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The Role of Insurance Principles in the Sustainability of Risk Transfer Systems

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Insurance is a mechanism for legally transferring risk from a person or entity to an "insurance" company to cover a potential loss. The reliability and sustainability of a health insurance product and/or system depends upon the reliability and sustainability of its risk transfer systems.

This paper deals primarily with insurance principles viewed in the context of private health insurance, although they also apply to government insurance programs including social insurance (1).

THE CHALLENGE: STATUTORY AND CONSUMER PRESSURE TO PROVIDE "INSURANCE" COVERAGE THAT IGNORES ESSENTIAL RISK TRANSFER PRINCIPLES IS ERODING THE AVAILABILITY OF SUSTAINABLE INSURANCE COVERAGE.

Moral Hazard Principles

The concept of moral hazard is important for the functioning and pricing of all types of insurance. Moral hazard is present when people change their behavior due to the presence of insurance. For example, if people are more likely to engage in dangerous activities because they have medical insurance, their claims are likely to be higher than if they avoided those activities.

There are three types of moral hazard (2). Ex ante moral hazard is a person's tendency to be less likely to invest in their health or engage in healthy behaviors when they are insured. Ex post moral hazard is a person's tendency, at a given level of health, to consume more health care when they are insured. Supply induced moral hazard is the tendency of health care providers to offer or recommend more or more expensive care when the patient is insured.

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Moral hazard increases the likelihood and cost of claims, and insurance companies have developed various ways to attempt to mitigate these effects. Examples include financial incentives for healthy behaviors, cost sharing provisions such as deductibles and coinsurance, and pre-authorization requirements. Research suggests that the effects of ex post moral hazard and supply induced moral hazard are significant.

Adverse Selection Principles

Like moral hazard, adverse selection is important for the functioning and pricing of all types of insurance. Adverse selection occurs when insurance companies are unaware of characteristics of insured people that could affect the likelihood, timing or size of their claims. For example, people with serious medical conditions are highly motivated to buy medical insurance because of the likelihood that they will need care for their conditions. Premiums cannot reflect this higher risk if the insurance company is unaware of the conditions.

Insurable Events Principle

The notion of insurable events is central to the definition and functioning of insurance. Insurable events are those that are largely unavoidable or random, high cost, and have a probability of occurring that is relatively low and can reasonably be estimated. An already burning barn, for example, would not be an insurable event because the loss has occurred, it is not unavoidable or random and its probability of occurring is 100%. The premium for insurance to cover such a loss would be higher than the amount of the loss, as the insurance company has expenses and profit that also must be covered by the premium. The challenges that moral hazard and adverse selection present for insurance pricing and system sustainability are magnified when the principle of insurable events is violated.

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The most prominent example of a non-insurable event in health care today would be a pre-existing condition. Suggesting that a pre-existing condition is a non-insurable event should not be equated with suggesting that people with a pre-existing condition should be denied care. Societies may decide that it's not acceptable to leave people without financial protection against catastrophic expenses arising from such a condition. That said, however, it is critical to acknowledge that insuring people for coverage of a previously diagnosed condition is clearly the equivalent of insuring against a barn fire after the barn has caught fire.

Actuarial Soundness Principle

A system or plan exhibits actuarial soundness if there is a viable plan, which recognizes the time-value of money, to balance revenue and expenditures over the life of the system or plan.

Risk Classification Principle

Examples: Other common contract provisions that affect the long term sustainability of insurance plans include those that do not satisfy risk classification principles. This principle addresses how to reflect different risk characteristics related to the insurable event in pricing and providing coverage. Examples of provisions that violate this principle are:

- Guaranteed Issue requires insurance companies to issue a policy to any applicant regardless of health status or medical history. Unless the risk of no underwriting can be largely mitigated through other policy provisions, the resulting selection cannot in general be adequately rated for.
- Community Rating means that all applicants in the same geographic area pay the same insurance premiums. With pure community rating, rates do not vary by age or gender. With modified community rating, some variation in premiums by age is allowed (for example, premiums may vary by up to a factor of five between the youngest and oldest applicants) and smokers pay higher premiums.

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Once again, the selection anticipated must be largely mitigated for this type of provision to be part of a sustainable plan or system.

Risk classes must also be refined periodically to reflect changes in the environment, such as effects on average life expectancy of advances in medical treatments.

Consequences: When risk transfer system principles are ignored costs go up and equity and sustainability are compromised. Consider, for example, the impacts on insurance premiums, number of people without insurance, and number of insurance carriers in the market of guaranteed issue and community rating provisions that violate the principles referenced above. Beginning in 1992, eight states implemented community rating and guaranteed issue reforms in their individual medical insurance markets. Some states implemented the reforms in the small group market as well. As a result, (3)

- The share of the population in these states covered by individual insurance dropped dramatically. For example, one in six New Yorkers with individual or small group policies became uninsured as a result of the community rating and guaranteed issue reforms, according to a Milliman study.
- Private insurance companies that sell individual insurance left the states. For example, 45 insurers left Kentucky between 1994 and 1997.
- Premiums for individual insurance soared. For example, monthly premiums for family coverage for the $500 deductible indemnity plan offered by Aetna in New Jersey went from $769 in 1994 to $6,025 in 2005.

A paper (4) that relied on two studies of the ACA's impacts on premium, one prepared in 2013 by Milliman for America's Health Insurance Plans, and one prepared in 2017 by McKinsey and Company for the U.S. Department of Health and Human Services, drew the following conclusions:

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Premiums for individual coverage more than doubled between 2013 and 2017, and the largest share (roughly half) of this increase resulted from the guaranteed-issue requirement and the prohibitions on medical underwriting, applying coverage exclusions for pre-existing medical conditions, and related provisions. The Milliman study predicted that 2014 individual premiums would be 20 percent to 45 percent higher as a result of these requirements. In a category that included guaranteed issue, community rating, consumer response to mandates, subsidies, effectiveness of special enrollment period rules, and related provisions, McKinsey estimated the impact of premium increases from 2013 to 2017 for a 40-year old male in four states. In Ohio, the category accounted for up to half of the 159% premium increase, and in Tennessee it accounted for about two-thirds of the 319% increase.

It is worth noting that the first major deviation from insurance principles began nearly one hundred years ago when, in 1929, the first HMOs introduced the concept of prepaying for normally non-insured primary care services. Although HMOs have somewhat fallen out of favor since the apex of their popularity in the 1980s, the notion that routine inexpensive health care services should be financed with private or social insurance has become ingrained in our health care system to such a large extent that catastrophic-only plans were outlawed in the Affordable Care Act.

Examining routine and catastrophic components of care separately is a worthwhile exercise as they have separate consequences for the cost and sustainability of the insurance plan. Routine care such as primary care is not unavoidable or random, is not high cost and does not have a low probability of occurring. Utilization of routine care is not an insurable event, and using insurance to pay for routine care is expensive and inefficient. It has been estimated that using insurance to pay for primary care can double the cost (5).

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Pre-paid routine care leads to overconsumption because the cost to patients is lower than it otherwise would be, they are less sensitive to health care prices and so they will be less likely to push back against supply induced demand. Additionally, when routine care is subsidized, patients set the threshold lower for seeking care and providers can more easily increase prices and have less motivation to keep prices low or to compete on price. When consumers of goods and services are paying with their own money, they are more price-sensitive and they are more likely to shop for value. While there are situations in healthcare where it's not possible to shop for value, such as when you need care urgently due to a serious injury or illness, these situations are not the rule.

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> **...rather than focusing on how to protect the integrity of the risk transfer principles in both the private and the public systems the emphasis now is on applying public risk transfer system goals to the private system without recognizing or addressing the adverse effects of doing so.**

The critical take away from all of the above is that the two phenomena that made a health insurance product available to the general public (i.e., the emergence of a third party payer and consumer buffering from cost of usage) are at risk because today rather than focusing on how to protect the integrity of the risk transfer principles in both the private and the public systems the emphasis is on applying public risk transfer system goals to the private system without recognizing or addressing the adverse effects of doing so.

THE OPPORTUNITY: RISK TRANSFER PRINCIPLES WORK AND SUSTAINABLE PRIVATE INSURANCE COVERAGE CAN BE A VITAL COMPLEMENT TO GOVERNMENTAL RISK TRANSFER SYSTEMS.

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Individuals, families, corporations and governments all purchase insurance primarily to reduce their exposure to catastrophic financial damages. People buy car insurance, for example, to protect their savings from the cost of repairs and lawsuits arising from accidents. We pay for health insurance to make sure that we and our loved ones can get care without bankrupting ourselves and our children.

Insurance companies recognize customer motivation and understand that the ideal insurance product is one that strikes the right balance between desire for protection and the ability to pay. Striking that balance has never been easy, partially because the balance is a constantly moving target. Health insurers, for example, price their product on the basis of research designed to match probable incidence and cost of care against the usage patterns and claims expected from a demographically diverse group of customers. In that process, projected costs are determined by expectations related to differing levels of demand and patterns of consumer behavior. Without the ability to rely on diversity of demand/usage and/or on patterns of usage and coverage, insurers cannot produce a sustainably priced product. Consumers, on the other hand, determine suitability and affordability based on their individual income, assets, risk preferences and personal patient experiences.

During the last half of the 20th Century, health insurance evolved from a perk of privilege and wealth to: 1) a valued employee-paid low-cost limited benefit of employment (1950's), and then to: 2) an increasingly costly and still employee-paid limited benefit (1960's and 1970's), and then to: 3) an employer-paid benefit with limits (1970's and 1980's), and then to: 4) an employer-paid benefit with more benefits in lieu of less wages (1980's and 1990's). As the employer-employment based health insurance market evolved from one in which employees were predominantly responsible for the costs to one in which the costs were paid predominately by employers, both usage and costs rose. And, as both the Medicare and Medicaid populations grew between 1980 and 2000, usage and costs were also rising in the public health coverage market.

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These gradual evolutions changed the relationships in the health care market, drawing ever sharper distinctions between public and private sector payers increasingly focused on rising costs; consumers increasingly sensitive to limitations on benefits they believed they had or were paying for indirectly; providers increasingly struggling with rising costs driven by new demands, expensive technologies and treatments; and staffing shortages; and policy makers increasingly challenged by the escalating complexity and cost of the system as a whole.

Over the next twenty years - 2000 to 2020 - this increasingly stressful and complicated mix of customers, consumers, constituents, providers and policy makers generated a different conversation about American health care focused more narrowly on affordability and access to coverage on the one hand and cost on the other. As that conversation became more politicized, the distinction between insurance and access to coverage became blurred. That blurring now obscures understanding of the importance of insurance as one of the viable, sustainable options available to us as a nation for making sure all of our people have access to the health care they need.

Approximations of the “ideal” health care insurance product did not become broadly available until the second half of the 20th Century and came into being only then as a result of the emergence of a strong middle class and employer-based group insurance products. From the insurers point of view these two phenomena generated large markets with relatively healthy consumers and stable financial streams. In the early years consumers paid all or most of the premiums and evaluated affordability based on the size of their paycheck.

As the system continues to evolve, the hope is that everyone will have insurance or other financial protection over their lifetimes, and the premiums paid for coverage for the population over time will be sufficient to pay for the care that the population needs over time, including care associated with expensive chronic conditions.

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It is in the interest of society to have as many people covered as possible so that situations where a person has not been paying premiums and suddenly needs a large amount of expensive care for a newly diagnosed condition are very infrequent.

Governments impose mandates and penalties to encourage people to be covered. Insurance companies have used contract provisions to encourage applicants with known medical conditions to get and keep coverage so that premiums and claims are more balanced and insurance plans are more sustainable than if applicants could wait until expensive care was needed to enroll in insurance and receive full benefits. These contract provisions included medical underwriting and coverage exclusions or waiting periods for pre-existing conditions. For applicants with pre-existing conditions, coverage could exclude care related to the condition, could require a waiting period until care related to the condition is covered, could decline to insure the person at all, or could charge a higher premium.

The record seems clear. When reforms do not respect the principles above, premiums increase considerably, which causes more people to forgo insurance and more carriers to stop offering coverage; that is, a system that does not respect the principles of insurable events, moral hazard, adverse selection, or risk classification, does not exhibit actuarial soundness.

The issues created for insurers and insureds by not respecting the principles noted above affect not just them, but all other stakeholders. This is true whether the system is comprised of private insurance, social insurance, or some combination of the two and it should be noted once again that there are multiple options for providing coverage of pre-existing conditions, such as high-risk pools, mandated coverage with penalties, limited enrollment periods, etc.

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What has been lacking during most of this evolutionary process is a lack of respect for the fundamental principles of risk transfer/insurance. Also lacking has been the ability to adequately analyze the complexity and interconnections of the American healthcare system. Fortunately, a Computer Actuarial Assessment Model (CA2M) is now being developed by the Concerned Actuaries Group (CAG). Additional information about CA2M can be found at here.

End Note

In her book Moral Hazard in Health Insurance, for example, Amy Finkelstein suggests that the effects of ex post moral hazard and supply induced moral hazard are significant and that effects of ex ante moral hazard may not be significant.

In the RAND Health Insurance Experiment, people were randomized into insurance plans that varied by the level of cost sharing required. People in the 95% cost sharing plan had almost 40% lower spending than those in the free care (zero cost sharing) plan. On average, the additional services received when care was free (the additional services were not received by patients who were responsible for 95% of the costs up to a low out of pocket maximum) had little value to patients, but sicker people benefitted from additional care while some healthy patients were harmed.

In 2008, Oregon assigned low-income uninsured adults to Medicaid via lottery. In the first year of the program, the lottery winners received 25% more care than those who remained uninsured, and there was no evidence of ex ante moral hazard.

To examine supply induced moral hazard, we can look to the introduction of Medicare in 1965. Prior to 1965, about three-fourths of seniors were uninsured. As seniors comprised about 10% of the population, Medicare increased the portion of the US population with insurance coverage by 7.5%.

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This increase in the portion of Americans with insurance is roughly the magnitude of the coverage expansion that was expected with the Affordable Care Act. Dr. Finkelstein reports:

> **By 1970, only 5 years after Medicare was introduced, I estimate that hospital spending was almost 40 percent higher than it would have been absent the introduction of Medicare. That's total hospital spending, not just hospital spending on the elderly. One back-of-the-envelope extrapolation result based on this is that the spread of all insurance, public and private, which occurred between 1950 and 1990 may be able to explain half of the sixfold growth in the real per capita spending over this time period.**

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Footnotes

1. Government /social insurance is covered more thoroughly in the Digging Deeper paper, "Why sound risk transfer systems are essential to America's efforts to meet its social objectives."

2. See End Note directly above

3. Meier, C., Destroying Insurance Markets: How Guaranteed Issue and Community Rating Destroyed the Individual Health Insurance Markets in Eight States. 2005, Council for Affordable Health Insurance and The Heartland Institute.

4. Haislmaier, E., Badger, D., How Obamacare Raised Premiums. 2018, The Heritage Foundation.

5. Hyde, S., Cured! The Insider's Handbook for Health Care Reform. 2009, Denver, CO: HobNob Pub. xi, 476 p.