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ISSUE BRIEF

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Risk Classification in the Voluntary Individual Health Insurance Market

Risk selection and risk classification, commonly known as “underwriting,” play an important role in most private insurance systems, but are often not well understood outside of the insurance industry. This issue brief, which updates a previous paper prepared by the American Academy of Actuaries,¹ reviews the fundamentals of risk selection and risk classification to help policymakers and the public better understand the role that risk classification plays in the voluntary individual health insurance market.

Information on a specific individual’s risk characteristics, such as health status, is not used to determine eligibility for most employer-sponsored and government-sponsored health insurance programs. However, such information is often used in the voluntary, individual health insurance market where individuals decide whether or not to purchase coverage based on how their premiums compare to their expectations for future medical expenses. While roughly nine out of ten non-elderly Americans with private health insurance coverage receive it through an employer-sponsored group plan, millions of privately insured Americans rely on the individual health insurance market.²

Risk classification helps maintain the financial soundness of the voluntary, individual health insurance market. Among the key points highlighted in this brief:

- To avoid insolvency, insurers must charge adequate premiums to pay policyholder claims.
- The risk classification process groups together individuals with similar levels of risk and expected medical costs, and permits insurers to charge an adequate premium.
- If individuals purchase insurance on the basis of adverse health information or other risk characteristics that are unknown to or not considered by the insurer, adverse selection results. Adverse selection means that otherwise similar people at lower risk for high health spending subsidize those at greater risk. This may drive lower risks from the insurance system and lead to higher premiums or even insurer insolvency.
- Banning the use of information that helps insurers classify risks potentially leads to higher costs and reduced access to individual insurance.

¹ The prior issue brief, “Risk Classification in Individually Purchased Voluntary Medical Expense Insurance,” was written by the Academy’s Task Force on Genetic Testing in Health Insurance and published in February 1999.

² U.S. Census Bureau, Current Population Survey, 2008 Annual Social and Economic Supplement.

Introduction

An individual health insurance contract represents a significant promise, one that can extend for years or even decades. To fulfill its promise to pay future claims, a health insurer must remain financially viable. An insurer's financial viability depends on administrative efficiency, sound investment strategy, continued marketplace competitiveness, and premiums corresponding to the claims that can be expected from the insurer's policyholders.

When purchasing insurance in a voluntary market, consumers weigh the price they must pay against the value they expect to receive. Individuals generally will not pay significantly more in premiums than they expect to receive back in benefits. Most healthy individuals are willing to pay a premium somewhat higher than the benefits they would expect to receive given their usual health care expenditures, in order to have the assurance provided by protection against unanticipated expenditures due to injury or illness. However, there is a limit to the additional premium any given consumer is willing to pay for this guarantee. If premiums for a health insurance policy rise above this level, then healthy individuals will likely not purchase the coverage. If no insurer offers coverage at a premium below this level, healthy individuals will drop out of the insurance marketplace.

In order to attract new policyholders, insurers aim to offer insurance at a low and competitive price. However, insurers also must ensure that the premiums charged are adequate to enable them to pay claims as they come due, and to allow them to accumulate sufficient funds to remain financially sound. Excessive premiums damage an insurer's competitiveness, while inadequate premiums place its policyholders in jeopardy by undermining the insurer's ability to meet its obligations. Establishing premiums that are neither too low nor too high requires the ability to reliably project the level of future claims.

To make these projections, insurers rely on actuaries, who use principles of probability and statistics, expertise in finance and

economics, and mathematical reasoning to calculate the appropriate premiums that an insurer charges. Of course, the claims that an insurer may expect to face ultimately depend largely on the risk characteristics of the individuals who are covered.³ Thus, actuaries must calculate the appropriate premiums to be charged for various sets of risk characteristics. Risk selection and risk classification are used to ensure that each individual purchaser is charged a premium commensurate with the relative value that particular purchaser may expect to receive from the insurance coverage provided.

Types of Insurance Systems

There are three primary types of insurance systems: (1) social insurance, (2) group insurance, and (3) individual insurance. In most social insurance programs, such as Medicare, everyone eligible for coverage is required to participate, and individuals are not allowed to choose their own benefit level. The risk profile of the participants, that is the overall distribution of risk characteristics among the participating individuals in such mandatory social insurance systems, is typically more predictable and stable than that of a private insurer because the covered population consists of everyone in a given, well-defined class of eligible individuals. Because participation in such a governmentally-sponsored monopoly is typically mandatory, adverse selection and competitiveness are not at issue, and premiums or contributions are set based on considerations of social and individual equity as well as program solvency. In other words, the need for risk classification in setting individual premiums is significantly reduced or eliminated altogether.

With group insurance, such as an employer-sponsored health plan, the plan sponsor typically makes the decision of whether to offer coverage, and if so, what type and level of benefits will be provided. In most cases, such as the majority of employer-sponsored health plans, coverage is either automatic for members of the group or offered on a subsidized basis that encourages most members

³ Other factors, such as the level of benefits provided, claim management practices, and the legal environment also have a significant effect on claim costs.

to participate. Determining the risk profile of likely program participants essentially becomes a matter of evaluating the risk profile of the eligible group, rather than evaluating specific individuals. The major risk characteristics evaluated by health insurers in the group market typically include group size, the industry or occupations involved, the demographics of the group, the benefits provided, and prior claim levels for the group as a whole.

With voluntary individual insurance markets, each individual decides whether to purchase insurance, when to purchase insurance, and what type and level of benefits to purchase. Which individuals will actually buy coverage from a particular insurer depends on the premiums and benefits offered, as well as those of competing insurers. An insurer's flexibility in establishing premium rates is restricted by the laws regulating the market. Many states give health insurers flexibility in establishing individual market premiums, and most states give insurers a great deal of flexibility in accepting or rejecting each application for coverage. In this environment, evaluating and classifying the risk presented by each individual applying for coverage is key to predicting likely claim levels and establishing actuarially sound premiums.

Risk Selection and Risk Classification

For each application it receives, a health insurer in the individual market must make two decisions. First, it must decide whether or not to accept the application and issue a policy (*risk selection*). Second, if the application is accepted, it must be appropriately categorized to ensure that the policy provisions and premiums are consistent with the level of risk involved (*risk classification*). The process of selecting and classifying insurable risks is known as *underwriting*.

Risk classification is the process of grouping together individual applicants for health insurance who have similar risk characteristics and share a similar level of expected medical costs. Provided that each purchaser contributes to the insurance system an amount commensurate with his or her expected medical costs, no single individual's decision to purchase coverage will adversely

affect other purchasers. If some purchasers are to pay less than that amount, then others must subsidize their costs by paying more, or an external subsidy must be provided to the system.

Economic considerations make it important for insurers to accept as many applicants as possible at premium rates that correspond to the risks presented, in order to maximize market share, premium income, and profitability. Insurance is often characterized as being based on the concept of *pooling* and the sharing of risk. The term "pool" is typically used to describe either a group of policyholders whose premium and claim statistics are aggregated for purposes of developing premium rates, or all of the participants in a single insurance program or system. In one sense, the participants in a single insurance program are "sharing" their risk. Another way of describing most insurance systems is that participants transfer their risk to the insurance program, and that the insurance program manages its aggregate risk through diversification across a wide array of participants. Whichever description is preferred, if participants with different levels of risk (i.e., different levels of expected claim costs) pay the same premiums into the system, an implicit subsidy is created, from one the group with lower expected claims to the group with higher expected claims.

Actuaries who develop risk classification systems are guided by the principles of their profession's standards of practice. According to Actuarial Standard of Practice Number 12, *Risk Classification*, risk classification systems should reflect the expected cost associated with a given risk characteristic; should be applied objectively and consistently; and should be administratively practical, cost-effective and responsive to change. Following these principles ensures that the premiums for any two individuals with a similar risk status are comparable. This is known as *financial equity*. It is important to note that actuaries do not need to establish a cause-and-effect relationship between each risk characteristic and a specific individual's health care costs, but rather that collectively the risk characteristics used are correlated with the aggregate claim costs of a group of similarly situated

policyholders. This standard of practice also explicitly recognizes that there may be legal constraints on the risk characteristics that may be considered in a particular risk classification system, and imposes on the actuary a professional obligation to comply with any such constraints.

Risk selection and risk classification based on the health or medical condition of specific individuals (*medical underwriting*) are of little concern when coverage is mandatory, or when each decision to purchase health insurance covers large, diverse groups of people automatically or on a subsidized basis that strongly encourages participation by both healthy and unhealthy individuals (e.g., most employer sponsored health plans, which are typically heavily subsidized by the employer). This is why there is no medical underwriting of specific individuals in most government insurance programs and employer sponsored health plans.⁴ Medical underwriting is primarily used in voluntary individual insurance markets, where each person must decide whether or not to participate in the system based on the perceived value of coverage to them (i.e., the relationship of the premium they must pay to their perception of their risk of loss).

Risk Characteristics

While some consumers may keep an individual health insurance policy in force for years or even decades, particularly those who develop medical conditions that would make qualifying for another policy difficult, most policies are in force for only a few years. As a result, health insurance underwriting focuses on medical costs expected during the first few years after a policy is sold. In contrast, disability income and long-term care policies are typically viewed by buyers as permanent insurance. As a result, the underwriting of those products considers the long-term health of applicants.

Subject to any limitations established by

state law, each insurer must decide which combination of risk characteristics to use in evaluating applications and establishing premium rates. Average medical costs typically increase with age. In addition, average medical costs for men differ from those of women. As a result, like many other types of insurance, health insurance premiums will typically vary by age and gender. In addition to classifying risks based on these demographic characteristics, insurers will often charge different premiums for smokers and non-smokers.

After applicants are classified according to such basic criteria as age, gender, and smoking behavior, insurers must classify those applicants whose expected claim costs exceed their established range for standard risks due to medical factors.⁵ Medical history and the current physical condition of an applicant are important indicators of the likely need for future medical care. Medical factors are particularly important when evaluating the applications of older individuals, who are more likely to be in poor health. Insurers evaluate a risk primarily by estimating the probable influence of current impairments and previous medical histories on future claims.

In general, when considering medical information the insurer evaluates the applicant's recent medical expenses, any current medical conditions that need, or will shortly need, medical treatment, and any physical condition, such as a high cholesterol level, that increases the likelihood of future illness. Some conditions, such as diabetes, have implications for both current and future medical expenses. It is particularly important for the insurer to distinguish between chronic conditions or those likely to recur, such as diabetes, and acute disorders that do not recur once properly treated, such as bone fractures or appendicitis. For current conditions and those conditions that are likely to recur the insurer must evaluate: the current treatment costs; the likelihood of a recurrence; the like-

⁴ Late applicants, individuals who initially decline to participate in an employer-sponsored program then later seek to join, make a purchase decision very similar to that of an individual market purchaser, and are often underwritten if their decision is not prompted by the loss of other coverage or by a major life event such as a birth or marriage. While the Medicare program does not underwrite late applicants, the same concern is recognized through a higher premium.

⁵ Additional risk characteristics may be taken into consideration as well, including dangerous occupations and avocations.

ly future costs of recurrence; the effect on the applicant's general health; and the normal progression of the condition.

It should be noted that many individuals with medical conditions found to have minimal impact on near-term health care needs, such as mildly abnormal blood pressure, may be included in the standard group. Insurers typically wish to accept as many applicants as possible, at the lowest possible premium rates.

Self Selection in the Individual Market

People tend to make economic decisions that are in their own best financial interest. As a result, people who apply for voluntary, individual health insurance are not a randomly selected group. Because applicants for individual health insurance choose the timing of their insurance purchase, as well as the benefits and type of plan selected, they have the opportunity to make decisions that favor themselves, potentially at the expense of the insurance program. When viewed from the standpoint of the insurance program, this phenomenon is known as adverse selection, anti-selection, or biased selection, and occurs when applicants make purchase decisions based on risk characteristics that are known or suspected by them but unknown to, or not considered by, the insurer or administrator of the program.

If the insurer is unaware of, or prohibited from using, a risk characteristic that is associated with higher than average medical costs, that characteristic cannot be reflected in the premium charged, and applicants with that particular characteristic will on average contribute less to the insurance program than they as a group receive from it. In that case, coverage will be particularly attractive to individuals with that risk characteristic, and more and more of these individuals can be expected to purchase coverage at the favorable premium rate. As a result, premiums could rise for all policyholders, some of whom may find that the value received for

their premium no longer justifies purchasing coverage. This may also lead to adverse selection at policy renewal if individuals with lower than average expected medical costs are more likely than those with higher than average expected medical costs to discontinue coverage by allowing their policies to lapse.

The process of adverse selection may reach a point of equilibrium with claim costs and premiums that are stable, though higher than would otherwise be required (in some cases much higher). In extreme cases, however, premiums can continue to spiral upwards as more individuals leave the system in response to rising premiums.

Setting Initial Premiums

Estimating the premiums for a voluntary individual insurance product is integrally related to risk selection and risk classification. Approximately three-quarters of underwritten applicants for individual health insurance policies are accepted as *standard risks* (i.e., they represent average, healthy individuals).⁶ Many people with minor medical conditions will be included in this group. The claim level for the standard risk group is used as the benchmark for pricing. Each insurer decides which risk characteristics to use for risk selection and risk classification. Of course, for individual health insurance, medical history and current medical condition are typically among the most important.

In the typical underwriting process for individual medical expense insurance, the underwriter is expected to consider all of an applicant's medical conditions (which may vary in severity, symptoms, and treatment) in order to estimate the expected level of future medical costs. Many factors come into play in determining expected future medical costs. Individuals whose characteristics place them in the standard risk category according to age provide the benchmark by which medical costs are measured. The benchmark group may be thought of as establishing a base rate of 100 percent.

⁶ America's Health Insurance Plans. 2007. "Individual Health Insurance 2006-2007: A Comprehensive Survey of Premiums, Availability, and Benefits" (available at http://www.ahipresearch.org/pdfs/Individual_Market_Survey_December_2007.pdf).

To illustrate, an applicant might have a particular heart condition that increases costs by 50 percent on average. That same applicant also might have healthy lifestyle or other factors, such as regular exercise, a healthy diet or a history of not smoking, that would be expected to reduce future costs by 10 percent. In that case the applicant's expected health care costs would be 140 percent of those for a standard risk individual, and they would typically be offered a policy with a higher, *substandard* premium rate.

Individuals with extremely high expected medical costs may be considered uninsurable. Predicting future medical expenses for very high-cost individuals is particularly difficult, because of the small number of individuals with any particular condition, the difficulty in quantifying the impact of many serious medical conditions, and the potential for interactions between multiple medical impairments.

Underwriting at Renewal Generally Prohibited

The underwriting process, including risk selection, risk classification, and determination of an initial premium, is performed only once, when the insurance policy is initially sold. Insurance contract provisions and state insurance laws generally restrict a health insurer's ability to raise premiums once the policy is in force.

Typically, the insurer can only raise premiums if the increase is applied uniformly to a "class" of policyholders, usually defined as all policies of a particular type sold in a given state. This is a very important consumer protection, because it means that the premium for a particular policyholder will never be increased as a result of that particular person becoming ill. Of course, premiums may still rise significantly if average costs rise for the class as a whole. This becomes a particular concern if rising premiums cause healthier individuals to leave the pool, resulting in a class whose remaining policyholders are relatively unhealthy and thus high cost.

Generally there also are restrictions on an insurer's ability to cancel a policy. Under the Health Insurance Portability and Account-

ability Act of 1996 (HIPAA), insurers may not cancel or non-renew policies except for non-payment of premium as long as the insurer remains in the individual market.

Summary and Public Policy Implications

Taken together, the risk selection and risk classification processes are the basis for grouping together individuals with similar risk levels into categories and using those categories to estimate the expected claim costs under an individual health insurance policy. From this process, premiums are calculated for each category of applicant commensurate with the expected claim costs of those applicants. The more precisely applicants are categorized (consistent with objectivity, administrative practicality, and cost-effectiveness), the more precise and financially equitable will be the premiums for each participant in the insurance program.

Financial equity is important in voluntary individual insurance systems, because each person decides whether or not to participate in the system based on his or her own economic circumstances. Any inherent subsidies from one set of participants to another tends to bias enrollment by encouraging greater participation among those benefitting from the subsidy and discouraging participation among those who would provide the subsidy. This results in higher average claim costs, and thus higher average premiums for the system as a whole, and in extreme cases may result in premiums that continue to spiral upwards.

Actuaries consider risk selection and risk classification important for consumers and health insurers alike. For consumers, they protect the solvency of the insurance program, making it possible for the insurer to fulfill the promise to pay claims as they come due. They also help stabilize and hold down premiums by avoiding the effects of adverse selection. For the insurer, risk selection and risk classification protect financial viability by allowing premiums to be set at a level commensurate with the risks insured. This financial viability is necessary to ensure ongoing operations and the continuing ability to develop and market new products.

Insurance is an efficient mechanism for dealing with the financial impact of unantic-

ipated illness or injury. But when individuals who are already in poor health are brought into the insurance system at standard rates, they are in effect subsidized by the rest of the insurance-buying public. Adverse selection in a voluntary insurance market can be a problem, even if most individuals ultimately purchase coverage, if they delay their purchase until they anticipate significant medical expenses. In that case relatively few active participants in the market will be healthy, and average costs will be high even though most individuals ultimately participate.

Achieving universal coverage through coverage mandates or other means would eliminate adverse selection and also therefore the need for risk selection or risk classification based on health status. Achieving universal coverage would also eliminate selection by other characteristics that are associated with higher health costs, such as advanced age.

As long as premiums are set to ensure program solvency, the question of how to distribute the costs across the population becomes an issue of balancing individual financial equity and social equity. Even when the allowed risk characteristics are limited by

applicable laws, actuaries will need to assess the risk of the overall pool and calculate premiums accordingly.

Adverse selection will still occur to some extent if compliance to mandates or response to other incentives is not 100 percent. In addition, even if adverse selection is minimized as a whole, a plan could end up with a disproportionate share of people with high health costs. It may be appropriate to risk adjust plan payments or implement other types of risk-sharing arrangements to take into account the health status or other risk characteristics of plan participants. With risk adjustment, payments would flow from plans that disproportionately enroll individuals with low expected health costs to those that enroll a higher percentage of individuals with high expected costs. When the use of certain risk characteristics is limited or prohibited when setting premiums, risk adjustment helps to make payments to competing plans more equitable and can reduce the incentives for competing plans to avoid enrolling high-risk individuals.



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