information and advice services available on telephone, internet (www.nhsdirect.nhs.uk) and digital TV – is a key and highly successful \(^\text{14}, \text{15}\) innovation. The NHS Direct helpline is now handling over 6 million calls a year and regularly receives patient satisfaction ratings of over 95%.

Networks are an organisational form that has been receiving increasing attention in recent years \(^\text{16}\). Health care networks are important in supporting self care. Firstly, the NHS is increasingly becoming a network organisation. People can make first contact with the NHS through an ever expanding number of gateways – GPs, A&E Departments, NHS Direct, Walk-in Centres, pharmacies and so on. Secondly, networks of people, e.g. those with long term conditions, are supporting each other in self care groups, often with quite impressive results \(^\text{17}, \text{18}\).

**Conclusion**

Although the importance of self care as a major if hidden part of health care has been long recognised \(^\text{19}\) it is however now receiving increased attention as the need for “patient centred” and “close to home” services become paramount. In the UK self-care features as one of the key pillars of the National Health Service (NHS) Plan \(^\text{20}\) setting out the UK Government’s vision for the future of health care in Britain. The plan states in a section on self care “The frontline in healthcare is the home. Most healthcare starts with people looking after themselves and their families at home. The NHS will become a resource which people routinely use every day to help look after themselves.” The NHS is seen as increasingly becoming a system that enables self care and the same is likely to be true in healthcare systems throughout Europe and beyond.

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\(^\text{19}\) Ferguson T, From patients to end users, *BMJ*, 2002 (9 March), 324, 555-556.

V. INVITED ARTICLE IV

Legitimacy of Benefit Decisions in Health Care - A Comparative Perspective

By Stefan Greß*, Dea Niebuhr+, Heinz Rothgangγ and Jürgen Wasem†

One of the primary factors driving health care costs is the continual development of new health care services – including new drugs as well as new diagnostic and therapeutic devices and procedures. Procedures and criteria to control the entry of innovations into health care systems may be an important tool to control health care costs and to improve the effectiveness of services provided as well (Harris et al. 2001). The purpose of this paper is to evaluate procedures and criteria for determining the benefit package in three European countries – Germany, Switzerland and England and to derive policy conclusions for optimizing benefits decisions in these and other countries (for a more comprehensive overview see Greß et al. 2005).

All three countries have in common that they have central institutions for making benefits decisions that are binding for insurers in the mandatory health insurance system (Germany, Switzerland) or health authorities (England) as well as for all providers. They also have in common that Health Technology Assessment (HTA) increasingly affects benefit decisions. However, there are also important differences. In the German social health insurance system the state has delegated most of the responsibility for benefits decisions to the corporatist meso-level – while in the similar Swiss system this responsibility continues to be with the state. In England, the state has delegated most responsibilities for benefits decisions to an independent agency. These countries therefore represent three different types:

- a national health system with a public agency to decide about the appropriateness of new health technologies (United Kingdom)
- a social insurance system where such decisions are taken by the state (Switzerland) and
- a social insurance system where such decisions are taken by corporatist arrangements (Germany)

For the appraisal of procedures and criteria for benefits decisions, we assume that “legitimacy” is a decisive factor for the acceptability of procedures and criteria. Legitimacy is a continuous rather than a dichotomous variable, which means that we can talk about more or less legitimacy, rather than legitimate vs. illegitimate procedures and criteria.

Our concept of legitimacy is based on the input-output model of functional democracy theories. Input-based theories assume that legitimacy is maximised by a high level of representation and participation. Output-based theories assume that legitimacy is maximised by high performance of the decision-making system. We assume that both dimensions of legitimacy are not perfectly correlated which implies that there might be trade-offs between the input and the output dimension of legitimacy.

According to our definition legitimacy is therefore the highest, the higher input- and output legitimacy are. In order to operationalise the input dimension, we assume that procedures are legitimate if they provide a high degree of transparency and representation. With respect to the

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γ University of Applied Sciences Fulda, Germany
output dimension, we define procedures as legitimate, if they produce “good results”, i.e. consistent decisions which also take into account the relationship between costs and clinical outcomes as a decision criterion.

In England procedures for benefit decisions are transparent and involve a high degree of representation. The same is true for the prioritization of services, which also follows publicly known criteria. All stakeholders are well informed at any stage of the process. The final guidance of NICE is made available for health care professionals as well as for patients. Moreover, all stakeholders including patient-focused organization are represented on the decision-making institution.

In contrast to England, there are severe deficiencies with regard to transparency and representation in Germany and Switzerland. In Germany, only the final decision is published – albeit without differentiation according to the informational needs of recipients. There is no transparency about the prioritization of services and no transparency about the rest of the decision-making process. Transparency of procedures is even worse in Switzerland. The whole process of decision-making is highly intransparent – except for short press releases about the final decision. However, in contrast to Germany, representation in Switzerland is much more comprehensive. First, the decisions are made by representatives of an elected government in Switzerland while in Germany the government only examines the decisions for formal errors. Second, the decision-making institution in Switzerland is supported by committees with a high degree of representation of stakeholders.

Consistency of decision-making is evaluated with respect to two criteria: Consistency is regarded as high if

1. decisions are solely based on rational criteria that have been agreed upon,
2. decisions are applicable for the whole health care system and not only for sub-sectors.

In general, the decision-making in England is quite consistent. Guidance of NICE is applicable to the whole health care system – for ambulatory care as well as for inpatient care and for pharmaceuticals. Moreover, the procedure for the appraisal of services at NICE is highly standardized which provides a good precondition for consistent decision-making. Yet the credibility of NICE has been damaged by inconsistent decision-making on the pharmaceutical Relenza in 1999 and 2000 (Syrett 2003).

Similar to England, the decision-making process in Germany is also highly standardized. However, the decision-making bodies consist almost entirely of stakeholders of the system which raises questions on their neutrality and the role private interests play in a public decision process. This is illustrated by the lengthy decision-making process on the coverage of acupuncture. Although there was no evidence for acupuncture to be effective, acupuncture was included in the benefits catalogue with some restrictions – sickness funds strongly favored the coverage of acupuncture, since most of the funds funded acupuncture anyway in order to attract new members. Thus, the criteria set by the committee were not decisive in the decision-making process. What is more, different principles for different health care sectors are applicable in Germany: Services are financed unless formally excluded in hospital care and services are not financed unless formally included in ambulatory care. Similar to Switzerland, decision-making on pharmaceuticals is applicable for ambulatory care only.

However, overall decision making is more consistent in Switzerland than in Germany, since one decision-making body is responsible for ambulatory care as well as for inpatient care. However, due to the intransparent decision-making in Switzerland, we are unable to assess the constant application of decision criteria. If information about the relationship between costs and the clinical outcome of services is available, ideally decision makers can choose those interventions with the best ratio of outcome and costs (Gold et al. 1996). According to our analysis of published benefits decisions, in Germany and Switzerland, the decision-making bodies base their decisions on the effectiveness of services only. More effective services will be included and less effective services will be excluded. If services are not proven to be marginally effective, they are not included – even if they are cheaper.
Decision makers in Germany and Switzerland do not explicitly use costs of services as a decision criterion at all, although they are required to do so by law. Accordingly, a potential increase of the overall efficiency of the health care systems in Germany and Switzerland is not realized so far.

In England, costs influence the decisions of NICE at least in some cases. Methodological problems are reflected in the fact that information about the costs of services is not always available. Even if information on costs is available, NICE does not use it as an exclusive decision criterion. Other criteria are also included such as the burden of disease and the effect of uncertainty of decision makers concerning the evidence of costs (Devlin and Parkin 2004).

The sheer number of benefit decisions has been limited in all countries. It has been highest in Switzerland and lowest in Germany. Moreover, in all three countries basically only new services have been reviewed. Due to the limited resources of the decision-making bodies and the time-consuming appraisal process, only very rarely existing services have been assessed.

References


First Announcement

Conference

on

Longevity - A medical and actuarial challenge

Third Geneva Association Conference on Health and Ageing

Munich
24 November 2005

hosted and co-organised by

GE Frankona Rückversicherungs-AG

Joint conference dinner on 23 November 2005

This conference will deal with the medical and actuarial challenges that longevity raises for insurance activities. This has of course wide-ranging impact on our economic and social systems in general.

Participants will come from insurance and reinsurance companies, universities and related institutions. The conference will only comprise a limited number of participants to guarantee an active exchange of opinions and animated discussions. Should you want to contribute to or simply participate in this conference, please contact the general secretariat of the Geneva Association (secretariat@genevaassociation.org).

Call for Papers

Special issue on Health and Ageing related topics
of
The Geneva Papers on Risk and Insurance – Issues and Practice
October 2006

A special editorial is being set-up and all papers will be subject to a refereeing process. Papers should be submit by 28 February 2006 to Christophe Courbage, special editor of this issue (christophe_courbage@genevaassociation.org)
VII. HEALTH CONFERENCES

2005

June 2-5 4th International Conference on Health Economics, Policy and Management, Athens, Greece. For further details, please visit www.atiner.gr

June 27-29 International Association of Homes and Services for the Ageing (IAHSA): Sixth International Conference, Trondheim, Norway. For more conference details and information on submitting proposals please visit: http://www.aahsa.org/iahsa/iahsaonline/Proposal/default.asp

July 6-7 Workshop advancing the methodology of discrete choice experiments in health economics, Gran Canaria, Canary Islands. For further information, please visit http://www.ulpgc.es/webs/wdce

July 10-13 International Health Economics Association (IHEA) - 5th World Congress: Investing in Health, Barcelona, Spain. For further information, please visit http://healtheconomics.org/barcelona/general-information/info.html

August, 21-25 International Epidemiological Association: 17th International Conference, Bangkok, Thailand. For details please visit: wce2005.org

September 14-17 14th European workshop on econometrics and health economics, University College, Dublin, UK. For further details, please contact: Andrew Jones, Department of Economics and Related Studies, University of York Heslington, York YO10 5DD, UK Tel: +44-1904-433766, Fax: +44-1904-433759 E-Mail: amj1@york.ac.uk

September 18-22 17th World Congress on Safety and Health at Work, Orlando, Florida. This is an international forum of 3000 professionals who gather every 3 years to exchange ideas, research and best practices on highly topical issues in the area of Occupational Safety and Health. For further details, please visit http://safety2005.org

Sept 29/Oct 1 World Ageing & Generations Congress 2005 University of St.Gallen Switzerland. This Congress intends to provide a permanent, international, intergenerational, and interdisciplinary platform that can address this dramatic demographic transformation and the challenges it presents to individual and societal welfare. For further details, visit http://www.viva50plus.org/

November 24 3rd Health and Ageing Geneva Association on Longevity – a Medical and Actuarial Challenge, Munich, Germany. For further information please contact us at secretariat@genevaassociation.org

December 1-2 2nd International Conference on Health Financing in Developing Countries, Clermont-Ferand, France. The conference will mainly focus on four broad areas: (i) Health financing, macroeconomic issues and development strategies; (ii) Financing strategies, combining instruments, roles of stakeholders; (iii) Financing, efficiency and regulation of health systems; (iv) Evaluation, methods and case studies. For further information or to submit a proposal, visit the conference website: http://www.cerdi.org/Colloque/FSPD2005/
VIII. PUBLICATIONS ON HEALTH ISSUES

The Dictionary of Health Economics, by A.J. Culyer, Edward Elgar publication, 2004, ISBN 1-84376-208-0. This expansive Dictionary contains entries and definitions on the principals ideas encountered in health economics (including pharmacoconomics) and on key concepts in bio-statistics, demography, epidemiology, medical sociology and medicine.


The Economics of an Ageing Population – Macroeconomic Issues, edited by Paolo Onofri, Edward Egar publication, 2004, ISBN 1-84376-779-1. This book studies the effects of demographic transition on the economies of industrialised countries. The authors demonstrate that an ageing population does not necessarily lead to a reduction in growth, providing that the working population are more productive and save a greater percentage of their income.


Comparative Health Policy, by Blank Robert and Burau Viola, Palgrave, 2004, ISBN 0-333-98599-0. This book provides a broad-ranging introduction to provision, funding and governance in a wide range of health systems, systematically comparing Australia, Germany, Japan, New Zealand, the Netherlands, Sweden, Singapore, the United Kingdom and the United States.

Functional Foods, Ageing and Degenerative Disease, edited by C. Remacle and B. Reusens, Woodhead publishing, 2004. This book reviews the role of functional foods in helping to prevent a number of such degenerative conditions, from osteoporosis and obesity to immune system disorders and cancer.

IX. GENEVA ASSOCIATION PUBLICATIONS

The Geneva Papers on Risk and insurance – Issues and Practice
Vol. 30, No. 1 / January 2005

30TH Anniversary Edition
Foreword, by Patrick M. Liedtke
Introduction to the First Issue of The Geneva Papers, 1976 by Raymond Barre
The Changing Face of Risk Management (first published in 1976), by G.N. Crockford
Contributions from the 31st General Assembly of the Geneva Association, June 2004
Regulation and Insurance Economics, by Jaime Caruana, Daniel Schanté and Lucia Caudet,
Hoshihiro Kawai, Walter B. Kielholz and Rolf Nebel, Anton von Rossum
Capital Adequacy and Risk Management in Insurance, by Henri de Casstries, Nikolaus von Bomhard, James J. Schiro, Jean-Claude Trichet, John Drzik
Managing Pension Obligations in Volatile and Demanding Environments, by Richard Harvey,
Patrick Peugeot, Art Ryan
Risk Transfer and the Insurance Industry, by Gerd Häusler
Also
The Integrated Supervision of Financial Markets: The Case of Switzerland, by Philippe Gugler
Terrorism Risk Coverage in the Post-9/11 Era: A Comparison of New Public-Private Partnerships
in France, Germany and the U.S., by Erwann Michel-Kerjan and Burkhard Pedell
Managerial Use of Discounted Cash-Flow or Accounting Performance Measures, by Paul J.M. Klumpes

The Geneva Papers on Risk and Insurance Theory
Vol.29, No.2 / December 2004

Opting Out of Public Insurance: Is It Socially Acceptable?, by Carine Franc and Laurance Abadie
Portfolio Selection with Quadratic Utility Revised, by Timothy Mathews
Utility and the Skewness of Return in Gambling, by Michael Cain and David Peel
Reimbursing Preventive Care, by Francesca Barigozzi
Relative Guarantees, by Snorre Lindset

Recent Working Papers Series “Etudes et Dossiers”

No. 287 / November 2004
International Insurance and Finance Seminar
London, 11 – 12 November 2004

No. 288 / December 2004
2nd Geneva Association Health and Ageing Conference
Trieste, 21 - 23 October 2004

No 289 / December 2004
2nd Meeting of the Geneva Association’s Global Insurance Communications Network
Zurich, 6-7 December 2004

No 290 / January 2005
M.O.R.E. 19 Seminar – The role and relevance of insurance for manufacturing industries
Bordeaux, 8-9 November 2004

No 291 / January 2005
3rd and 4th Paris International Conference on Risk and Insurance Economics
9 December 2003 and 14 December 2004
X. CONFERENCES ORGANISED AND/OR SPONSORED BY THE GENEVA ASSOCIATION

2005

May
11-12 Hannover CRO’s Spring Workshop 2005

June
1-4 Paris (Versailles) 32nd General Assembly of The Geneva Association (members only) hosted by the French members
16-17 Berlin 11th joint seminar of the European Association of Law and Economics (EALE) and the Geneva Association

August
7-11 Salt Lake City 1st World Risk and Insurance Economics Congress, jointly organised by The Geneva Association, ARIA, APRIA and EGRIE

September
29 - oct 1 St Gallen Two sessions organised at 1st Viva 50 plus World Ageing & Generation Congress “The future of Pensions” and “Working beyond 60: Key Policies & Practices in Europe”.

October
3-4 Brussels 3rd Annual Roundtable of Chief Risk Officers, hosted by Fortis
14 Rome Montepaschi Vita Annual Forum, organised by Montepaschi Vita and The Geneva Association

November

December

2006

February
2-3 Amsterdam 8th Meeting of the Geneva Association’s Amsterdam Circle of Chief Economists (ACCE), hosted by ING

May
17-20 Munich 33rd General Assembly of The Geneva Association (members only), hosted by the German members

October
17-18 Zurich 4th Annual Roundtable of Chief Risk Officers, hosted by Swiss Re