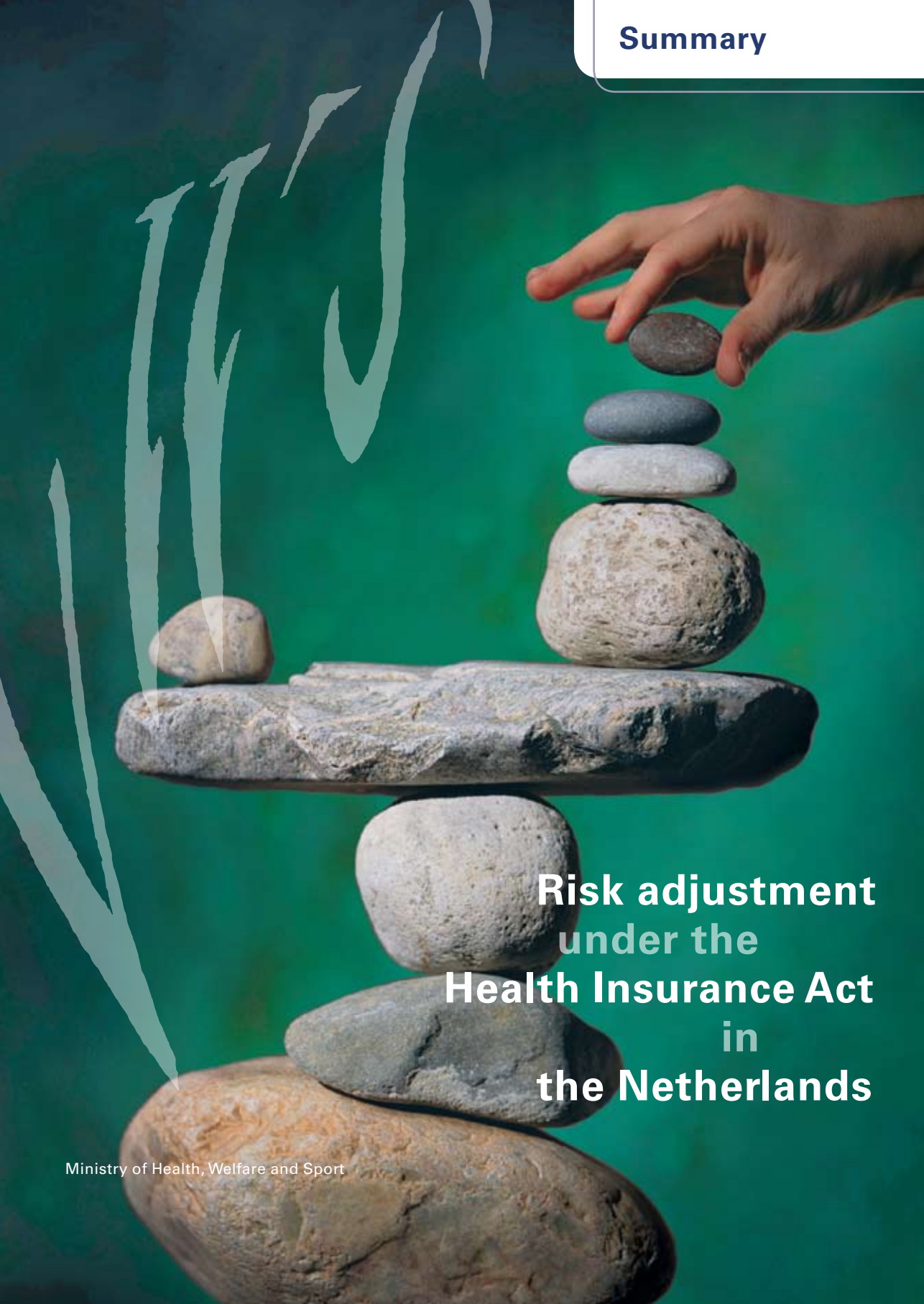
Summary



Risk adjustment under the Health Insurance Act in the Netherlands

Ministry of Health, Welfare and Sport

An introduction to risk adjustment

1 Introduction

What is risk adjustment? Why is it being used in the Dutch health care system? This chapter addresses these and other questions. We have summarised the main elements of risk adjustment, including the policy-making, legal and financial context in which it is used. This summary chapter provides the basic knowledge required for a broader understanding of risk adjustment.

2 Purpose of risk adjustment

2.1 Design of the health care system

The Dutch government wants to create an affordable and accessible health care system that also delivers high quality care. Tension inevitably exists between cost control objectives on the one hand, and universal accessibility and quality on the other. A simple way of saving costs is by limiting the quality or accessibility of care. By using available funds efficiently, however, it is possible to assure quality and accessibility while controlling costs. This requires sufficient efficiency incentives.

In the 1980s, it became clear that the health care system lacked these incentives. This was one of the most important conclusions of the Dekker Committee, a government advisory body. On the supply side, the government was heavily involved in determining the price and volume of delivered health care services. This made the health care system both inflexible and fragmented. Diverse and separate funding systems prevented substitution of cheaper outpatient care for expensive institutional care. The government set spending ceilings for each part of the health care sector. Service capacity and prices were regulated centrally. Sickness funds bore no financial risk because the government reimbursed all the costs of the persons they insured. In effect, they were little more than bookkeepers. Insured persons had little freedom of choice of either

insured services or their insurance company. On the demand side, the lack of cost-sharing by patients meant there were few, if any, incentives to reduce consumption of health services. Advances in medical technology and the ageing of the population made the pressure to control costs increasingly necessary.

In the early 1990s, the government promoted efficiency through the introduction of market forces. In its role of orchestrator, the government reduced direct controls and increasingly left the running of the health care sector to sickness funds, private and public sector health insurers and care providers, opting for a system of managed competition. This competition applied primarily to the sickness funds that bought health care services on behalf of their members ('demand control').

Under the Health Insurance Act of 2006, the sickness insurance funds were abolished and Dutch citizens were required to purchase their health insurance from profit-making private health insurers, which prior to 2006 insured only the wealthiest third of the population. Private health insurers negotiate on behalf of their members with care providers such as hospitals, general practitioners and pharmacies the scale, quality and price of services charged their members. Consequently, the health insurers play a pivotal role in implementing the Health Insurance Act. Insured persons can now 'vote with their feet'. They may change their health insurer once a year if the premium is too high, or the quality of care, bought on their behalf, is too low. This incentivizes both health care providers and health insurers to be efficient in the delivery (providers) and purchase (insurers) of health care.

2.2 Managed competition in the health insurance market

The health insurance market in the Netherlands is not completely free. Universal accessibility of care would be jeopardised if health insurers could offer lower premiums to healthier persons ('equivalence principle'). Unhealthy persons would be charged higher premiums or would be uninsurable. This would penalize the sick and reduce access to care for the people who needed it most. That is why the government chose to regulate the health insurance market by establishing preconditions under which private insurers must conduct business. The Health Insurance Act imposes on health insurers a duty of care, and an obligation to accept all who apply for basic insurance, although an insurer may refuse a person applying for supplementary insurances. All health insurers must offer the same basic package of essential medical care and charge all of its members the same

premium for it [1]. This establishes solidarity between people with different health risks.

Without the government requiring the insurer to accept all who apply, the prohibition of premium differentiation and the establishment of a uniform basic set of benefits, would give health insurers strong incentives to insure only those persons with good health risks and shun those with poor health risks (preferred risk selection) in order to guarantee a profit. Since insurers are required to charge all policyholders the same premium, insurers with a relatively sick portfolio of insured persons would be obliged to charge all their members higher flat-rate premiums in order to remain profitable. This would create incentives for the healthier members of the group to find a different insurer with a lower premium at their next annual election. As only the sickest remained in the original plan, the premium would have to be raised again. Eventually the premium would be so high and the plan membership so small, the insurance plan would become unviable and withdraw from the market. This is what insurers call a "death spiral" for an insurance plan. Government regulation of the market is designed to prevent death spirals and create a fair basis of competition among insurers.

Therefore, the government must make preferred risk selection unrewarding for health insurers and ensure that insurers with unhealthy populations are not disadvantaged compared with those with healthy populations.

2.3 Preventing preferred risk selection and creating a level playing field

Risk adjustment is a tool the government uses to prevent preferred risk selection. Health insurers receive financial compensation for insured persons with an unfavourable risk profile (like the elderly, chronically ill and people who are incapacitated and have higher health costs). Each year all health insurers receive from the Health Insurance Fund a financial contribution known as the *risk adjusted contribution*. The size of the contribution depends on the composition of their insured populations. A health insurer with a relatively large number of insured persons with an unfavourable risk profile receives a higher contribution than one with a relatively large number of insured persons with a favourable risk profile. Older insured persons exhibit an unfavourable risk profile, because on average they incur higher medical costs than younger insured persons. So a health insurer gets a higher risk adjustment contribution for older

1 Except for discounts under collective contracts.

insured persons than for younger ones. See sidebar 1 for an example of two insured persons[2].

If risk adjustment works properly a health insurer will receive risk adjustment payments which equal the higher medical costs of an older or sicker policyholder. Since the insurer is paid more for an older or chronically ill policyholder, the insurer has the resources to invest in the higher costs of such an individual's care. In this manner, risk adjustment removes the financial incentive to select according to risks or to avoid insuring the sick.

Besides preventing selection according to risks, risk adjustment encourages fair competition between health insurers. Since insurers receive risk-adjusted payments that equal the cost of care for their policyholders, each starts with the same ability to make a profit through efficient practices such as reducing their administrative costs or negotiating better prices for their members with providers. Risk adjustment creates a level playing field for health insurers, regardless of the composition of their insured populations.

2.4 Promoting the efficiency of health care

If preferred risk selection is not a profitable strategy, health insurers must direct effort and money towards promoting the efficiency of care, rather than towards acquiring or shedding certain groups of insured persons. Health insurers that operate less efficiently (i.e. by purchasing services at a higher price or by organising care less efficiently) than the average health insurer, will be unable to make ends meet with the risk adjusted contribution.

They will have to increase their flat-rate premium (or draw temporarily from their reserves). If these health insurers charge their members policyholders an above-average premium without providing palpably higher quality care, they will run the risk their members will switch to other health insurers who are cheaper.

2 We have purposely omitted from the example all kinds of technical and institutional complications like the breakdown into sub-amounts and balancing with the flat-rate calculation premium.

Sidebar 1 **Notional example of two insured persons**

How are health insurers compensated for insured persons with an unfavourable risk profile? This is best illustrated by means of two notional insured persons. The first is a 67-year-old woman who lives in a village in the countryside and suffers from a thyroid disorder. She takes medication for her disorder. The insurer receives sizable amounts (see Table 1) by way of compensation for her age and disorder. The woman has not been hospitalised over the past few years. She used to be insured by a sickness insurance fund, but now lives rurally in a good area. These characteristics represent a favourable risk profile. Therefore, they are deducted (see negative amounts in Table 1). On balance the insurer receives from the Health Insurance Fund slightly more than EUR 1,000 for this insured person.

The second person is a 19-year-old man. He studies in Amsterdam and has rented a bed-sit in a reasonable district. He is healthy and needs no medication for a chronic disorder. Like the woman in the first example, he has not been hospitalised over the past few years. On balance the insurer receives for this insured person about EUR 200 from the Health Insurance Fund (see Table 1). For this young, healthy student, the health insurer receives only one-fifth of the amount that it gets for the older woman with the thyroid disorder. This system is used to compensate health insurers for insured persons with an unfavourable risk profile.

Table 1 **Example of risk adjusted contributions for two notional insured persons.**

	RISK ADJUSTED CONTRIBUTION
Insured person 1	
Woman, age 67	970
Suffers from thyroid disorder	174
No hospital discharge diagnosis	-97
Ex-sickness insurance fund, lives rurally	-31
Source of income: state old-age pension	0
On balance	*1.016*

	RISK ADJUSTED CONTRIBUTION
Insured person 2	
Man, age 19	389
Not suffering from a chronic disorder	-109
No hospital discharge diagnosis	-97
Ex-sickness insurance fund, lives in city	36
Source of income: paid employment/other	-20
On balance	*199*

Conversely, health insurers that operate more efficiently than the average health insurer will have surplus money from the risk adjusted contribution and will be able to reduce their flat-rate premium (or increase their reserves). These health insurers can charge a below-average premium and thus attract insured persons from less-efficient insurance plans. The result will be lower overall costs. With a properly working risk adjustment system, the efficiently-operating health insurers with a relatively large number of insured persons with poor health risks can obtain a better market position than inefficient health insurers with a relatively large number of insured persons with good health risks.

Risk adjustment is sometimes called the Achilles heel of the health care system. Provided that risk adjustment works properly, it is possible to reap the benefits of managed competition. If risk adjustment does not work properly, preferred risk selection will be rewarded instead. This may disadvantage vulnerable groups in society such as the chronically ill and the elderly, for whom a health insurer will not receive adequate compensation. Therefore, it is crucially important to compensate health insurers adequately through the risk adjustment system for identifiable groups of insured persons with predictably high care costs and vice versa.

3 Financial structure of risk adjustment

3.1 Flat-rate premium

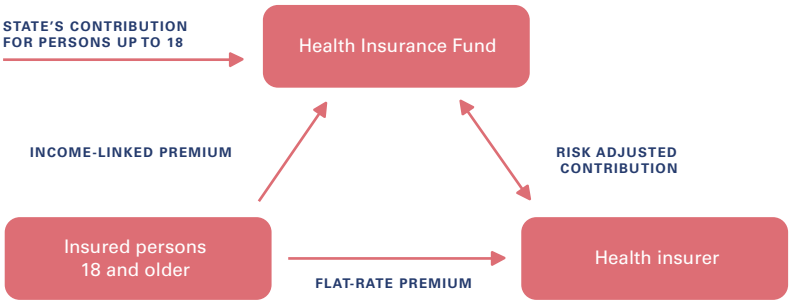
Every health insurer in the Netherlands has two revenue sources that cover the cost of the basic insurance package. The first is the flat-rate or nominal premium and the second is the annual risk adjusted contribution paid by the Health Insurance Fund. The flat-rate (or nominal) premium is charged to policyholders aged 18 or older. The health insurer sets the level of the flat-rate premium. The only variation in the premium that can be charged to policyholders is based on the health costs of the province in which the policyholder resides). Setting a lower flat-rate premium is an important way for health insurers to enrol new policyholders and retain existing policyholders.

3.2 Risk adjusted contribution

The second source of income is the risk adjusted contribution from the Health Insurance Fund. The fund is financed through income-related premiums paid by employers on behalf of their employees, and paid directly by pensioners and the self employed at a lower rate. It is collected by the Tax and Customs Authority. The State contributes general tax

revenues for children under age 18. Health insurers can not charge flat-rate premiums for children. The Tax and Customs Authority deposits the income-related contributions into the Health Insurance Fund. The fund is administered by the Health Insurance Board, an independent administrative body whose duties include implementing risk adjustment. An amount, the risk adjusted contribution, is then paid from the fund to the health insurers (see Figure 1). Only the fifty percent of the insurer's revenues from the income related-premiums are risk adjusted; however, this adjustment bears the entire burden of risk adjustment required to equalize the risk among the individual insurance companies risk pools.

Figure 1 **Financing of Health Insurance Act**



The size of the risk adjusted contribution depends on the risk profile of the persons insured by a health insurer. This approach compensates a health insurer for insured persons with an unfavourable risk profile. The payment provided from the Health Insurance Fund assures the fullest possible elimination of cost differences between health insurers resulting from differences in the health and health relevant demographic characteristics of insured persons. The risk adjusted contribution provided does not compensate insurers for cost differences between them, that result from business practiced under their direct control, such as inefficient purchasing of care services.

3.3 Available funding

A health insurer obtains approximately half its income from the risk adjusted contributions. The other half comes in through the flat-rate premiums. This ratio is established by the Health Insurance Act. In 2007, the total amount disbursed from the Health Insurance Fund and apportioned over the health insurers came to roughly EUR 12 billion. The total rounded budget for services under the Health Insurance Act – the 'macro-

services amount' – came to EUR 25 billion in 2007. This consisted of the risk adjusted contributions and the estimated revenues from flat-rate premiums.

Each year the Minister sets the total amount available for risk adjustment. The ministerial order and its implementation rules are drawn up well before the year concerned, to give health insurers maximum information about the risk adjusted contribution. They can calculate the flat-rate premiums they will charge based on this information and the best estimate of their projected health insurance payments to providers.

4 Ex-ante adjustment and retrospective compensation

4.1 Ex-ante adjustment

The risk adjustment system is primarily an ex-ante one. Ex-ante means the risk adjusted contribution is determined prior to the calendar year it concerns. With ex-ante adjustment, a health insurer runs a financial risk because the insurer must make ends meet with the risk adjusted contribution and the income from flat-rate premiums, regardless of the actual costs in the calendar year concerned. Ex-ante adjustment gives the health insurer an incentive to use the obtained funding as effectively and efficiently as possible.

The ex-ante risk adjusted contribution is determined prior to the calendar year. It is based on an estimate of the costs of providing care services. This estimate is calculated by reference to the risk profiles of the insured persons. The risk profile consists of a number of characteristics of insured persons, including age and gender, health features, region and source of the person's income. These characteristics are discussed at greater length in section 5. The correlation between the characteristics of insured persons and the costs of providing care services is based on an empirical validation of the prior health cost experience of insured persons. An econometric model – the risk adjustment model – is used to calculate the expected care costs (based on the characteristics of insured persons). This boils down to putting a 'price tag', called normative weight, on each value of an adjustment characteristic in the risk adjustment model. The risk adjustment model is updated each year, by making an annual estimate of the expected costs of care services based on the risk profile of the insured persons. The model and its outcomes are kept as current as possible. The more accurate the prediction of the care costs, the fairer the financial risk that health insurers run will be. The data required for the estimate are provided by the health insurers.

4.2 Retrospective compensation

After determining the risk adjusted contribution prior to a year, the composition of a health insurer's insured population may change, because each year insured persons are allowed to switch their health insurer. This may change the number of insured persons and also the risk profile of the insurer's portfolio. To protect insurers from this source of risk, the risk adjusted contributions are also recalculated retrospectively, taking into account the actual number of insured persons and their characteristics during the year.

After the end of the year, health insurers are partially compensated for the costs they incurred for providing care services. Retrospective compensations make a correction for deficiencies in the risk adjustment model. The correlation between the characteristics of insured persons and the costs of providing health care is not perfect, so the prospective estimates do not completely eliminate insurers' risk. The retrospective compensations further reduce risk at the individual level. As the prospective system is refined and perfected, it is expected the retrospective adjustments will be phased-out.

Health insurers have only limited ability to influence certain costs of providing health care (see section 6). The balance between prospective and retrospective compensations that will be used is decided prior to the calendar year concerned. The retrospective compensations are described in section 7.

5 Risk profile

5.1 Risk profile and risk adjusters

Risk adjustment compensates health insurers for the risk profiles of insured persons. But what determines a risk profile? This section describes the insured persons characteristics used in the 2007 risk adjustment model to calculate (beforehand) the expected care costs and the risk adjusted contribution. The characteristics are called 'risk adjusters'. They correspond, to a great extent, with the insured persons characteristics used previously for risk adjustment between sickness insurance funds.

5.2 Age and gender

Health insurers first receive compensation for the age and gender of their insured persons. Older people have on average higher care costs than younger people. The effect of age depends partly on gender. Women aged between 20 and 35 have on average higher care costs than men in the same age bracket on account of their use of expensive obstetric and maternity care. Therefore, age and gender have been combined into a compound risk adjuster. Figure 2 illustrates the effect of age and gender on expected costs under the Health Insurance Act.

5.3 Source of income

Secondly, health insurers are compensated for the 'source of income' of their insured persons. Through this risk adjuster, it is possible to make rough allowance for socio-economic health differences between insured persons. Insured persons who receive state incapacity benefits or income support, for example, have higher care costs on average than insured persons in paid employment.

The 2007 risk adjustment model makes a distinction between (1) people receiving incapacity benefits, (2) people receiving income support, (3) people receiving unemployment benefits and other state benefits, (4) self-employed persons and (5) insured persons in paid employment and those without their own source of income. Within the other five categories, a further distinction is made according to the insured person's age. There is additionally a separate category for children aged 0 to 14 and for people older than 65.

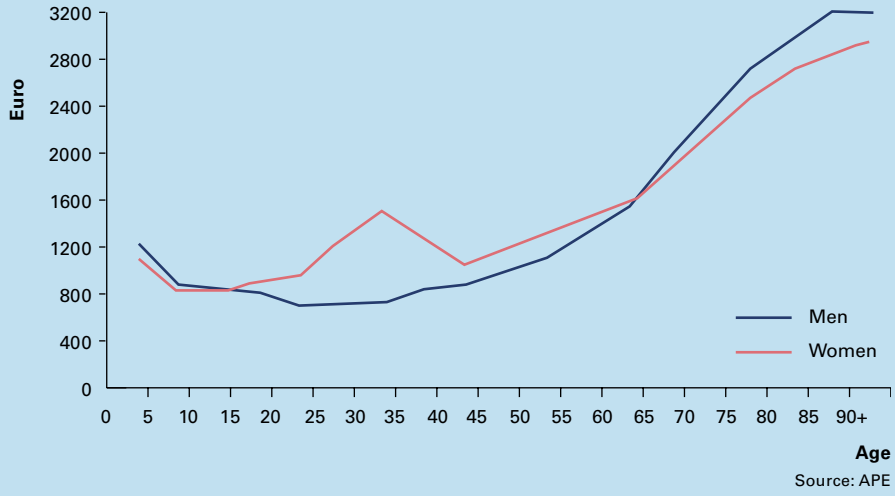
5.4 Region

A third risk adjuster is the region where a person lives. This characteristic has little to do with the customary definition of a region as a self-contained geographical area. The division into regions is based on a clustering of postcode areas according to the socio-economic, demographic and care-related characteristics of a postcode area. The clustering of postcode areas was established in 2007 using urbanisation, proportion of non-Western immigrants, average income, proportion of single persons, standardised death probability, proximity of hospitals and GPs and the number of nursing home beds (per 1,000 inhabitants within a radius of 25 km).

There are ten regional clusters. Those with low classification numbers are the most urbanised areas, with relatively many non-Western immigrants, an above-average death probability and low average income, and

relatively high normative weights. Those with high classification numbers are the less urbanised areas, with relatively few non-Western immigrants, a below-average death probability and high average income, and relatively low normative weights.

Figure 2 **Expected costs under the Health Insurance Act in 2007 (excluding production independent costs) according to age and gender**



Source: APE

5.5 Pharmacy Cost Groups

People with a serious chronic illness like diabetes, rheumatism or epilepsy have a pattern of high recurring costs over consecutive years. Health insurers are compensated for the high costs of insured persons with a chronic disorder by means of the fourth risk adjuster called Pharmacy Cost Groups (PCGs). This characteristic is based on the recent use of medicines provided outside hospitals (via public pharmacies and GPs with their own pharmacies). Costs of medicines used in hospitals are included in the hospital prices. Consequently, these costs are not included in the Pharmacy Cost Groups which are used primarily for ambulatory care.

PCGs assume that insured persons with a chronic illness can be identified by means of the drug claims submitted for medicines prescribed for that illness. An insured person falls into a PCG if in a previous calendar year he/she was issued prescriptions for more than a certain quantity of defined

medicines (enough for approximately six months' usage). This means that only chronic cases are included in the determination of PCGs.

The 2007 risk adjustment model distinguishes between twenty different PCGs: glaucoma, thyroid disorders, psychological disorders, high cholesterol, diabetes types I, IIA and IIB, Chronic Aspecific Respiratory Affections (CARA), epilepsy, Crohn's disease/colitis ulcerosa, cardiac disorders, rheumatism, Parkinson's disease, transplants, cystic fibrosis/pancreatic disorders, cerebral disorders, spinal cord disorders, cancer, HIV/AIDS, kidney disorders and growth hormones.

Since 2007 an insured person can fall into more than one PCG. The inclusion of multiple health-based risk adjusters in the risk adjustment system reduces insurer's risk, if they insure individuals with multiple chronic conditions.

5.6 Diagnostic Cost Groups

PCGs do not identify all insured persons with chronic illness, because some disorders are treated clinically rather than pharmacologically. Moreover, PCGs are based only on use of medicines on an outpatient basis, while some insured persons with chronic illness receive medicines from hospitals. The costs of these treatments and prescribed medicines are not separately identifiable in insurer's records, because they are included in hospital prices.

Diagnostic Cost Groups (DCGs) have been included in the model as a fifth risk adjuster to improve the prediction of the continuing care costs of common chronic illnesses. DCGs are based primarily on the diagnosis received by insured persons when discharged from a hospital. The only diagnoses included in the determination of DCGs are those expected to generate high costs in the coming year.

Diagnoses with few implications for continuing care needs, like broken bones, are not factored into DCGs. The clustering of the diagnosis codes according to the thirteen DCGs takes place based on equivalent cost patterns and is not determined by medical classifications. That is why the thirteen DCGs do not have names. Ineligibility for a DCG is also recorded in the DCG system.

6 Types of costs

Health insurers are able to influence only some of the costs of health care providers. A health insurer has little influence over capital costs (e.g. depreciation of hospital buildings and equipment). Costs of this kind can differ considerably between hospitals and other health care providers. For that reason, the care costs have been split into three types: (1) production independent costs of hospital care (e.g. capital costs, heating the building), (2) production dependent costs of hospital care and specialist help (e.g., surgical fees), and (3) costs of other services, such as pharmaceutical care, GPs, medical appliances and maternity care.

The ex-ante risk adjustment model described above, applies only to the production dependent costs of hospital care and to the costs of other services. As a health insurer can influence these types of costs during negotiations with health care providers, it is reasonable for the insurer to be at financial risk for these costs. There is a different and less risk-related way of adjusting the production independent costs of hospital care. This adjustment is based on health insurer-specific past costs and numbers of insured persons. A health insurer is paid a fixed amount for each insured person.

7 Retrospective compensations

It is possible retrospectively to compensate insurers, if the risk adjustment model is inaccurate prospectively. If expected, and actual care costs are not the same, health insurers may find it tempting to skimp on the quality of care or to enrol only healthy people; alternatively, they may be paid excessive profits.

A health insurer can identify specific groups for which it will not be adequately compensated and try to shun them. Compensating the health insurer after the end of the year for the incurred care costs of these groups, will reduce the inclination to select according to risks. However, the use of retrospective compensations reduces efficiency incentives. Retrospective payment is a form of cost reimbursement, and cost reimbursement eliminates incentives to reduce costs because that lowers revenues and cash flow. This results in a trade-off between the desired efficiency incentive and the undesired incentive for preferred risk selection.

Different forms of retrospective compensation are used in the present risk adjustment system. We will discuss them in the sequence in which they are

applied in the system. Retrospective compensation is not used for all costs, however. Consequently, health insurers have different levels of financial risks on different types of costs. This may impede efficient treatment of the different types of care.

1 Retrospective correction of the number of insured persons per health insurer

Via verzekerdennacalculatie wordt achteraf rekening gehouden met veranderingen in de omvang en de samenstelling van de verzekerdenportefeuille van zorgverzekeraars. De samenstelling heeft betrekking op de opbouw van de verzekerdenportefeuille naar de onderscheiden vereveningskenmerken. Verzekerdennacalculatie kan in feite worden gezien als een correctie op de ex ante vereveningsbijdrage. Verzekerdennacalculatie heeft betrekking op alle typen kosten.

2 Retrospective correction of total costs

Since the introduction of the Health Insurance Act in 2006, retrospective correction of total costs has been used for risk adjustment purposes. The objective of retrospective correction of total costs is to compensate for differences between estimated and actual total costs. As a result, health insurers (as a whole) do not run any risk in the year concerned with regard to total costs. If the total costs turn out to be higher, there will be a higher risk adjusted contribution, while if they are lower the risk adjusted contribution will be lowered. Retrospective correction of total costs prevents a situation where health insurers charge flat-rate premiums that are too high in order to cover themselves against uncertainties in the development of total costs. Retrospective correction of total costs applies to all types of costs.

3 Outlier risk sharing

For each insured person, 90% of the costs above the claim threshold of EUR 12.500 were adjusted using the Health Insurance Fund in 2007. Outlier risk sharing helps redress the unequal distribution of unpredictable extreme claims between health insurers. Outlier risk sharing applies to the production dependent costs of hospital care and to the costs of other services.

4 Generic risk sharing among health insurers

Generic risk sharing among health insurers is used to correct any deficiencies in the model's risk adjusting effect. Basically, generic risk sharing among health insurers settles between them the difference between their actual costs and the ex-ante cost estimate (corrected for earlier retrospective compensations). Thirty percent of the difference between the actual costs and the ex-ante contribution is adjusted generically between health insurers.

Generic risk sharing among health insurers applies only to the production dependent costs of hospital care.

5 Proportional risk sharing

Proportional risk sharing is used to link the scale of the financial risk to the possibilities that health insurers have to influence the costs of health care. It settles the difference between costs actually incurred and the ex-ante risk adjusted contribution from the Health Insurance Fund (corrected for earlier retrospective compensations). For the production dependent costs of hospital care, 35% of the difference between the actual costs and the ex-ante cost estimate (after correction for outlier risk sharing and generic risk sharing among health insurers) were retrospectively reimbursed in 2007. Health insurers are 100% retrospectively compensated for the production independent costs of hospital care.

6 Safety net or bandwith arrangement

Besides the aforementioned retrospective compensation, it is also possible to temporarily use supplementary safety nets. The purpose of safety nets is to limit the financial risks that health insurers run. The safety net is used if a health insurer's actual costs deviate by more than EUR 17,50 per premium-paying insured person from the cost estimate (after correction of the earlier retrospective compensations). Ninety percent of the difference above the plus or below the minus EUR 17,50 is costed through the Health Insurance Fund.

The generic risk sharing among health insurers is the most controversial of the retrospective compensations. This is because generic risk sharing among health insurers involves financial transfers from health insurers that make a profit to those that incur a loss. The goal is to phase-out the retrospective outlier risk sharing compensations, generic risk sharing among health insurers, proportional risk sharing and safety net components as the prospective system is refined.

8 Implementation of risk adjustment

8.1 Determination of the risk adjusted contribution

The duties of the Health Care Insurance Board (CVZ) include implementing risk adjustment. The CVZ estimates how many insured persons with different risk profiles each health insurer has in its portfolio. Multiplying the relevant number of insured persons by the appropriate normative weights produces the prospective estimate of a health insurer's total costs. As the health insurer also receives income directly from its policyholder's flat-rate premiums, an

estimated average flat-rate premium is deducted from the total amount. This average flat-rate premium is referred to as the calculation premium. Total costs minus the calculation premium yields the risk adjusted contribution, which added to the nominal premiums, produces the revenues which enable the health insurers (in all likelihood) to pay their care costs.

8.2 Privacy

To implement risk adjustment CVZ must keep records containing privacy-sensitive information. CVZ uses privacy-enhancing technologies to allow it to carry out risk adjustment without using personal identifiers. Privacy-enhancing technologies are an interrelated set of ICT-measures designed to protect privacy by eliminating or reducing personal identifiers. Each insured person is assigned a pseudo-identity based on his/her Citizen Service Number. By using pseudo-identities, the CVZ does not possess the 'real' identities of insured persons which protects their privacy.

9 Closing comments

Risk adjustment compensates health insurers financially for insured persons with a predictably unfavourable risk profile. The mechanism is used to discourage health insurers from selecting people according to their risk profiles. Preferred risk selection means that health insurers will try to enrol individuals who are profitable (young, healthy people) and attempt to shun those who are unprofitable (old, ill people). By applying risk adjustment, preferred risk selection is costly to the insurer. Since they must spend money to determine an applicant's health status and therefore does not yield profits, if the insurer is fairly compensated by the risk adjusted system for the higher costs of sicker older policyholders. However, the strategy fails if the risk adjustment model is inaccurate.

A number of other countries also use an ex-ante risk adjustment system for health insurers. They include Belgium, Germany, the United States (Medicare programme), Ireland, the Czech Republic, Switzerland and Israel. But the Netherlands is leading the way through its development of its current risk adjustment model, mainly because the methodology explicitly accounts for health characteristics (PCGs and DCGs). The only other place where such an approach exists is in the United States under the Medicare programme. Another feature that makes the Dutch system unique is the central collection of income-linked care premiums.

The risk adjusted contributions disbursed to health insurers are funded out of the income-linked contributions that the Tax and Customs Authority levies and the central government contribution for young people up to age 18. The risk adjusted contribution forms roughly half the income of health insurers. The other half is obtained via the flat-rate premiums. Something else that is unique is that risk adjustment applies to all Dutch citizens.

Health insurers receive the risk adjusted contribution before the start of the year (ex-ante). An ex-ante system of this kind provides an incentive to use the available funding as efficiently as possible. After the end of the year, the health insurers receive partial compensation for differences between the ex-ante risk adjusted contribution and their actual costs. The risk adjusted contribution is set each year for the coming calendar year.

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