

Healthcare II: Health Insurance Policy and Market Design Issues

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- Guest speaker: Mark Shepard (Harvard Kennedy school)
- Focus: Overview of U.S. health insurance system, why markets fail in this setting and how mechanism design tools could help

1 Overview of U.S. Health Insurance System

U.S. health insurance system is a two prong system: (1) private insurance and (2) government programs. Government programs are only slightly smaller (in total number of people served) than private ones, but funding is comparable.

- Employer-sponsored insurance (private insurance) (177 million people in 2015)
 - Characteristics of employer-sponsored insurance:
 - * Restricted choice: employers choose a small number of insurance options to offer their employees.
 - * Employers negotiate the terms of the insurance plans with the insurers.
 - Government programs (Total 141 million)

There are four main types of government programs: Medicare, Medicaid, ACA Exchanges and Military health insurance.

 - **Medicare** (51 million)

There are two main types of Medicare programs, traditional Medicare and Medicare advantage. Both programs mainly target the elderly & disabled, but differ in whether the insurance providers are public or private.

 - * Traditional Medicare (government-run)
 - * Medicare Advantage (private insurers); this been growing in the past 10-15 years.
 - **Medicaid** (62 million)

There are two main types of Medicaid programs, traditional Medicaid and Medicaid Managed Care. Both programs are aimed at poorer people; in particular, although a menu of choices is offered, all insurance options are free. The two programs differ in whether the insurance providers are public or private.

 - * Traditional Medicaid (government-run)
 - * Medicaid Managed Care (private insurers)
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- **ACA Exchanges** (13 million)
ACA (Affordable Care Act / Obamacare) Exchanges are government subsidized affordable public health insurance exchanges.
- **Military health insurance** (15 million).
The government also offers health insurance to its military employees.
- **Uninsured** (29 million)
- Characteristics of government programs:
 - * Typically there are a larger number of insurance options, and choice is not as restricted.
 - * The government imposes rules and regulations on insurers, but there is not much negotiation for plan details.

Main take-aways:

- Insurance is sold in centralized environments, organized and designed by a central operator (employers and government). Mechanism design type research is especially important in such a setting.
- There has been a big shift away from having the government set up the health insurance plan, and towards the government setting up a market. The idea is that having competition will improve the offerings. However, insurance markets are becoming more concentrated.

Questions discussed after this section:

- Who is making the most money?
 - Hospitals and doctors (but many are non-profit).
 - Health insurers make less money — except in Medicare.
 - Why are insurers making money in Medicare? Because of politics: it was set up in 2003 by Republican congress in such a manner so as to overpay insurers.
 - What is the objective function for a benevolent central market designer?
There are several competing objectives:
 - Quality of healthcare (directly from doctors)
 - Better patient experience — this involves the entire care and insurance experience. E.g. If patients are recommended certain treatments by their doctors that their insurance delays or will not cover, then this lowers the overall patient experience. We could consider the wait time for care, for approval, and the quality of care.
 - Lower costs
 - Equity / fairness
 - Has there been research done on patient experience? What about its impact on patient health?
 - There is survey data on patient experience called ‘CAHPS’.
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- Very little else has been done.
- There are many problems with patient experience, especially with Managed Care (e.g. Medicaid with private insurers). Insurers make sick patients’ lives hard by denying claims. The power to deny claims was initially introduced to prevent doctor fraud. However, there is also an incentive for private insurers to make it difficult for patients to receive care (since this reduces insurers’ costs). Most insurance is “managed care” these days.
- Medicaid default patient assignments — sometimes patients do not express preferences for any provider and the government randomly assigns them. Is there room to assign patients in a non-random manner? E.g. Could use some sort of multi-armed bandit model?
 - Yes, this seems like an interesting way to model the problem.
 - This type of model could also be used for assigning poor patients in Medicare, and perhaps also for auto-enrollment in employer-sponsored insurance

2 Key Trends Over the Past 10-20 Years

Mark highlighted the key trends over the past 10-20 years: increasing costs, shift towards regulated markets and competition, and insurer consolidation.

- Tremendous cost growth:
 - Increasing costs are mostly driven by increasing cost in healthcare (not insurance margins).
- Greater use of regulated markets and competition in public programs:
 - In Medicare, Medicare Advantage has experienced dramatic growth, now accounting for 30%+ of Medicare enrollees.
 - In Medicaid, Medicaid Managed Care has experienced dramatic growth, now accounting for 70%+ of Medicaid enrollees.
 - ACA exchanges were recently introduced.
 - Employers are increasingly offering plan choice to employees, instead of restricting them to a single option.
- Insurer consolidation:
 - Insurance markets were already concentrated and have grown even more so.
 - The main reasons for this consolidation are barriers to entry and returns to large scale.

Mark’s main take-away:

- Because of the trend towards a market for increasingly costly goods with a smaller number of more powerful players, market design issues are increasingly important!
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3 Policy Challenges and Market Design Tools

Why doesn't the market work without centralization? Some of the key challenges in the health insurance market are the problems of adverse selection, limited competition, and difficulties in measuring quality and cost.

3.1 Adverse Selection:

- Problem: Good quality plans attract unprofitable (less healthy) consumers → competition leads to a “race to the bottom” in quality.
 - This is because government regulation doesn't allow insurers to charge higher prices to sicker people.
- Main tool for combating adverse selection: Risk adjustment.
 - The idea is to measure “risk” and shift funds from plans with a safer population to plans that attract riskier population.
Note: In order to keep the payments for ‘safe’ plans low, there are large subsidies from government for participation, and penalties for not participating.

Challenges / open questions:

- We need better methods for measuring risk (we can think of this as a big data problem).
- How do we separate consumer risk from insurer inefficiency (“moral hazard”)? Insurer efficiency is not necessarily observable. In order to do so, we need quasi-experimental variation.

Questions discussed after this section:

- Are there better measures for risk than cost?
 1. E.g. relative cost etc.
 2. Answer: This is an open area.
 3. Currently, only a simple regression is run on cost to determine risk.
 4. One currently unaccounted for factor: when there is observed and unobserved risk, payment is currently given proportional to the observed risk. However, because of correlation between observed and unobserved risk, typically need to overpay to correctly compensate for both observed and unobserved risk.
 5. Many of the currently used measures are soft measures that can be gamed (e.g. diabetes diagnoses and ‘upcoding’ (or over-diagnosing) in Medicare).
Note: Medicare insurers overpaid by 7%, and upcoding is the second-most important component for this overpayment, after limited competition.
There is currently no fraud investigation to see if patients are upcoded.
 - What problem is solved if we could measure ‘risk’ accurately?
 1. Cream-skimming. We could change incentives so that insurers view all patients as equally desirable.
 2. However, we would probably require that all insurers have the same technologies and profit margins to return to a textbook economics example.
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3.2 Limited Competition

- This is a big problem in ACA exchanges (and insurance markets more generally).
 - 30% of people will be in counties with only 2-3 health insurers.
 - Reasons for this: barriers to entry, regulation.
- Problem: This drives up prices for both the consumers and the government.
 - This is particularly true in current practice because government subsidies are often linked to existing prices → Insurers can game the system to increase profits. In Medicare, the prices are set too high, and not in a way where competition reduces them.
- Possible tool: Competitive procurement mechanisms.
 - Idea: Use the regulator's power to set subsidies and determine a choice set to get more effective competition.
 - This would require a mixture of tools from auction procurement & consumer choice.

Questions discussed after this section:

- Are there similarities with privatization of utilities (electricity) or transportation? Is it possible to connect with that literature?
 - Yes, there are definitely similarities, but very few people are currently working in health insurance design with that sort of background.
- Suppose we wanted to bring policy suggestions to a person or organization at a lower level. Who should we contact?
 - The easiest place for entry is employers, especially those with academic affiliations or interests (e.g. Harvard, Stanford, Princeton health insurance).
 - Medicaid programs: there is a fair amount of flexibility to work with in these programs. (However Medicaid is mostly run at the state level, with the exception of California which is run at a county level.)

3.3 Measuring Provider Quality/Cost

- A key barrier to improving health care is measuring quality (and to a lesser extent costs). If we could measure quality and costs better, we could reward good quality doctors and steer patients appropriately.
 - Problems:
 - Quality is multi-dimensional (there are many imperfect measures).
 - Quality is patient-provider specific (matching problem).
 - Outcomes depend on patient sickness as well as provider effort.
 - Solutions to this problem are unclear.
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4 Other Questions

4.1 Current Research

- Health Economics
- Health Services Research, see journals like ‘Health Affairs’.
- Liran Einav Stanford — see talk at World Congress on importance of mechanism design for health insurance markets.

4.2 Potential Data Sources

- There are commercial, quasi-academic companies founded by academics who are trying to do measurements and predictions (e.g. risk adjustment) better. (e.g. one founded by a person at BU, another at Johns Hopkins)
 - Publicly available data sets of health insurance claims (but these require knowledge on how to work with data sets — Mark suggests finding someone in the field to work with).
 - What type of data is public or easy to elicit; what type of data is private or hard to elicit?
 - In addition to the public/private split, there is also sometimes ‘public’ information that regulators say can’t be used.
 - Easy to observe: billing records (claims data sets), i.e. what was done to patients, what was charged, what was paid.
 - A little less easy to observe: underlying diagnoses and sickness.
 - There are other things we can observe about the patients, some gameable (e.g. diabetes diagnosis, frequently used), some not so easily gameable (e.g. zip code, not so frequently used).
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