Moral Hazard Lecture notes

Key issue: how much does the price consumers pay affect spending on health care? How big is the moral hazard effect?

ex ante moral hazard  Ehrlich and Becker (1972)
health insurance (HI) changes probability of needing health care

ex post moral hazard  Mark Pauly (1968)
HI changes level of spending when ill

Most research focuses on the latter.

HI -> Spending increases

But greater HI is correlated with being sicker and higher mortality. (Causal?)

Adverse selection -> sicker people more likely to buy health insurance. (much more later)

Draw a demand curve diagram showing why you cannot calculate demand elasticities from observational studies.

Two randomized control trials to use for the analysis.

Rand Health Insurance Experiment 1972-1977, ~3000 people

Oregon Health Insurance Experiment 2008 lottery for eligibility for Medicaid expansion among people below the poverty level
Oregon Health Insurance Experiment

Led by Amy Finkelstein (MIT economics) and Kate Baicker (Harvard School of Public Health).

US Medicaid is public health insurance for the indigent.

In Oregon, new expansion program to cover people who are financially, but not categorically, eligible for Medicaid.

Essentially, these are really poor, 100% of the federal poverty line. Less than $10,000 for a single person in annual income.

They are uninsured but able-bodied: not getting Medicaid because they are on welfare or they’re disabled. Oregon had money to cover some but not all of those that are eligible. Enough for 10,000 people

First-come first-served rewards people who are better connected.

Federal law actually prohibits awarding Medicaid based on health status

Equitable way was by a lottery.

90,000 low income adults signed up,

Randomly drew about 30,000 names to be eligible to apply for Medicaid.

Compared use and health of those chosen and not chosen.

Findings

Medicaid increased:

- hospital admissions
- probability of taking of prescription drugs and of going to the doctor
- Increases annual medical spending by about 25% relative to those uninsured. About $750 a year for this population

Did not find, at least in its first year, any evidence of ex ante moral hazard.

E.g., No change in smoking behavior.
Rand HIE

Everyone randomly assigned to plans with different cost sharing: Free, 25%, 50% and 95% cost share up to a maximum out of pocket limit (stoploss) of at most $1000 (in 1970$).

People assigned to the plan with 95% consumer cost sharing - so they have to pay 95% of their medical costs up to the stop loss - you find that their annual medical spending is almost two-fifths less than the annual spending for those assigned to the free care plan. Compelling evidence against the null hypothesis of no moral hazard.

Most health insurance is not characterized by a simple copayment, but rather has insurance that becomes much more generous after reaching a deductible.

=> consumer prices change according to how much consumption you have during the year. Price measured as the consumer cost share.

Consumption decisions are made during the year under uncertainty.

What price matters? Current price, or price that you expect to spend at the end of the year.

How important is forward-looking behavior in moral hazard? Aviva Aron-Dine Liran Einav Finkelstein, and Mark Cullen used different hire months to see how people differ in responding to deductibles. And stoplosses.

Results: individuals are not completely myopic.

They do not just respond to the sticker price, so there is some degree of forward-looking behavior, but how much and how important is it?

With the amount of forward-looking behavior, find that the spending reduction of moving from a no deductible to a high deductible plan is a lot lower, about 25 to 50 percent, of what you would predict if you felt that individuals were fully myopic.
Rand Elasticity of demand -.2 was calculated assuming fully myopic consumers. If forward looking then this overstates the effect.

Who is going to select the high-deductible plans, and how is that going to affect the impact of these plans on spending?

Sicker (higher mean)
More risk averse (higher cost of illness)
More price responsive to insurance. (more utility gain from purchasing insurance) *(More uncertain health care needs)*

People differ not only in their health but also in their price sensitivity of demand? Then you have to think about who’s going to select these high deductible plans: are they going to be the guys who are more or less price sensitive?

Einav and Finkelstein (2013)
They find significant evidence that **more price responsive** people buy more health insurance, not just sicker.

So high deductible plans are more likely to be purchased by inelastic demanders.
How does insurance affect rates of growth in spending?

Why are health costs growing so much?

Aging of the population?
Unhealthy lifestyles.
Changes investment in prevention.

*cost increasing technological change*

Joseph Newhouse and others have done work on this, looking at the roles of, for example, the aging of the population or other demographic factors (Newhouse 1992).

Widespread consensus that *cost increasing technological change* in medicine is the driving force behind the growth in health spending.

Why *cost increasing* technological change in medicine?

And the particular question Finkelstein is interested in is: what role does health insurance plan in affecting technological change in medicine?

By 1970, only five years after Medicare came in, Finkelstein estimated that hospital spending is almost 40% higher than it would have been absent the introduction of Medicare. General equilibrium effects, not just partial equilibrium from an experiment.

Insurance changes the risk to INNOVATORS about willingness to pay for a new innovation.

Insurance also changes the optimal price charged by pharmaceutical and other goods.

Insurance changes the supply decisions of providers. Consider the case of two goods, both equally valued (or judged equally effective) by the consumer. One is old and cheap, the other is new, under patent and higher priced. Current insurance payment practice is that as long as a drug or product is safe and effective, it can be covered. Which drug will the doctor recommend? Which drug will spend more time convincing the doctor to prescribe?