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## COMPETITION IN HEALTH INSURANCE AND PREMIUM REGULATION

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### Introduction

In most countries, health insurance markets are highly regulated. Insurers in particular are not allowed to differentiate their premiums according to health risks and must often charge a uniform premium for all applicants. This policy is referred to as “community rating” and is used, for example, in Germany and Switzerland. It is motivated by concerns related to justice. In an unregulated market, insurers would charge those with higher health risks higher premiums, or would not even offer them coverage at all. This is regarded as unjust by many, particularly in cases where differences in health risks are beyond an individual's control.

Even if insurers are initially allowed to set risk-dependent premiums, they are often not permitted to adapt their premiums to changes in health status. Such regulation is in place in private health insurance in Germany. In the individual health insurance market in the US, most states require “guaranteed renewability” which obliges insurers to sell a contract holder a new contract with the premium at average rates for her or his initial risk class (Patel and Pauly 2002). These contracts offer insurance against “premium risk” or “reclassification risk” which arises if premiums are adapted to unforeseeable changes in the risk type.

These premium regulations have implications for the workings of health insurance markets. Some potential gains from competition are likely to be diminished. Community rating creates incentives for risk

selection, which call for further regulation. Guaranteed renewability can lock-in individuals with their health insurer. Before we discuss these issues, we begin by reviewing the potential benefits and drawbacks of competition in health insurance. Our contribution will also highlight alternative policies that aim to achieve the same effects as community rating and guaranteed renewability.

### Competition in health insurance: advantages and drawbacks

Competition in health insurance can yield a number of benefits for consumers. Insurers have incentives to administer contracts and to control claims efficiently in order to be able to offer contracts at prices close to the expected costs of insurance claims. Furthermore, competition encourages insurers to design insurance contracts according to individual preferences. This calls for the specification of efficient levels of co-payments taking into account the costs of insurance and moral hazard. Coverage of health services and reimbursement criteria are further dimensions of an insurance contract.<sup>1</sup>

Compared to other branches of insurance, health insurers can provide a range of additional services. In particular, they can act as an important agent for individuals who seek a high quality of care at reasonable prices. Under the Managed Care approach, insurers take this role by becoming organizers of healthcare. This approach contains several arrangements designed to achieve high quality and efficiency of provision, for example quality assurance and pay-for-performance programs. Measures to control healthcare expenditure often rely on restrictions of provider choice. Treatments may also need to be evaluated through “utilization reviews”, and physicians can be obliged to follow special guidelines in their treatment decisions. In the special case of a Health Maintenance Organization, insurers go even further and supply services themselves by employing



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<sup>1</sup> However, insurance design can also be a means of avoiding price competition as detailed contracts may tend to confuse individuals and increase search costs (Abaluck and Gruber 2011; Schram and Sonnemans 2011).

physicians and running hospitals. So far, Managed Care is mainly used in the US. It can be found to some degree in other countries with private health insurance such as Chile and Switzerland.

The competitive pressure to bring down prices to cost, however, can also have severe drawbacks. Individuals differ substantially in their health risks and therefore in their expected healthcare expenditure. In their underwriting process, insurers usually get a good picture of the health status of an individual and adjust the premium accordingly. This leads to risk variation in premiums (an example is presented in Box 1) that is precarious in two ways. On the one hand, it is regarded as unjust, especially when individuals cannot be held responsible for their health status. On the other hand, risk rating can be disadvantageous for healthy individuals if health status changes and premiums are adjusted for new conditions. From an ex ante point of view, this generates a premium or reclassification risk to individuals, which they would like to cover by insurance. To some extent, markets can provide insurance against premium risk by offering individuals long-term coverage without individual premium adjustment. However, insurers will generally not charge uniform premiums from individuals with initial differences in health status. Empirical studies for US markets show that premiums differ considerably with respect to health risk, but also indicate some insurance of premium risk since the relationship between expected healthcare expenditure and premiums is not proportional (Pauly and Herring 1999, 2007).

A potential problem of health insurance markets is adverse selection, which arises when individuals are better informed about their health risk than insurers. However, there is little evidence relating to this phenomenon. Most health insurance markets are regulated, making it hard to distinguish between the effects of premium regulation and asymmetric information. In addition, health insurers are usually able to obtain detailed health information in the under-

#### Box 1

##### Risk rating in German private health insurance

About 9 million individuals obtain their basic coverage through private health insurance (PHI) in Germany (PKV 2012). These include employees whose income exceeds a certain threshold, self-employed individuals or civil servants. Premiums in the PHI depend on initial health status. Unless major changes in overall healthcare expenditure arise, premiums must be constant throughout a lifetime. Surpluses in early years are saved to finance higher healthcare expenditure in old age. Insurers are neither allowed to terminate a contract nor may they adjust the premium to individual changes in health status.

Using their own or publicly available data, insurers calculate surcharges. For example, one German health insurer charged 50 percent extra for arthritis of one joint, 20 percent extra for allergies excluding asthma, 20 percent extra for varicose veins and 40 percent extra for the presence of gallstones. Insurers may also completely deny insurance to high-risk individuals, for example those working in dangerous occupations (for instance, lumbermen or sailors) or those who have expensive diseases such as multiple sclerosis, apoplexy and pneumoconiosis.

writing process, which limits the possible information advantage of applicants.

#### Community rating

The widespread regulatory response to the negative effects of risk rating is community rating, i.e. the requirement to charge uniform premiums. Sometimes this regulation is weakened by allowing premiums to vary within bands or by defining groups for which premiums can be differentiated (for example smokers vs. non-smokers).<sup>2</sup> At first sight, this regulation avoids unjust premium differentiation. In addition, the premium risk problem appears to be solved. However, community rating creates new challenges inducing further regulation. Firstly, low-risk individuals may find that community-rated insurance is not attractive to them. They may prefer not to buy any health insurance to avoid cross-subsidizing high risks. For this reason, community rating often goes in hand with compulsory insurance. Conversely, insurers have little incentive to insure high-risk individuals with community-rated premiums. Open enroll-

<sup>2</sup> In some countries, premiums also depend on income. To avoid disadvantaging insurers with low-income members, a central fund is usually introduced to correct for such differences. For example, the "Gesundheitsfonds" in Germany collects income-dependent contributions and pays capitations to sickness funds.

ment or guaranteed issue is therefore frequently required. A threefold regulation of community rating, open enrollment, and compulsory insurance can, for example, be found in Belgium, Germany, the Netherlands and Switzerland.

The main problem of this regulatory approach is the incentive for insurers to concentrate their efforts not on an efficient provision of services, but on risk selection because of the gap between an individual's premium and expected healthcare expenditure. Two variants of risk selection can be distinguished (Zweifel, Breyer and Kifmann 2009, 253–54). When insurers can observe characteristics of individuals related to healthcare expenditure, they can try to directly risk select by influencing contracting. For example, insurers may take their time processing the contract form handed in by a person who is predicted to be expensive. Individuals who can be considered to generate a surplus may be encouraged to sign a contract with supplementary services priced at a discount or, in extreme cases, outright payments. Indirect risk selection consists of designing benefit packages or of contracting with service providers who are attractive for low risks, but unattractive for high risks. It does not require insurers to observe risk types, but relies on self-selection since individuals with different risk types differ in their preferences.

Studies on risk selection focus on the direct variant. With a field experiment on German sickness funds, Bauhoff (2012) shows that insurers select based on geography. Individuals from West Germany have to wait longer than those from East Germany if they request a contract for membership. Direct risk selection in Germany has also been documented by the *Verbraucherzentrale*, Hamburg, a consumer advice center (see Box 2). Baumgartner and Busato (2012) investigated the extent of risk selection in Switzerland. In a field experiment, they compare insurers' reactions to young applicants willing to accept high deductibles (indicating low risks) and to old applicants preferring

low co-payments (indicating high risks). They find that applicants with low risk signals have to wait about a day less for an insurer's response, are offered lower premiums and often receive offers from a subsidiary within an affiliated group, apparently specializing in low risks.

A further problem of community rating stems from the fact that low risks are more likely to switch insurers than high risks. This has been demonstrated for Germany by Nuscheler and Knaus (2005), for the Netherlands by van Vliet (2006) and for Switzerland by Beck (2004). This can threaten the existence of insurers who have a high share of high risks. If they are forced to raise the premiums, they can expect mostly low risks to leave, putting the firm in further distress.

To cope with risk selection, several measures are available. Obvious methods of direct risk selection can be legally ruled out and punished. Setting up health insurance exchanges, which make it possible to join insurers without having direct contact, may be useful. With respect to indirect risk selection, insurers can be restricted in designing their benefit packages. Minimum benefits can be defined, obliging insurers to offer benefits that are of importance to high risks, such as the treatment of chronic diseases.

## Box 2

### Direct risk selection in Germany

In the German sickness fund system, all funds are obliged to accept any applicant. However, they have ways of bypassing this legal requirement. This became evident in spring 2011 when one fund, CityBKK, was hit by insolvency. Its members were commonly presumed to be high risk. Members of the fund contacted other funds, some of which tried to avoid accepting their applications in the following ways:

- Funds recommended applicants to select other funds.
- One fund pointed out the disadvantages of joining it, for example that the applicant might have to take other pharmaceuticals after switching. If the applicant insisted, the employee said that his/her job would be threatened if s/he accepted former CityBKK members and hung up.
- Employees of another fund pretended that application forms had run out. The applicant was then referred to headquarters for a personal interview, but appointments were not available within the next two months.
- One fund's website was blocked in Hamburg where many CityBKK members live, making it impossible to download application forms.
- Another fund's hotline was constantly busy, and if someone could be reached, then that person pretended not to be authorized to affiliate any applicant.

Source: *Verbraucherzentrale* Hamburg 2011.

In addition, imposing an upper limit on benefits can discourage insurers from offering services that are only means to attract low risks, such as access to fitness centers (Kifmann 2002). The problem of this approach, however, is that potential benefits from health insurance competition are lost. In particular, this is evident with respect to the choice of contractual partners for the provision of services, a key element of the Managed Care approach. Clearly, this choice is a good way to attract low risks, for example by giving a large choice of specialists in athletic medicine, and to avoid high risks, for example by contracting very few experts in chronic diseases.

With risk adjustment, economists tend to favor another approach to counter risk-based selection. The objective of these schemes is to pay insurers more if they insure high risks and less if they enroll low risks. The first risk adjustment schemes relied on the easily observable characteristics of individuals such as age and gender. Meanwhile, diagnostic data is frequently used (Zweifel et al. 2009, 278–80). Without risk adjustment, the potential gains of risk selection can be large. For example, Beck, Trottmann and Zweifel (2010) examined the incentive to dump unfavorable or cream-skin favorable individuals with Swiss data. Successful dumping potentially led to a 46 percent reduction in premiums over five years in the case of no risk adjustment. This advantage fell to 16 percent if prior hospitalization and membership in a pharmacy-based cost group was added to the risk adjustment formula. Premium reductions for cream-skimming are roughly the same. Earlier studies and those of other countries also find potentially large gains, depending on the variables used for risk adjustment and the information insurers have available for risk selection (see, for example, Newhouse et al. 1989; van Barneveld et al. 2000; Shen and Ellis 2002 and Holly et al. 2003).

In European countries using community rating, the net of further regulations is tightly meshed. Insurance is compulsory and insurers must accept any applicant. Benefits are strongly regulated, even up to the point that insurers are effectively obliged to offer almost identical benefit packages as in Germany. In addition, risk adjustment schemes are in place. It is controversial whether all of these regulations are necessary. For example, with better risk adjustment in place, insurers could be given more freedom in designing their benefits and in contracting with providers. The current state, however,

makes it difficult for insurers to realize the potential benefits of competition discussed above. Frequently, their role is reduced to offering a given benefit package at low cost.

If insurers were to be allowed to offer different benefit packages, for example traditional health insurance and managed care, another problem of community rating would become virulent. An efficient choice of insurance may require the relative price of these packages to depend on the risk type. With community rating, however, only one uniform price differential is possible, a priori ruling out an efficient choice (Kifmann 1999). In this environment, risk adjustment schemes that completely neutralize incentives for risk adjustment may also be impossible (Schokkaert and van de Voorde 2004).

### **Guaranteed renewability**

Risk rating in health insurance markets also creates a challenge over the life-cycle. Unforeseeable changes in health status can cause the adaptation of premiums, thereby exposing individuals to premium risk. In Germany, regulators have responded to this risk by not permitting private health insurers to adapt their premiums to individual changes in health status. In the US, most states oblige insurers to offer guaranteed renewability: when their contract expires, policy holders must be offered a new contract with a premium at average rates for their initial risk class (Patel and Pauly 2002).

These regulations have implications for the design of insurance contracts over the life-cycle. Guaranteed renewability is mostly attractive for individuals who turn out to be high risks. Low risks, by contrast, always have the option of changing insurers. Legally, they cannot be tied to an insurer. Therefore, the problem that insurers end up with only high risks needs to be solved. With guaranteed renewable contracts, this is achieved in the form of a prepayment. Premiums at the beginning of the contract exceed current healthcare expenditure. The surplus is used to lower premiums in the future, making it attractive for both high and low risks to remain in the contract. In Germany, this goal is reached by requiring insurers to calculate premiums in a way that they remain constant over a policyholder's lifetime. Since healthcare expenditure increases with age, the premium exceeds expected costs at a young age, thus generating a prepayment.

While guaranteed renewable contracts can provide insurance against premium risk, they tie individuals strongly to their insurer since the prepayment is lost if individuals change insurer. Insurers may exploit this lock-in situation, for example by lowering the quality of their service or by trying to deny justified claims. To what extent this happens depends on the possibilities of drafting detailed contracts and on the power of reputational forces. Similar to community rating, the problem can be expected to be severer, the greater the discretion that insurers exercise in organizing healthcare. Anticipating this, individuals may be reluctant to buy insurance contracts that extend the power of insurers beyond the reimbursement of insurance claims.

An interesting question is whether guaranteed renewability needs to be mandated. In contrast to community rating, no *ex ante* redistribution is involved. Guaranteed renewability is only concerned with *ex post* changes and, therefore, risks usually covered by insurance. Markets have also provided these contracts without a requirement as in the US prior to the Health Insurance Portability and Accountability Act (Pauly and Herring 2007). A possible justification is that standardizing terms of contracts can be useful for consumers, protecting them from contracts that fail to provide substantial premium guarantees and from exploitation of the lock-in situation (Patel and Pauly 2002). In addition, guaranteed renewable contracts can protect the public from having to step in when an individual cannot afford health insurance because of a deterioration of the health status. The prepayment also provides some protection against high premiums in old age, lowering the government's need to subsidize healthcare for the elderly.

## Conclusion

Premium regulation in the health insurance market is an attempt to avoid the problems generated by risk rating. Community rating tries to avoid premium differentiation, which is regarded as unjust. Guaranteed renewability is an approach to dealing with the risk of premiums being adapted to unforeseeable changes in the risk type. At first glance, these regulations are attractive for regulators because they appear to be simple and easy to implement. However, they cause a number of side-effects. With community rating the main problem is the incentive for insurers to risk select. Various addi-

tional regulations are used to minimize this problem. In particular, the enrollment process and benefit packages are regulated. Risk adjustment schemes try to compensate insurers for insuring high risks. Overall, the main problem is that these regulations can hamper the ability of insurers to offer contracts according to the preferences of individuals. Their potential to act as an organizer of medical care is severely reduced. On a smaller scale, this problem also arises with guaranteed renewable contracts. These lead to a lock-in situation with an insurer. Individuals may therefore be reluctant to give insurers too much influence over the provision of care.

Alternative solutions that try to avoid the negative consequences of risk rating and require less market intervention are therefore of interest. Pauly et al. (1992) have proposed refundable tax credits reflecting a household's risk category. Those with little or no tax liability would receive a transfer. The crucial question with this proposal is how precisely these tax credits and transfers can reflect risk types. This is also the challenge with the concept of "time-consistent health insurance" by Cochrane (1995). This alternative to guaranteed renewability envisages a separate insurance contract contingent on individuals' risk type. Individuals turning into high risks would receive an indemnity to compensate for the higher premiums of new contracts.

Zweifel and Breuer (2006) advocate premium subsidies that are paid when risk-based premiums exceed a certain percentage of household income. However, this policy creates the incentive for the insurer and the individual to include additional services in the contract to increase the transfer. Defining the benefit package in detail can be one way of avoiding this, but, as with community rating, the ability of insurance markets to offer contracts tailored to individual preferences is curtailed. Furthermore, this policy seems less suited to meet equity objectives than community rating. From a social welfare perspective, Kifmann and Roeder (2011) find that combining premium subsidies with community rating is superior for plausible correlations of health and productivity.

At the current stage, the famous trade-off between efficiency and equity seems to be unavoidable in health insurance. The potential benefits of competition in health insurance are limited by premium regulation. On the other hand, the market outcome without premium regulation is hardly acceptable for society. Advancements in risk adjustment and in tar-



getting transfers to high-risk individuals may mitigate this trade-off in the future.

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