



norden

NORDIC ECONOMIC POLICY REVIEW

CHALLENGES IN HEALTH CARE FINANCING AND PROVISION

Introduction

Tor Iversen and Sverre A.C. Kittelsen

Ageing populations: More care or just later care?

Terkel Christiansen, Jørgen Lauridsen and Mickael Bech

Lifestyle, health and costs – what does available evidence suggest?

Kristian Bolin

The economics of long-term care: A survey

Helmuth Cremer, Pierre Pestieau and Gregory Ponthiere

The role of primary health care in controlling the cost of specialist health care

Stephen Beales and Peter C. Smith

Payments in support of effective primary care for chronic conditions

Randall P. Ellis and Arlene S. Ash

An economic assessment of price rationing versus non-price rationing of health care

Luigi Siciliani

Should pharmaceutical costs be curbed?

Kurt R. Brekke, Dag Morten Dalen and Steinar Strøm

Productivity differences in Nordic hospitals:

Can we learn from Finland?

Clas Rehnberg and Unto Häkkinen

The *Nordic Economic Policy Review* is published by the Nordic Council of Ministers and addresses policy issues in a way that is useful for in-formed non-specialists as well as for professional economists. All articles are commissioned from leading professional economists and are subject to peer review prior to publication.

The review appears twice a year. It is published electronically on the website of the Nordic Council of Ministers: www.norden.org/en. On that website, you can also order paper copies of the Review (enter the name of the Review in the search field, and you will find all the information you need).

Nordic Economic Policy Review

Challenges in health care financing and provision

Tor Iversen and Sverre Kittelsen (Editors)

TemaNord 2013:514

Nordic Economic Policy Review
Challenges in health care financing and provision
Tor Iversen and Sverre Kittelsen (Editors)

ISBN 978-92-893-2496-0
<http://dx.doi.org/10.6027/TN2013-514>
TemaNord 2013:514

© Nordic Council of Ministers 2013

Cover photo: Pub. Unit/NCM

Print: Rosendahls-Schultz Grafisk
Copies: 40

Printed in Denmark



This publication has been published with financial support by the Nordic Council of Ministers. However, the contents of this publication do not necessarily reflect the views, policies or recommendations of the Nordic Council of Ministers.

www.norden.org/en/publications

Nordic co-operation

Nordic co-operation is one of the world's most extensive forms of regional collaboration, involving Denmark, Finland, Iceland, Norway, Sweden, and the Faroe Islands, Greenland, and Åland.

Nordic co-operation has firm traditions in politics, the economy, and culture. It plays an important role in European and international collaboration, and aims at creating a strong Nordic community in a strong Europe.

Nordic co-operation seeks to safeguard Nordic and regional interests and principles in the global community. Common Nordic values help the region solidify its position as one of the world's most innovative and competitive.

Nordic Council of Ministers

Ved Stranden 18
DK-1061 Copenhagen K
Phone (+45) 3396 0200

www.norden.org

Content

Challenges in health care financing and provision <i>Tor Iversen and Sverre A.C. Kittelsen</i>	7
Ageing populations: More care or just later care? <i>Terkel Christiansen, Jørgen Lauridsen and Mickael Bech</i>	23
Comment by <i>Anna Lilja Gunnarsdottir</i>	55
Lifestyle, health and costs – what does available evidence suggest? <i>Kristian Bolin</i>	59
Comment by <i>Tinna Laufey Ásgeirsdóttir</i>	99
The economics of long-term care: A survey <i>Helmuth Cremer, Pierre Pestieau and Gregory Ponthiere</i>	107
Comment by <i>Þórólfur Matthiasson</i>	149
The role of primary health care in controlling the cost of specialist health care <i>Stephen Beales and Peter C. Smith</i>	153
Comment by <i>Helgi Tómasson</i>	187
Payments in support of effective primary care for chronic conditions <i>Randall P. Ellis and Arlene S. Ash</i>	191
Comment by <i>Jørgen T. Lauridsen</i>	211

An economic assessment of price rationing versus non-price rationing of health care

<i>Luigi Siciliani</i>	213
Comment by <i>Mickael Bech</i>	243

Should pharmaceutical costs be curbed?

<i>Kurt R. Brekke, Dag Morten Dalen and Steinar Strøm</i>	247
Comment by <i>Helgi Tómasson</i>	275

Productivity differences in Nordic hospitals:

Can we learn from Finland?

<i>Clas Rehnberg and Unto Häkkinen</i>	277
Comment by <i>Thorvaldur Gylfason</i>	317

Challenges in health care financing and provision

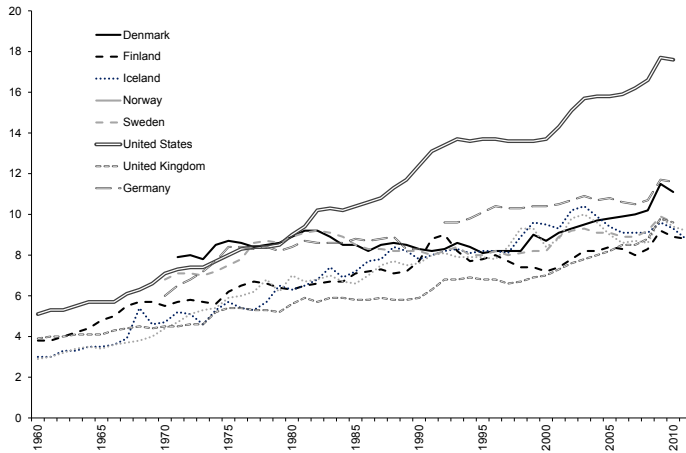
Tor Iversen* and Sverre A.C. Kittelsen**

Good health is highly valued and a prerequisite for taking full benefit of a rising level of income. Hence, the willingness to pay for improved health is likely to rise sharply with income, and so is the willingness to pay for health care, since health care is a vital input in the production of health. Hall and Jones (2007) claim that as people get richer and consumption rises, the marginal utility of consumption falls rapidly. Furthermore, the marginal utility of life extension does not decline and spending on health to extend life allows individuals to purchase additional periods of utility. As a result, the optimal composition of total spending shifts toward health, and the health share grows along with income. In projections based on their quantitative model, they find that the optimal health share of spending seems likely to exceed 30 percent in the US by the middle of the century. This is consistent with the development of health care spending as a percentage of GDP illustrated by Figure 1. All Western countries have had an increase in the share of GDP used on health care since the 1960's. While the US has continued on a rising trend, the share seems to have more or less stabilized in the Nordic and other European countries since the 1990's. Note that the figure does not show the actual level of health care received by the citizens, since the countries also vary in income, cost level and the extent of informal care.

* Department of Health Management and Health Economics, University of Oslo, tor.iversen@medisin.uio.no.

** Ragnar Frisch Centre for Economic Research, Sverre.kittelsen@frisch.uio.no.

Figure 1. Health expenditure as percentage of GDP, Nordic and selected non-Nordic countries



Source OECD (2012).

There are a number of trends that influence health care expenditure besides income. On the demand side, there are the demographic changes that are summarized as an ageing population due to higher life expectancy and changing fertility, changes in lifestyle that may lead to obesity and other risk factors, and environmental changes that may influence health. On the supply side, new and often expensive medical technology gives more and better treatment, and increasing female labour force participation has reduced informal care given in the family. Even though the health care needs are changing and new technologies improve human happiness and welfare, the expansion of health care still needs to be financed. The characteristics of the markets for health insurance and health care make the expansion of health care challenging. These characteristics determine the trade-offs between various objectives and overall goals in the health sector and constitute health economics as a separate field of applied economics. The authors of this issue of the *Nordic Economic Policy Review* have been invited to deal with some of the main challenges in the financing and organisation of health care in a Nordic setting.

Risk aversion and uncertainty about future health imply demand for health insurance to cover future costs of health care. The purpose of health insurance is to relieve the citizens from bearing the financial risk of major health expenses. Hence, health insurance implies that there is a

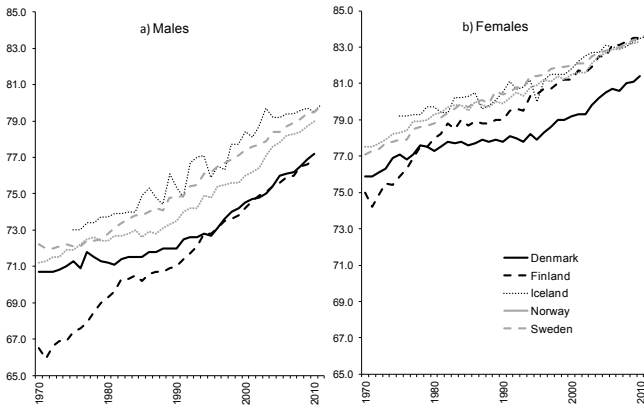
third party that pays for health services. Such third-party financing characterizes all insurance policies, whether public or private, and represents no efficiency problem in itself. The potential efficiency problem arises when information about disease prevention, disease risk, cost and quality of care is unevenly distributed between the three parties; i.e. the patient, the insurance company and the health service provider. For instance, health insurance implies moral hazard and reduced incentives for disease prevention, as described by Kristian Bolin. Variation in disease risk and the degree of risk aversion in the population combined with insurance companies knowing less about the individuals' disease risks than individuals themselves, result in market imperfections due to adverse selection and not everyone may get the insurance coverage they want. Hence, the unequal distribution of information can entail an argument for mandatory insurance. Mandatory insurance with income-dependent premiums can also be justified by the median voter's interests. Uncertainty about future risk groups as well as health-related altruism contributes to a more robust public financing. Public funding will be harder to maintain the greater variability there is in disease risk, the greater the proportion of the population that is at high risk of disease, and the more costly the diagnosis and treatment of disease. The role of the public sector in health care insurance and provision is significant in all developed countries and more prominent in the Nordic countries than in most other countries.

Small patient co-payments imply that patients will demand health care even if their valuation of the marginal health improvements from care is less than the marginal cost of providing health care. Hence, the price mechanism will not fulfil its role of allocating resources to and within the health sector. There is a need for other types of rationing in addition to the limited rationing by means of the price mechanism. Waiting times, implicit prioritizing by service providers and governments' explicit prioritizing are used as rationing mechanisms in the Nordic countries. Luigi Siciliani elaborates on the optimal balance between these instruments for rationing health care in his article.

The relationship between insurer and health service provider is characterized by the insurer having less access to information about the service provider's operations than the service provider itself. This applies to information about the service provider's efforts to reduce costs, information about the patient composition, information about the possible

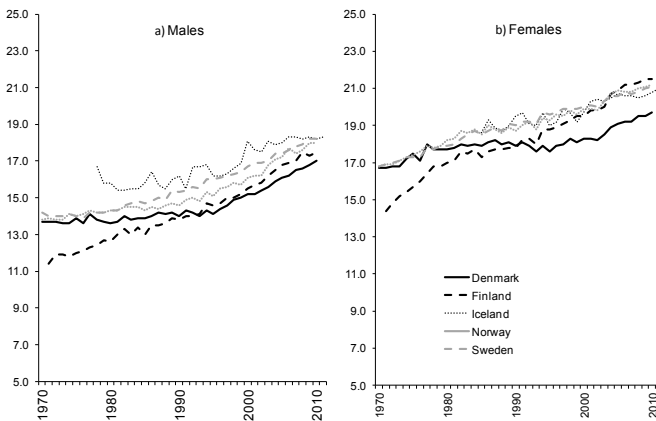
patient selection and information about the quality of care provided. The problems of asymmetric information for the insurer are raised from several perspectives by Rehnberg and Häkkinen (hospitals), Brekke, Dalen and Strøm (pharmaceuticals), Ellis and Ash (risk adjusted capitation payment), Beales and Smith (primary care and specialist care) and Cremer, Pestieau and Ponthiere (long-term care).

Figure 2. Life expectancy at birth, Nordic countries



Source: OECD (2012).

Figure 3. Life expectancy at 65, Nordic countries



Source: OECD (2012).

A growing proportion of old people in the population is the main driver of health care demand besides income. This development has its background both in previous and present birth rates and in the development of longevity. During recent years, there has been a remarkable increase in the longevity of old people in the developed part of the world. Figure 2 illustrates how life expectancy has increased by 5-10 years in all Nordic countries over the past four decades. Eggleston and Fuchs (2012) show that at the beginning of the twentieth century, in the United States and other countries at comparable stages of development, most of the additional years of life were realized in youth and working ages; and less than 20 per cent were realized after the age of 65. Now, they find that more than 75 per cent of the gains in life expectancy are realized after the age of 65 – and that share is approaching 100 per cent asymptotically. They assert that the new demographic transition is a longevity transition and ask how individuals and societies will respond to mortality decline when almost all of the decline will occur late in life. In the Nordic countries, the increase in life expectancy at the age of 65 shown in Figure 3 is particularly noticeable after 1990. Christiansen, Lauridsen and Bech elaborate on an important part of this question in this issue by asking "Ageing populations: More care or just later care?". Cremer, Pestieau and Ponthiere take the issue further with their survey of the economics of long-term care for the elderly.

The development of unhealthy lifestyles in rich societies has recently attracted much attention. In particular, the growing occurrence of obesity is a concern both because of its negative health effects and its potential effects on the demand for health care. Lifestyle and the related health and cost constitute the topic of Kristin Bolin's paper. Tinna Laufey Ásgeirsdóttir elaborates on the issues related to the deviance from rational behaviour in her comment to Bolin's paper.

The development in medical technology has contributed to increased longevity and improved quality of life (see, for instance, Cutler, 2004 for examples). The development in medical technology has also contributed to increased costs of health care, since patients who were previously offered no care or inferior care are now offered more effective care that helps them survive. In public insurance systems, it becomes a social concern what level of costs that is acceptable for obtaining a marginal gain in longevity and quality of life, and what instruments that are available for

implementing the socially optimal amount and composition of health care. These issues are raised at a fundamental level by Siciliani, specifically for pharmaceuticals by Brekke, Dalen and Strøm and for hospitals by Rehnberg and Häkkinen. Rehnberg and Häkkinen are in particular interested in what role comparative studies can have as an instrument for raising hospital productivity.

Taken together, the ageing population, development in medical technology and unhealthy life styles give rise to an increasing *occurrence of chronic diseases*. While patients previously died of their diseases, they now live with their diseases for more years. Patients with chronic diseases typically demand health care from many types of providers. Hence, their access to health care and the coordination of their many different needs for health care is a crucial issue. Beales and Smith review and discuss the literature on whether or not primary care can take care of patients at a lower cost than specialist care. Ellis and Ash describe and discuss how payment systems for patients with chronic diseases can be constructed to avoid poor access for patients who need many services.

1. Ageing populations: More care or just later care?

The increasing share of elderly in European countries stems partly from increased life expectancy and partly from decreasing fertility among the younger generations. The effect of ageing on health care expenditure depends crucially on the development of the health of the elderly, as well as on other factors such as medical technology and the institutions of the health care systems in each country. It is generally observed that health care utilization increases with age, and a large proportion comes at the end of life. In a pessimistic and costly scenario, increasing life expectancy will not increase the healthy lifespan but will just expand the period of ill-health at the end of life. At the other extreme, health technology improvements may imply shorter periods of ill health at the end of life and therefore lower expenditure for each person. In such a scenario, health care expenditures need not increase even if the share of elderly does.

Terkel Christiansen, Jørgen Lauridsen and Mickael Bech survey the studies that have been made on the expenditure effect of ageing. In studies based on data on individuals from a single country, it is possible to

distinguish between health care costs that increase with age in general and those that are due to proximity to death. The results in these studies are mixed, but while proximity to death generally incurs large costs, many studies only find modest increases in age-specific costs. Some even find declining age-specific costs for the very old above e.g. 80 or 85.

Studies based on individuals in one country have difficulties in capturing the effect of life expectancy, or of different institutional arrangements, at least in the short term. Instead, one can use comparisons of countries over several years. In these studies, income is always the main determinant of health care expenditure, although health care expenditure is publicly regulated in most countries. While different studies show different results due to differences in methods and data, the general impression is that ageing as such can be expected to cause only a modest increase in health care expenditure per capita in the future. This conclusion is supported by the authors' own empirical study, based on 15 EU countries.

2. Lifestyle, health and costs – What does available evidence suggest?

In this article, Kristian Bolin provides a summary of what is known regarding (1) health risks, and healthcare and productivity costs, and (2) the effectiveness and cost-effectiveness of primary and secondary prevention programmes associated with smoking, alcohol abuse, nutritional choices, physical activity, and obesity. Health risks associated with smoking are well-established and quantitatively large compared with other health risks included in the study. Consequently, healthcare costs and costs related to productivity that can be attributed to smoking are fairly well-known, and both primary and secondary effective and cost-effective preventive interventions against smoking are available. The health risks associated with alcohol consumption are also considerable – although not as high as those for daily smokers – for those who consume excessive amounts. The risks decrease with consumption and some studies have even found beneficial health effects associated with moderate consumption. Alcohol-attributable healthcare and productivity costs are also relatively well-known. Some evidence suggests that primary and secondary alcohol pre-

vention may be both effective and cost-effective. The evidence, however, is less reliable than the corresponding evidence for smoking.

The health risk, and healthcare and productivity costs, associated with inadequate physical activity and obesity are fairly well-known. However, healthcare and productivity costs associated with specific dietary patterns, and specific foods, are disputable, due to the unclear relationships between diet and future health outcomes. The cost-effectiveness of interventions designed for changing health behaviours is largely unknown. Both primary and secondary anti-obesity programmes that target child and adolescent behaviour are potentially effective.

3. The economics of long term care: A survey

This article by Helmut Cremer, Pierre Pestieau and Gregory Ponthiere presents an overview of the economic literature on long-term care. It first presents some evidence on the extent of the problem of disability in very old age. With an ever-increasing longevity, the needs are expected to increase in most countries and this exerts pressure on the three institutions providing LTC: the family, which is by far the main provider, the market and the state. Each of these institutions raises specific problems. The role of the family is under pressure because of the increasing rate of labour market participation among women aged fifty and plus, because of the increasing mobility of children and because of changes in family values. The private market for LTC insurance remains very thin almost everywhere. This is due to a variety of reasons that are both economic and social. Finally, in most countries, the state remains reluctant to offer a universal social insurance programme for long-term care that would advantageously replace the current, often quite cumbersome means-tested systems.

The main lesson emerging from the overview is that there is a great deal of interaction between these three institutions, the most noticeable being the partial crowding out exerted by public programmes on family solidarity and on the private insurance market. Another lesson is that, even if it were possible, returning to the old scheme of family solidarity is not necessarily desirable as it can hide situations of forced solidarity in which case human and social costs can be huge.

In the discussion of policy alternatives, the authors distinguish between direct and indirect involvement of the state. Directly, the state faces a tough choice between a fully-fledged universal coverage social insurance and a means-test programme restricted to the poorest. The first type of system is much more expensive. However, the second can only be effective if the means testing is rigorously enforced (which is currently not the case in many places). The authors argue that public action can be useful to foster the LTC insurance market and to keep family and community solidarity as active and effective as possible. Mere tax incentives would be insufficient. The government should provide education and information on the risks of dependence and the type of services that each type of dependence requires. Many people seem to be unprepared for the risks of dependence, in the same way in which they were unprepared for the risk of retirement half a century ago.

4. The role of primary health care in controlling the cost of specialist health care

The motivation for the article by Stephen Beales and Peter C. Smith is the concern in developed health systems that increases in health expenditure have reached unsustainable levels, leading to an urgent search for expenditure control mechanisms. One particular concern is the use of hospital inpatient services that is supposed to be ‘avoidable’ in most OECD countries. According to the authors, the belief is that – with timely, high quality intervention in primary care – unnecessary specialist health care utilization could be markedly reduced, with associated cost savings and improved quality of life for patients. The authors review the empirical evidence for three broad forms of primary care intervention: reducing or delaying the onset of disease; reducing the use of specialist care once a clinical condition has been identified; and reducing the intensity of use of specialist care once a need for such care has arisen. They find little persuasive evidence on the macro benefits of primary care spending in terms of reduced overall spending, and – with a few exceptions – the micro evidence is small scale and inconclusive, although there are indications of promising policy options for future experimentation. Then, they examine the role of incentives in promoting the cost containment role of primary

care. In general, the empirical results of experiments are found to be disappointing. The paper concludes with a discussion of why this might be the case and the associated policy implications. They state that the experience in all health system reforms is that a reform stands little chance of success without clinical leadership and engagement, including at the most senior level. They also state that disappointing results from some pilot schemes may be due to their small scale, or the short time for which they are implemented. Finally, the authors note that the distinction between primary and secondary care may become increasingly blurred in future years. As the number of older people with complex chronic medical needs increases, so does the demand for integration of care, and personalized medical treatment will grow. Whether there will be a provider response to such demand is likely to depend on the reform of provider payment mechanisms, particularly for secondary care. At present, these usually reward discrete episodes of care. In the future, payment mechanisms are increasingly likely to reward 'bundles' of care, or indeed a whole year of care, for people with complex needs. Experience in the US with the new "Accountable Care Organizations", responsible for the costs and quality of health care for a defined population (with a minimum size of 5 000 people), will be of great interest in this respect.

5. Payments in support of effective primary care for chronic conditions

How to appropriately reward bundles of care is the topic of the paper by Randall P. Ellis and Arlene S. Ash. When bundled payments are large, weak risk adjustment creates a strong incentive for practices to avoid individual patients expected to cost more than the bundled payment. Hence, there is a danger that the chronic patients in most need of care are the group that receives the poorest quality of care. Perverse economic incentives might make the group that is the focus of a health care reform end up as losers. Ellis and Ash describe and discuss risk adjustment based on their work in developing efficient risk adjustment systems in the US. The experiences have great relevance for the Nordic countries in their ambitions to coordinate health care between primary care and specialist care. Ellis and Ash assert that risk adjustment models can be calibrated

and used to establish appropriate payments and incentives for delivering superior primary care, particularly to people with chronic conditions requiring careful management, through health-based capitation payment and performance assessment in a patient-centred medical home (PCMH). The implementation of risk-adjusted primary care payment for a PCMH will be easier in Scandinavian countries where payments are made by a single payer; however, the decentralized administrators responsible for paying for primary care may face many of the same challenges that appear in the US. They address practical considerations and administrative structures that could support a risk-adjusted payment reform for the PCMH. Feasibility is supported by the experience of one health plan in the US that conducted a “virtual all-payer” PCMH pilot. Their approach could serve as an inspiration also for policy-makers and health care administrators in the Nordic countries.

6. An economic assessment of price rationing versus non-price rationing of health care

Although health insurance, public or private, aims at reducing the costs to the patient if and when the need arises, it is generally assumed that if health care was freely available, utilization would be higher than optimal and the expenses would be excessive. Thus, health care has to be rationed in one way or another. This article by Luigi Siciliani reviews the relative merits of three different forms of rationing: i) price rationing, which takes the form of a co-payment or a coinsurance rate, and two forms of non-price rationing, ii) rationing by waiting, when a patient is placed on a waiting list before receiving treatment, and iii) explicit rationing, when the patient is explicitly refused treatment. Both waiting times and co-payments can help contain excess demand, though the demand is generally inelastic with respect to waiting times and co-payments (elasticities of -0.1 or -0.2).

With price rationing, the patient or a physician, acting as the patient’s representative, weighs the benefits of the health care against the price, a mechanism which in most markets leads to a socially optimal use of the service. This does, however, defeat the very objective of health insurance, which is to reduce out of pocket expenses when the need arises. In addi-

tion, it is inequitable if the use of health care depends more on patients' income than on their real need. Information problems imply that it is not always easy for the patient to know the true benefit.

Rationing by waiting time in public health care works by either shifting some patients to the private sector, by deterring doctors from referring patients to treatment, or by making patients give up waiting. While the first mechanism may be good for redistribution since the rich pay for their own treatment, the informational problems mean that it may not be the patients with the lowest needs that are rationed. Most importantly, while price rationing incurs a cost to the patient but gives income to the provider or insurer, waiting time incurs a real cost for the patients without giving a benefit to anyone.

Explicit rationing can potentially generate higher patient welfare than co-payments or waiting times, since there are no price or waiting costs for the patients. If doctors are able to assess the health needs of the patients, then treatment is given to those with the highest benefit. Explicit rationing can take the form of a list of treatments that are not covered by the public health insurance, but more often one needs to set a threshold so that some patients get treatment and some do not. This may be costly for the doctor, who has to act as a gatekeeper, but the costs to the doctor can be reduced by more precise clinical guidelines. The author recommends an increased development of such guidelines to facilitate more use of explicit rationing.

7. Should pharmaceutical costs be curbed?

Both pharmaceutical innovations and the ageing of the population explain the increasing importance of pharmaceuticals in health care, which is here discussed by Kurt Brekke, Dag Morten Dalen and Steinar Strøm. Pharmaceuticals account for almost a fifth of total health spending in OECD-countries. However, in the Nordic countries, the expenditure has stabilized over the past few years, especially in Norway where the expenditure has not increased since 2004. There are considerable differences in both expenditure and price level between countries.

Due to the importance of patent protection and insurance coverage, pharmaceutical markets are subjected to economic regulation – both on

the supply side and the demand side. This article explains the special features of pharmaceutical markets and the Nordic markets in particular, before explaining the main regulatory policy measures taken by governments in these countries. To encourage the development of new drugs, patents protect the innovating company from direct competition. Policy instruments are important in avoiding excessive use or pricing of patented drugs, but also in encouraging effective competition after the patent expires. A large proportion of drug expenditure is paid by the public sector either through hospital budgets or health insurance schemes.

Demand can be regulated by co-payments or co-insurance from patients. Reference pricing is a co-payment scheme that has become increasingly popular in recent years. The regulator sets a reference price, which is the maximum reimbursable price for all drugs in the reference group. Direct regulation, akin to explicit rationing, requires that a drug meets a minimum cost-efficiency ratio if the regulator is to place the drug on the reimbursement list.

On the supply side, prices can be regulated both by price caps on wholesale or end user prices, and on the mark-ups at the retail level. Price caps need direct or indirect information on the cost level of the suppliers, and international price comparisons are often used effectively. Generic substitution allows or requires pharmacies to substitute a prescribed brand-name drug with a cheaper generic version with the same substance or the same therapeutic effect.

In empirical studies reviewed in the article as well as in studies conducted by the authors themselves, there is evidence that economic regulation does work. The authors point out that using cost-effective drugs benefits patients and increases social welfare. The large increases in drug expenditure in the 1990's were strongly influenced by the introduction of new and innovative drugs with new benefits, and the flattening expenditure curve in recent years may be evidence of more mature markets and effective regulatory policies. In addition to price-lowering policies, the authors emphasize the importance of cost-efficiency or cost-benefit analysis when drugs are approved for reimbursement.

8. Productivity differences in Nordic hospitals: Can we learn from Finland?

Comparative studies of health system performance are a source for identifying and explaining differences in costs, outcome and efficiency. Acute short-term hospitals are the major resource users in the health care sector and have a significant role for advanced treatment. In this paper, Clas Rehnberg and Unto Häkkinen present and discuss the findings from the Nordic collaboration on productivity differences across acute hospitals. As the four countries share many administrative tools and use common standards for data collection, unique cross-country comparisons are possible. The results suggest that there is a markedly higher average hospital productivity in Finland compared with Denmark, Norway and Sweden. Further analysis shows country-specific effects not to be correlated with the explanatory variables tested. This means that these country effects must be linked to the structure of financing, regulatory framework, organisational arrangements etc. in each country.

The explanations of findings are discussed along with different theories and possible reasons for the observed differences. Although no clear explanations are argued for, a number of hypotheses for further research are identified. The markedly higher productivity levels among the Finnish hospitals do not seem to be explained by differences in the use of market mechanisms and reimbursement systems. The Finnish system has not implemented performance-based payments or internal market mechanisms. The method and arrangements for the allocation of resources in Finland between different health services, as well as the trade-off against other public sector tasks at the municipality level, are proposed as major differences in relation to the neighbouring countries. The combined role as purchaser and provider at the municipality level is also proposed as important for the resource allocation within the health sector. The paper argues for a closer analysis of the impact of fund-holding, contractual relations and incentives between levels of governments as well as including quality indicators in the efficiency measure.

9. Lessons to be learned

Much of the growth in health expenditure stems from increased income, from the increase in life expectancy and the share of the elderly, and from the availability of new treatments. These factors imply that a continued growth in health expenditure may increase social welfare. Some measures can be explored to decrease the burden of financing, and to improve welfare for a given level of expenditure.

In the long run, there is the challenge of designing migration and fertility policies that may stabilise the demographic composition of the population. In the medium run, the demand for health care can be crucially influenced by the encouragement of a healthy life style. As discussed by Bolin and by Ásgeirsdóttir, it is not clear how effective policies should be designed. These questions clearly underline the need for field experiments and further research more generally.

There seems to be more scope for policy on the supply side. Brekke, Dalen and Strøm show how economic regulation of the pharmaceutical markets has an effect by lowering prices. Rehnberg and Häkkinen demonstrate that there are considerable differences in the productivity of Nordic hospitals, pointing the way to potential cost savings. The reasons for these differences are not fully understood, and should once more be the subject of further research. One possible explanation is that the more productive Finnish hospitals are owned by municipalities that also have the responsibility for primary care and for other public expenditure areas such as education.

This is in accordance with the discussions of Beales and Smith and of Ellis and Ash who point to the importance of increased weight on integrated care, particularly for chronic patients. These same authors also emphasise the importance of designing reimbursement schemes that reflect the risk profile of the population.

Perhaps the clearest policy implication of the articles in this issue of *NEPR* is the need for more explicit priorities as to which patients should be treated. Siciliani argues strongly that explicit rationing has less efficiency loss than rationing by waiting times and is more equitable than price rationing. As Brekke, Dalen and Strøm also point out, treatments and drugs that are cost-efficient should be financed, but those that do not have a minimum effect for the cost incurred should not be financed. To

be effective and equitable, these decisions must be based on health economic evaluations, clinical guidelines and priorities decided at a central level.

There have been constraints of width and depth in the selection of themes for this issue of NEPR. Closely related issues such as pension policy are not covered, since this is beyond the field of health economics. Not treated in this issue of the *Review* is the major question of the organisation of health insurance as such: Is there a place for a larger involvement of private health insurance, such as in the mandatory insurance scheme of the Netherlands? We have taken the Nordic model as given, and invited authors to discuss challenges within that context.

Brave reform proposals in the health care sector are often initiated with scant knowledge of their effects. This is in remarkable contrast to the documentation that new pharmaceuticals and medical procedures are required to deliver. There is a need for more experiments also in the organisation and financing of the health sector. The Nordic countries are in a favourable position for doing this kind of research with standardized register data covering the entire population. Comparative studies in the Nordic setting have a potential for contributing to an improved knowledge basis of health policy.

References

- Cutler, D.M. (2004), *Your Money or Your Life: Strong Medicine for America's Health Care System*, Oxford University Press, New York.
- Eggleston, K.N. and Fuchs, V.R. (2012), The new demographic transition: Most gains in life expectancy now realized late in life, *Journal of Economic Perspectives* 26, 137-156.
- Hall, R.E. and Jones, C.E. (2007), The value of life and the rise in health spending, *Quarterly Journal of Economics* 122, 39-72.
- OECD (2012), OECD health data 2012 – Frequently requested data, <http://www.oecd.org/health/healthpoliciesanddata/oecdhealthdata2012-frequentlyrequesteddata.htm> (October 21, 2012).