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The key role of health insurance in a cost-effective health care system*

Towards regulated competition in the Dutch medical market

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Summary

The previous two sessions of this Symposium have dealt with incentives for cost-effective provider behaviour. Although incentive-reimbursement, which rewards the providers for delivering medical care in a cost-effective way, can be an important step towards a cost-effective health care system, it is not sufficient. As long as the insured consumers have both comprehensive health insurance coverage and freedom of choice of provider, providers will have great difficulty in resisting consumers' demand for ever more costly medical care, and politicians or other decision-makers will have great difficulty in restricting capacity and in preventing overcapacity. Fear of losing patients or voters might dominate. Therefore, in this session we shall focus on the key role of health insurance in a cost-effective health care system and on consumer incentives and insurer behaviour.

If the consumers have a choice between several health plans such that the premiums or the out-of-pocket payments reflect the cost-effectiveness of the provider chosen, this will give the provider incentives for cost-effective behaviour. As a result, competition may arise between different providers, between provider-groups, and between provider-insurer organizations. Although market forces do play an important role in a competitive health-care system, competition should not be confused with a "free market". Besides financial arrangements to protect the poor, pro-competitive regulation is needed to guarantee a "fair competition".

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Currently there is much consensus that the present Dutch health insurance system, in which 60% of the population is publicly insured and 40% is privately insured, should be replaced by a national health insurance scheme, which uniformly applies to the entire population.

A few years ago, I made a proposal for such a scheme, which was based largely on the ideas of Ellwood, McClure, and Enthoven on competition between alternative delivery systems. The main features of this proposal will be discussed. In my opinion, the long-term prospects for regulated competition in the Dutch medical market seem rather favourable.

Health insurance; Cost-sharing; Limited provider plan; HMO; Regulated competition

1. Introduction

In preparing this paper I encountered the following paradox: during the last 20 years the number of people who consider good health as the most important thing in their life has increased in The Netherlands from 35 to 52% [1]. Nevertheless, the rising health care expenditures, which as a percentage of Gross National Product have doubled during the same period, are increasingly being experienced as a problem. This seeming contradiction is augmented if one realizes that there are other goods like cars, alcohol, and holiday trips, which are less appreciated than good health and whose rise in cost exceeded the rise of health care costs without attracting so much attention.*

An essential difference between buying health care and buying those other goods is in the function of prices. In buying cars or buying holiday trips market prices function as signals to both the producer and the consumer, resulting in an efficient production process and an allocation of those goods according to consumer preferences. In the health care sector, however, this market mechanism does not work, partially because most consumers have comprehensive health insurance. The lack of price sensitive consumer behaviour together with many cost-increasing provider incentives and the passivity role of the insurer (or "third party")** creates a health care system in which there is ample opportunity for waste and inefficiency. The explanation for the above paradox, I think, is that the waste and inefficiency and an insufficient meeting of the consumer preferences rather than the absolute level of cost are the fundamental issues in the health care cost problem. During the early 80s, this was aggravated as the economy shrank and many people began to feel that the marginal returns of health care expenditures had decreased or even that the marginal benefits were below the marginal costs. The challenge to the "health

* During the last 20 years the amount of alcohol consumption and the number of cars per capita in the Netherlands increased by factors of three and five, respectively. During the same period real GNP per capita increased by less than one half.

** In this paper the term insurer will be used to indicate both the insurer and the "third party".

care cost problem", therefore, is not simply reducing costs, but *improving efficiency*. In this way the allocation of health care resources can be brought to more closely resemble consumer preferences. I am confident that, at least in my own country, but I presume also in many other countries, changing the incentive structure can greatly improve efficiency without sacrificing equity. That is why we have to search for the right economic incentives, which is the well-chosen theme of this Conference.

The previous two sessions of the Conference have dealt with incentives for cost-effective provider behaviour. Although incentive-reimbursement, which rewards the providers for delivering medical care in a cost-effective way, can be an important step towards a cost-effective health care system, it is not sufficient. As long as the insured consumers have both comprehensive health insurance coverage and freedom of choice of provider, providers will have great difficulty in resisting consumers' demand for more and more costly medical care and politicians or other decision-makers will have great difficulty in restricting capacity and in preventing overcapacity. Fear of losing patients or voters might be a dominant factor. Therefore, in this session I will focus on the key role of health insurance in a cost-effective health care system.

This paper is organized as follows. In Section 2, I concentrate on the consumer incentives. In Section 3 the insurers' behaviour is discussed, with special emphasis on the Dutch situation. In Section 4 it is argued why in a competitive medical market place, procompetitive regulation is needed to counteract the undesirable side-effects of a free health care market. Finally, I will show how the present Dutch health care system, which is dominated by direct government control on volume and prices, can be gradually transformed into a competitive medical market (Section 5).

2. Consumer incentives

The fundamental way in which health insurance can contribute to a cost-effective health care system can be described as "*rewarding the insured consumers for choosing cost-effective providers*". Essentially there are two ways of doing this and these two ways follow directly from those two aspects of health insurance that are widely held responsible for the health care cost-inflation, i.e., comprehensive insurance coverage and free choice of provider. Consequently the key elements in making the insured consumer cost conscious are "cost sharing" and a "limited provider plan".

Before discussing these two issues, I will give two examples of how full insurance coverage with free choice of provider can weaken or even frustrate provider incentives for cost-effective behaviour. Although physicians are the main decision makers in the process of medical treatment, in general it is the patient who chooses which physician or which hospital to go to.

Suppose, for example, that two neighbouring general practitioners (GPs) are reimbursed in two different ways. GP1 faces a remuneration system with built-in

incentives for cost-effective provider behaviour: his income, besides the fixed amount per patient, increases the fewer drugs he prescribes, the less he refers his patients to specialists, and the less his patients are hospitalized. GP2 receives a fixed amount for each patient in his practice, independent of the amount of prescribed medicine, the number of referred patients, or the number of hospital days of his patients. (This is the usual remuneration system for GPs under the Dutch public insurance system.) If the insured consumers are completely insured and if the insurance premium is independent of the consumer's choice of provider, it is simply rational consumer behaviour to "demand" the most specialized and most extended care. Therefore, GP1 will have a hard time convincing his patients of his cost-effective style of providing care, and he might well end up losing his patients.

Mutatis mutandis, the same argument applies to identical neighbouring hospitals receiving an identical fixed budget. (Prospective reimbursement is the way all hospitals in The Netherlands are financed now.)

Suppose that the hospital staff receives a part of the positive balance at the end of the year. Suppose further that it is possible to dramatically lower costs by reducing inefficiency and over-equipment or by reducing hotel facilities and luxury (number of beds per room/ward, colour TV, telephone, choice of meals, visiting times, and other services). Consequently the waiting times may increase somewhat, and more patients will have to be admitted during holiday periods and weekends. All in all, although the reduction of cost does not effect the technical quality of the care delivered, it does affect the consumer satisfaction. Therefore, if one hospital reduces its cost level, while the other hospitals do not, then in the long run it might end up losing its patients (and undoubtedly the "fixed" budget will be proportionally reduced).

These two examples illustrate Enthoven's [2] statement:

"It starts by making consumers cost conscious, which is supposed to make providers cost conscious and to encourage them to form cost-effective organized systems of care".

2.1. Cost sharing and limited provider plan

As stated above, the key elements in making the insured consumers cost conscious are "cost sharing" and "limited provider plans". Cost sharing can be described as a mode of health insurance whereby the insured consumer is required to pay some portion of his covered medical expenses out of his own pocket. Limited provider plans can broadly be divided into two categories, Health Maintenance Organizations (HMOs) and Preferred Provider Organizations (PPOs), as they are referred to in the U.S.A. A common feature of limited provider plans is that it is advantageous for the insured consumer to receive his care from or through referral from a limited group of specified providers.

HMOs are the most "extreme" form of limited provider plan because, in the HMO-system, the consumer, who pays a fixed amount per period to the HMO, agrees to receive *all* care from or through referral from the physicians participating in the HMO.* In general, HMOs do not use cost sharing schemes, except for some

* The term HMO was coined by Ellwood et al. [6].

minor co-payments. Apart from some exceptions, all out-of-plan use has to be paid for by the consumer.

In the PPO-system the providers agree to deliver medical care to the PPO-subscribers at reduced fees, and the PPO-subscribers are encouraged to choose the preferred providers by lower out-of-pocket payments for services rendered by the preferred providers. The distinction between cost sharing and PPOs, therefore, is not always clear-cut. Variations on the theme are indemnity insurance [3], variable cost insurance [4], health care alliances [5] and many other alternative delivery systems.

An essential difference between HMOs and PPOs is that HMOs accept the responsibility of providing or otherwise assuring the delivery of an agreed upon set of health services to its subscribers, while PPOs do not take this responsibility. Another difference is that generally HMO-providers are at financial risk, i.e., they somehow share in the financial result of the organization, while PPO-providers do not.

2.2. Effectiveness

What can be said about the effectiveness of the different ways of making the consumers, and through them also the providers, cost conscious? As little is known about the performance of PPOs and the many variations on the theme, I will limit myself to the effects of cost-sharing and HMOs.

From many empirical studies we may conclude that there is little doubt that increased cost sharing whould reduce the demand for the medical care in question [7,8]. Interim results from the RAND Health Insurance Experiment indicated that families required to pay 25% of their bills up to a maximum out-of-pocket amount spent 19% less on services than those with full coverage; in the case of an income-related deductible scheme, which was at most $1000 per family per year, total health care expenditures were 31% lower than in the case of full insurance [9]. It appeared that, with some minor exceptions, in general the provision of free care did not improve the health status of the participants [10].

In discussing the results of the HMOs, I will consider only the Prepaid Group Practice (PGP), the dominant HMO-type. The well-known results of Luft [11,12] indicate that total health care costs for PGP-subscribers are 10 to 40% lower than those for similar people in the traditional health care system. On the basis of a number of non-experimental studies the quality of care in PGPs appears to be at least similar to that in the traditional health care system [13–16]. Results from the RAND Health Insurance Experiment indicated that the expenditures for PGP-subscribers are 28% below those of similar people with full coverage or 25% co-insurance in the traditional fee-for-service system [17]. For the vast majority of experimental participants, the medical care delivered through the PGP produced health outcomes similar to, and in some cases better than the traditional fee-for-services system. However, poor PGP-patients who entered the experiment with medical problems seemed to experience worse health than similar people who entered the experiment through several conventional insurance plans in the fee-for-service system [18].

In most cases PGP-subscribers have nearly full insurance coverage for all medical costs, i.e. with hardly any cost sharing, while most traditionally insured people in the U.S. are confronted with considerable cost sharing. Based on the effects of cost sharing alone, one would expect higher costs for PGP-insured than for traditionally insured people. In reality, however, we see on average some 25% *lower* costs per person in the PGPs compared with the traditional, non-PGP-system. Clearly the cost sharing effect is more than compensated for by the effects resulting from the organizational and financial characteristics of the PGP-structure, like the closed panel, the broad benefit package (which prevents the substitution of cheap uninsured care by expensive insured care), peer review, and the providers being at financial risk.

In interpreting this finding, one should realize that the above-mentioned experimental cost sharing effects are *partial* price-effects, i.e. when other relevant factors are kept constant. However, in real practice, especially when the physicians are reimbursed on a fee-for-service basis, the overall cost-reducing effect of cost sharing may be adversely influenced by supplier induced moral hazard and by other forms of supplier induced demand or overdemand. The PGP-structure clearly offers an effective means of coping with these phenomena.

If the consumers have a choice between several health plans such that the premiums or the out-of-pocket payments reflect the cost-effectiveness of the provider chosen, this will give the providers incentives for cost-effective behaviour or it will sustain such incentives when already existing. As a result, competition may arise between different providers, between provider-groups or between provider-insurer organizations. Increasing cost sharing as a means of stimulating competition between providers, however, may lead to the undesirable situation that a poorly informed consumer has to shop around for the cheapest provider while he is ill. Furthermore, as we saw above, the effects resulting from the specific characteristics of the PGP-structure appear to be superior to the cost sharing effect in improving efficiency. (For a thorough disucssion of the limited possibilities of using direct charges as a strategy for cost containment or efficiency enhancement, see Barer, Evans, and Stoddart [19], and Enthoven [20].) Therefore, rather than increasing cost sharing, stimulating competition between all kinds of alternative delivery systems like HMOs and PPOs should be preferred. Before addressing this issue, I will look at the essential role of the insurers in a competitive medical market.

3. Insurer behaviour

In the previous section, I concluded that competition in the health care sector may arise as a result of special provisions in health insurance policies, in particular provisions concerning "cost sharing" and "limited providers". From this it follows that, besides the provider incentives and the consumer incentives, the role of the insurers, who are supposed to offer those options, is essential in a competitive

medical market. A logical question then is this: What are the insurer incentives and possibilities for offering health insurance policies containing incentives for cost-effective provider behaviour?

A problem in formulating a general theoretical framework for analyzing and predicting insurer behaviour is that the insurers' incentives and possibilities strongly depend on the structure of a health care system. For instance, major hindrances for HMOs in the U.S. to enter the health insurance market result from the employer-provided health insurance system, which is a rather specific characteristic of the U.S. health care system. Therefore, I shall restrict myself here to one particular case, namely the Dutch situation. The Dutch health insurance system and its experiences may be of interest for other countries because both a public and a private health insurance system co-exist in the Netherlands. On the one hand, there is a compulsory public health insurance plan in which 60% of the population is enrolled. This insurance plan provides nearly full coverage for medical expenditures like hospitalization, physician treatment, drugs, etc. It has a wage-related premium and many forms of solidarity (e.g., between healthy and unhealthy people). On the other hand, about 40% of the Dutch population, mainly the higher income groups, is completely free in choosing insurance coverage. They can buy private health insurance from one of the competing insurers.

According to the Exceptional Medical Expense Act (a national health insurance to cover catastrophics) the *entire* population is insured against risks like additional hospital treatment after one year, nursing-home care, and care in institutions for the physically and mentally handicapped. In this paper, I will not deal with these expenditures, which form about 30% of the total Dutch health care expenditures [21].

3.1. Public health insurance

In the *public* health insurance system in the Netherlands some 50 sickness fund organizations of different origin and signature are operating today. Each publicly insured individual has to enroll in one of these organizations in his area. Many of these organizations have a long history and some even date from the time of the guilds in the 17th century.

In those early days there were hundreds of sickness fund organizations that were all independent and self-supporting. Most of them operated in a restricted geographical area. In fact, they functioned as a kind of PGP for people below a certain income level. People above that level were not permitted to join a sickness fund organization. As "private patients" they had to pay the physician a fee that was considerably higher than that charged in the sickness fund sector.

In the beginning of this century there was a major battle between the sickness fund organizations and the medical associations. The physicians felt themselves threatened by the sickness funds and they strongly opposed becoming, what they felt, to be "wage slaves" of the sickness funds, i.e. they opposed being on their pay-roll. Other hot issues were physician participation in the sickness fund boards and the height of the income level above which people were not permitted to join.

Furthermore, the medial societies required the sickness funds to permit any physician in the community to have a contract with the sickness funds in the area ("open panel" instead of "closed panel"). Besides boycotting those physicians who participated in recalcitrant sickness funds, the medical society started to found a nationwide network of sickness fund organizations of their own.

Those who are familiar with the history of the PGPs in the U.S. will note the clear resemblance between the history of the Dutch sickness funds and the history of the PGPs in the U.S. where Individual Practice Associations (IPAs) were founded by medical associations as a defensive alliance against PGPs [22,23]. An important difference, however, is in the end of the story. In 1941 a forerunner of the present Dutch public health insurance system was established. According to this new legislation all sickness fund organizations were obliged to enter into a contract with each physician in the community who expressed the wish to do so (i.e. open panel instead of a closed panel); the sickness funds were not allowed to have physicians on their pay-roll; and the sickness funds lost the right to determine their own benefit package, to offer different options and to set their own premiums. All income related premiums were collected into a Central Public Fund, and each sickness fund received payments from this Central Public Fund equal to the health care expenditures of its members. Thus, in contrast to the PGPs in the U.S., whose market successfully increased from less than 3 million subscribers in 1970 to about 20 million in 1985 [24], the original PGP-like Dutch sickness fund organizations were defeated on the most important issues.

Nowadays, in broad outline the structure of the public health insurance is still the same as it was established in 1941. The conclusion, therefore, is that an individual sickness fund organization has hardly any *incentive* for cost containment because every cost reduction results in an equal reduction of its payments from the Central Public Fund and hardly affects the premium paid by its own members. A second conclusion is that the sickness funds have no *possibility* of offering limited provider plans because of their duty to enter a contract with each physician in their area. Nor do they have the possibility of offering high and low option plans or of changing the structure of the benefit packages of their insurance policies. We will return to these issues when discussing strategies for stimulating a competitive Dutch medical market.

3.2. Private health insurance

In the *private* health insurance market in the Netherlands some 70 insurance companies, both for-profit and non-profit, are operating today. They offer their customers, who are either self-employed or belong to the higher income groups, a broad range of health insurance policies, ranging from small to large benefit packages and from full coverage to all kinds of cost sharing schemes. As yet, they do not offer any limited provider plans.

Most private health insurance policies are bought by price-sensitive individuals and only a minority (about one-third) consists of group-insurance provided through the working place. Nearly all employees who buy private health insurance receive a taxable subsidy from their employers.

Although the insurers seem to have clear incentives for cost-containment, i.e. higher profits or a lower premium and therefore more subscribers, in the past the insurers have not made any serious efforts to control health care costs. Until the late 70s the market for private health insurance was rather quiet and orderly. The usual method of establishing premiums was, with some exceptions, primarily based on community rating, i.e. the premiums were based on the average health care costs of all the subscribers and did not vary with such variables as age, sex, or health status. Only in the case of entering into new contracts, in contrast to the continuation of existing contracts, were age-related surcharges imposed and indemnifications related to pre-existing medical conditions excluded.

Starting in the mid 70s, however, things changed. Competition between insurance companies increased, deductibles became more and more popular (late 70s), age-related premiums were introduced (June 1980), the insurers' efforts for health care cost-containment were increasing (early 80s) [25], and thinking about establishing HMOs or other limited provider plans has become a serious issue [26].

Although it is tempting to try to explain these changes in insurer behaviour, I will restrict myself here to mentioning the fact that since the mid 70s, the private health insurance market in The Netherlands has been gradually changing from a non-competitive market with hardly any cost-containment efforts into a competitive market with increasing cost-containment activities. (An analysis of the behaviour of the Dutch health insurance companies during the last decades will be the subject of a forthcoming study.)

4. Regulated competition in the medical market

As indicated in Section 2, the structure of health insurance policies may play a key role in creating a competitive health care market. In general, competition is considered to be a desirable method of quality control, price setting, and resource allocation. However, competition should not be confused with a "free market". In the economics literature, it is well understood that market prices may not reflect all relevant information because, for example, external effects or future shortage are insufficiently accounted for in the determination of market-prices. In a free health care market, several socially unacceptable side-effects may occur like preferred-risk selection and adverse-risk selection (both as seen from the point of view of the insurer) and accessibility problems for those who are poor or medically indigent. (Some of these problems did occur in The Netherlands when the health insurance market was unregulated.) Therefore, besides financial arrangements to protect the poor, procompetitive regulation is needed to guarantee a "fair competition".

In the recent discussions about "competition versus regulation"* in health care,

* See, for instance, the title of the proceedings of the sixth Duke University Medical Centre private sector conference: "Financing health care: Competition versus regulation", edited by Yaggy and Anlyan [27], and the title of various articles such as Pollard [28] and Luft [29].

it is important to note that these two words stand for two different strategies of health care cost-containment and that they generally stand for "regulated competition" versus "direct government regulation concerning prices and volume".* So in both cases regulation through government intervention is needed, but the accent is totally different. To further aggravate the potential misunderstanding that it is competition *or* regulation one could point to the subtitle of Enthoven's Consumer-Choice Health Plan article which reads: "A National-Health-Insurance Proposal Based on *Regulated Competition* in the Private Sector" [31].

It is not the intention of this paper to give a thorough discussion of all problems that might arise in a free health care market and of all aspects (such as the effectiveness) of procompetitive regulation intended to cope with these problems. (This alone could be the theme of several special Conferences.) Instead I will point out the main issues that appear to be relevant in that discussion: preferred-risk selection, adverse-risk selection, antitrust, consumer information gap, quality of care, accessibility problems, teaching hospitals and, last but not least, future shortages.

4.1. Preferred-risk selection

Preferred-risk selection is selection by the insurer of good health risks and may occur in situations where an internal cross-subsidization of premiums between subscribers takes place, i.e. the insurer provides insurance coverage to some subscribers at a loss, which is balanced by higher profits on providing insurance coverage to others. In such a situation the insurer has strong incentives to selectively contract with the latter. A necessary condition for preferred-risk selection to occur is that the insurer can distinguish risks while the premiums are not fully risk-adjusted.

In general, preferred-risk selection in a competitive medical market can be avoided** by (a combination of) the following measures:

a) Risk-adjusted premium revenues for the insurer, i.e., the revenues for the insurer should reflect the expected health risks of the respective subscribers. This does not imply that the premium payments from the viewpoint of the individual consumers should be experience-rated. In order to achieve a distribution of

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* Enthoven [30] discerns two strategies for health care cost control: competition and regulation. By competition he means a market system supported by "procompetitive regulation" designed to help the market achieve society's goals. By regulation he means direct government control over the prices, productive capacity and the use of services.

** It is interesting to note Pauly's [32] statement, in reaction to Newhouse [33], that if there is to be a problem with competition, it does not come from preferred-risk selection (or: "cream-skimming"), in which the insurer can identify the good risks, but rather from adverse-risk selection, which occurs when good risks cannot be identified.
In another context, discussing implications of the papers presented at the conference "Biased selection in health care markets", Pauly [34] concludes that "as long as one avoids things like community-rating and too easy switches across policies, adverse selection need not be a difficulty" (p. 281) and that "given the other distortions in the system, perhaps adverse selection, at least up to a point, is not so adverse" (p. 286).

health care costs that meets society's goal, each individual could receive a voucher worth a certain amount of money or a refundable tax credit depending on the actuarial risk-group (e.g. age-sex group) the individual belongs to [35]. The money to cover the vouchers can be collected in different ways and can be dependent on income or every other relevant factor society wishes. There are several variations on the theme, such as an equalization fund for private health insurance companies or a modified Central Public Fund (see section 5.1) as is presently being discussed in The Netherlands.

The major problem, however, in determining risk-adjusted (premium) revenues is in determining the various actuarial risk-groups (for a discussion on this issue, see [36–42]). This problem is more serious in the case of individual subscribers than in the case of group insurance.

b) Open enrollment and minimum insurance coverage, i.e. during some restricted period, the insurers are obliged to accept every consumer who wishes to buy an insurance coverage for a specific minimum benefit package.
c) Prohibition of selective advertising.
d) Exclusion of certain uninsurable risks from the competitive health insurance system. E.g. very expensive or very predictable expenses could be covered by a "catastrophic" national health insurance, e.g. like the Dutch Exceptional Medical Expense Act (see section 3). This will reduce both the incentives and the capability of the insurers to select preferred risks.

4.2. Adverse-risk selection

Adverse-risk selection is selection by the insured consumer of the insurance coverage that is most likely to give him the highest returns for the premium paid. According to Pauly and Langwell [43] the technical definition of adverse-risk selection in economic theory is based on the assumption that the insured has better information about the risk he or she presents than does the insurer. In general, this means that consumers with a bad health status or who otherwise expect high expenses will choose a comprehensive insurance coverage, while healthy consumers will choose low option plans, i.e. restricted coverage and/or high cost-sharing. As a result of adverse-risk selection the market becomes segmented in such a way that the healthy have, on an average, low health care expenditures and the unhealthy are confronted with high expenditures (premium plus out-of-pocket payments). Adverse-risk selection, just as preferred-risk selection, is more severe in the case of individual subscribers than in the case of group insurance. Adverse-risk selection also includes the phenomenon that consumers will buy health insurance *only* when they expect to claim insurance benefits. Empirical results concerning adverse selection have been presented, e.g. by Price and Mays [44,45] and Luft et al. [46].

In order to diminish adverse-risk selection one can consider (a combination of) the following measures:

a) Restricting the consumers' freedom of choice of health insurance coverage, e.g. by making some form of minimum insurance coverage obligatory, while leaving

some freedom of choice with respect to supplementary insurance.
b) Government mandated cross-subsidization from low option plans to high option plans over all insurers.
c) Restricting open enrollment by restricting the open enrollment period, or by permitting the insurers to restrict coverage for selected issues (e.g. elective care) in the first period of coverage or by extending the contract period.

4.3. Antitrust

Antitrust policy is the term used to describe programs designed to control the growth of monopolies and to prevent powerful firms from engaging in practices that are considered "undesirable" [47]. Antitrust policy appears to be an eminent factor in the emergence of competition in the medical market.* "It is unlikely that market competition would have occurred (in the U.S.A.) had it not been for the applicability and enforcement of the anti-trust laws. In a previous time, with similar pre-conditions, anti-competitive behaviour by physician associations was able to prevent the emergence of market competition" [50]. The same lesson can be learned from the history of the Dutch sickness fund organizations in the first few decades in this century (see Section 3.1). In addition, antitrust measures are essential in order to prevent undesirable monopolies and cartels.

4.4. Consumer information gap

Lack of consumer information is often mentioned as a characteristic of the health care sector, which would be a hindrance for fair competition in the medical market.** This argument may be valid in the case of cost sharing induced competition between individual providers, but it has less validity in the case of competition between all kinds of alternative delivery systems like HMOs and PPOs. In this case, the consumer only has to choose between several of these organizations in his area, while these organizations selectively contract providers based on their expertise. It is much easier for the consumers (or for consumer organizations) to compare a restricted number of organizations (like HMOs or PPOs) than a large number of individual providers. Furthermore, in a competitive environment it is in the interest of these organizations to profile themselves and to provide the consumers with clear information on price, quality and service, that can be well understood by the average consumer. Consumer organizations will verify the validity of this information. Therefore, it is to be expected that the consumer will be better informed in a competitive medical market than in a non-competitive health care system, where a medical cartel may exist and where advertising has been banned by the medical association using arguments based on "ethical grounds". (Is advertising for

* For a discussion of the essential role of antitrust policy in a competitive medical market, see e.g. Pollard [48] and Havighurst [49].
** For a thorough discussion on consumer information, see e.g. Pauly [51].

good medical care less ethical than advertising for alcohol, cigarettes, and other health threatening activities?)

4.5. Quality of care

The strongest argument for the expectation of good quality of medical care in a competitive health care system is competition itself. If the consumer is not satisfied, then he will choose some other provider organization. The experiences with HMOs in the US strongly support this argument.*

4.6. Accessibility problems

Accessibility problems for the poor and the medically indigent in a competitive health care system need not be greater than in a non-competitive system. In every system the rich and the healthy people will have to pay for the poor and unhealthy people. In principle there are many ways to achieve these transfers in a competitive health care system (see above, "preferred-risk selection"). In a competitive medical market those cross-subsidies from one group to another probably become more obvious than in a non-competitive system.

4.7. Teaching hospitals

Besides individual patient care, teaching hospitals deliver such products as graduate medical education, clinical research and new technology testing. As far as the high costs of these products are financed through patient care revenues, competition between hospitals might be a threat for teaching hospitals. Therefore, in a competitive market these different products should be separately priced based on their own costs. For a discussion on this issue, see Colloton [55] and Enthoven [56].

4.8. Future shortages

Although the issue of future shortages of physicians is not frequently mentioned in the discussion about competition in health care, I think it is quite essential. The reason that this issue is not mentioned often might be that most of the competition debate during the last decade has taken place in the U.S., where it is expected that "current surpluses of health professionals will continue for the next 20 years" [57]. Although this may be true for the U.S. for the next 20 years, it still remains essential that, in the long run competition should not be frustrated by shortages of physicians.

An important question in this matter is this: Who makes the decision with respect to the number of places in medical schools and the number of medical specialists to be trained in each specialty? In order not to let physician shortages be-

* For a discussion on competition and quality of care see Wyszewianski et al. [15], Schwarz [52], Donabedian [53] and Feldstein [54].

come the Achilles' heel of any procompetitive regulation, attention to health manpower should be an integral part of any long term pro-competitive strategy.

5. Towards regulated competition in the Dutch medical market

Discussing the possibilities for competition in the Dutch health care system, which during the last decade has been highly dominated by direct government control of volume and prices, I will take the health insurance market as the point of departure for two reasons: first, as expounded in this paper, because the role of health insurance in a competitive medical market is essential; second because changing the health insurance system is a leading issue in the Netherlands today. Currently there is considerable agreement that the present system, in which 60% of the population is publicly insured and 40% is privately insured, should be replaced by a national health insurance scheme that uniformly applies to the entire population. The right mixture between public and private health insurance in such a national scheme is one of the main topics.

5.1. A long term proposal

A few years ago, I made a proposal for the long term structure of a national health insurance scheme in the Netherlands [58].* This proposal for a National Health Insurance Act (NHIA) was based largely on the ideas of Ellwood and McClure [5] and Enthoven [30,35] on reforming the health care delivery system through incentives and on competition between insurers and alternative delivery systems. As the structure of the Dutch health insurance market is quite different from that in the U.S., this proposal can be considered as a Dutch version of Enthoven's "Consumer-Choice Health Plan", in which the best elements of the Dutch public and private health insurance system are combined. Under the terms of this proposal, each individual would be able to choose between several health insurance options with different premiums offered by competing insurance organizations. These options include the possibility of freely restricting one's choice of provider in exchange for a premium reduction. In this way the providers of health care can, through the consumers' choice, be confronted with incentives to economize and the many existing *cost-increasing* financial incentives can be converted into *cost-decreasing* incentives.

The main features of the proposed NHIA are as follows:

- The NHIA applies equally to all residents of the country.
- In the first instance the NHIA is intended to be complementary to the existing national catastrophic health insurance, i.e. the Exceptional Medical Expense Act. Subsequently these two Acts could be integrated.
- The sickness fund organizations and the private health insurance companies

* For a review and a discussion of other current proposals, see Lapré [59].

would administer the NHIA and have the same rights and duties. They are here referred to as "insurers".

- The insurers will be financially self-supporting – their premium revenues forming a "natural" budget – and they will compete with each other.
- A procompetitive regulation is needed in order to achieve a fair economic competition among the insurers. This regulation relates to open enrollment, a minimum benefit package, the premium rating, and the way information is provided to the consumers.
- A large part, for example 60% of the health care expenditures that are covered by the NHIA, would be publicly financed. A national fund (or the tax-collector) would collect this 60% by means of premiums (or taxes) that could be income related in *any* possible way,* and would distribute the money to qualified insurers on the basis of the subscriber distribution over various specified actuarial groups (e.g. the age-sex distribution). In order to become a qualified insurer, an insurer would have to observe the procompetitive regulation. The remaining part of the premium would be paid directly to the insurer by the insured. On an *average,* this would be 40% of the total premium, but handled by an efficient insurer the remaining part of the premium could be considerably lower. The consumer would be free to buy health insurance from any qualified insurer.
- The choice of 60% is merely a suggestion. The percentage should not be too high, because then the premium, that the consumer directly pays to the insurer, could reduce to zero, which would eliminate the insurer's incentive for efficiency above a certain level. On the other hand, if the percentage is too low, it might become attractive for non-qualified insurers to enter the market and to sell unsubsidized health insurance policies to healthy people based on experience-rated premiums. This would totally undermine the procompetitive regulation.

  For policy purposes the percentage may be higher for certain subgroups, such as the poor and the aged people.

5.2. Short term strategy

History teaches that a sudden change from the present, complex insurance system to a national health insurance scheme in the Netherlands would be impossible (among other reasons because of the large changes in individual income). Therefore, the most pragmatic way seems to be to make changes in the present structure

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* On an average the insured would pay about 40% of the total premium for a complete health insurance policy directly to the insurer. However, this does not imply that poor people will have more health care expenditures than in the present situation, where all publicly insured pay a fixed percentage of their wage-income as a health insurance premium. For instance, up to a certain income level people could be exempted from paying a contribution to the national fund, or they might even receive a voucher ("negative tax") from the national fund worth a certain amount of health insurance premium payment.

Because mathematically every outcome is possible, the question whether a change in income distribution will take place and if so, to which degree, is a purely political choice.

such that the present public and private health insurance system gradually converge to a uniform health insurance system. With respect to the sickness fund organizations the following changes are required, most of which imply a turning back of some of the major measures taken in 1941:

a) All sickness fund organizations should become self-supporting. Each sickness fund would receive a fixed *budget* from the Central Public Fund equal to about 60% of the expected health care expenditures based on its subscribers' distribution over the various actuarial groups. The Central Public Fund would collect 60% of the health care costs through premiums, which can be income-related in any way. The individual subscriber would pay the remaining part of the premium directly to the sickness fund organization.
b) The sickness fund organizations should no longer be obliged to enter into a contract with each physician in the community who expresses the wish to do so.
c) The sickness fund organizations would be free to negotiate with the providers on their fees and on various remuneration schemes.
d) The sickness fund organizations would be allowed to offer both limited provider plans with premiums reflecting the cost-effectiveness of the providers chosen and high and low option plans, on the condition that each plan covers at least a specified benefit package.
e) The sickness fund organizations would have the freedom to acquire new subscribers from any region, and the consumer would be free to enroll in any sickness fund operating in his area. Note that this implies potential competition between sickness funds, which is an essential difference with Rutten's [60] proposal, in which each sickness fund would have a regional monopoly.

With respect to the private health insurance companies, the following short-term changes are proposed:

a) Procompetitive regulations would be introduced with respect to such things as open enrollment, the minimum benefit package, and the premium rating. Some steps in this direction have already been taken. In April 1986 a new law became effective that includes such regulation for a restricted group of privately insured (among others, 800 000 previously publicly insured who on that date were transferred to the private sector). Based on these experiences this kind of regulation should be extended to the whole private sector.
b) In order to enlarge the possibilities for cost containment activities and for introducing limited provider plans, the private insurance companies would – just like the sickness fund organizations – be free to negotiate with the providers on their fees and on various remuneration schemes.

According to those lines I think that the sickness fund organizations and the private health insurance companies may gradually converge to become comparable organizations with the same rights and the same duties, and that the present public and private health insurance system may gradually converge to form a uniform national health insurance scheme.*

* For different options of the competitive structure that may arise, see Rutten and Van de Ven [61].

5.3. Prospects for regulated competition

Speculating on the chances for a competitive Dutch medical market, I think that the prospects for a gradual change from direct government regulation to some form of regulated competition seem full of promise because of the following circumstances:

1) Health care costs have risen very rapidly, from 3% of the GNP in 1953 to 9% in 1983. Direct price and volume regulation by the government during the last decade has proven to be unsuccessful in containing costs and avoiding waste and inefficiency (see e.g. Rutten [60]).
2) There is an oversupply of physicians and hospital beds: more than two physicians and more than five hospital beds per 1000 people. For the year 2000 an increase of some 25% in the number of physicians is predicted.
3) The Dutch government has given a high priority to a fundamental restructuring of the Dutch health insurance system,* while the current political climate in the Netherlands is very much in favour of deregulation and of restoring market forces. As J.P. van der Reyden [62], the former Dutch Secretary of Health, stated: "In accordance with the view of Enthoven, who initiated the ideas about the Consumer-Choice Health Plan, I think that under a number of conditions fulfilled by the government and a number of rules set by the government 'free competition' in health care leads to efficient allocation of health care resources that is socially acceptable".
4) A new law that includes some elements of pro-competitive regulation in the private sector became effective in April 1986.
5) Proposals for regulated competition within the public system are becoming more popular, at least in the academic world.
6) The HMO-idea is by no means new for the Netherlands. Many HMO-like organizations already operated during the first decades of this century.
7) 40% of the Dutch population already has private health insurance coverage, which is a rather high percentage for Europe, and innovation is most likely to come from the private sector.
8) The bulk of private health insurance is sold to price-sensitive individual subscribers, in contrast to the U.S.A. where 85% of private health insurance consists of group health insurance sold through the working place.
9) Last but not least, the largest Dutch health insurance company has announced that it is preparing to start an HMO experiment [63].

Since the culture and the health care system in the Netherlands are so different from those in the U.S.A., an exact copy of HMOs and PPOs cannot be expected. Nevertheless, the Netherlands seem a likely European candidate to borrow useful elements from the American experience.

According to a Dutch saying, the rapidly rising health care costs are "boiling over". Cost-containment through direct government control on volume and prices, leaving its underlying incentives untouched, is like tyring to keep the lid on top of

* See the government's request (April 18, 1983) for advice from three advisory boards.

the pot, in order to keep it from boiling over; whereas converting the economic incentives, e.g. through a restructuring of the health insurance system according to the lines of the proposed NHIA, may be considered as simply turning off the heat.

Although I expect that the process of moving towards regulated competition in the Dutch medical market will be slow, partially because of the time needed to deal with the issues mentioned in section 4, changing the Dutch health insurance market according to the proposed NHIA may provide us in the long run with an effective means of coping with waste and inefficiency without sacrificing equity and may lead to a health care system that closely matches the consumer preferences.

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