The Impact of Insurer Size Increase on Negotiated Prices: Evidence from the ACA in Arkansas

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APCD Data Users Group Webinar

Introducing Myself

Jee-Hun Choi

- Assistant professor in the department of economics at Lehigh University.
- Originally from Seoul, South Korea
- Ph.D. in Economics, Cornell University (2020)
- Research interests: health economics and industrial organization
  - Interaction between public and private sectors in US health care
  - Effects of health reforms, such as the Affordable Care Act

Roadmap

I. Research question
II. Why I chose the AR APCD for this research?
III. Key results
IV. Difficulties

I. Research Question

- Do larger health insurers in the US possess bargaining advantage when they negotiate with medical providers for prices?
- Past empirical studies documented the buyer size effect in US health care, but they are mostly based on cross-sectional variation.
  - Hospital services (Sorenson, *J of Industrial Econ* 2003; Wu, *J of Health Econ* 2009)
  - Pharmaceutical drugs (Ellison and Snyder, *Review of Econ and Stat* 2010)
  - Prof. services (Roberts et al., *Health Affairs* 2017; Scheffler et al., *Health Affairs* 2017)
- Main concern is that insurer size may correlate with other factors, such as an insurer's ability to steer patients.
- Goal of my paper is to empirically measure the insurer size effect without this concern.

II. Why AR APCD?

- Arkansas is one of 38 states (including D.C.) that expanded their Medicaid programs through the Affordable Care Act (ACA) of 2010.
- Differently from other states, Arkansas used individual plans (private insurance plans usually not for Medicaid beneficiaries) for the state's expansion.
- The approach resulted in a significant enrollment increase for the largest incumbent insurer in the Arkansas individual market.
  - Share of non-elderly population covered by the largest insurer increased from 3.5% in 2013 to 12.7% in 2015.
- The enrollment increase is, in large part, *exogenous*. Arkansas individual market provides a rare empirical setting where one can study the effect of exogenous size increase on negotiated prices.

II. Why AR APCD? – Continued

- AR APCD data contain enrollment and health care claims for commercial health insurance plans in Arkansas from 2013 to 2020.
- Enrollment dataset identifies whether a given individual is covered by individual plans (as opposed to group plans) and whether covered by Medicaid or not.
- Claims dataset contains key variables for the study such as:
  - Allowed amounts, DRG code for inpatient services, patient demographics (age and sex), and provider identification.
- The Medicaid expansion took place in 2014, so by comparing the negotiated prices between pre-ACA and post-ACA individual plans, one can measure the effect of the ACA-induced enrollment increase on negotiated prices.

III. Key Results

- The negotiated hospital prices for the largest insurer's individual plans decreased by 18% on average from 2013 to 2015 (after controlling for patient demographics and case severity using DRGs).
- Supporting evidence that the price reduction is mainly contributable to the ACA-induced size increase.
  1. A competing insurer in the market did not experience the price reduction.
  2. The price reduction is higher in the counties with larger shares of eligible populations.
  3. The price reduction is higher for the services consumed in higher volume.
  4. No price reduction from out-of-state hospitals.

III. Key Results – Continued

- Improvement in bargaining position is the key mechanism behind the price reduction.
- I estimate the savings health expenditure.
  - Inpatient expenditure: $23.5 million per year (12% of the total)
  - Premium expenditure: $108 million per year (10% of the total)
- Please see my paper to learn more about findings:
  - https://sites.google.com/site/jeehuno805/research

IV. Difficulties

1. APCD data only cover health care claims from a single state.
   - May not be ideal for comparative studies.
   - External validity of results
2. No individual characteristics except demographics
   - For example, Medicaid coverage status can be determined, but no information about household income.
3. Not all variables are complete.
   - Some variables, like Member Race, do not have values for most observations.
   - Data dictionary indicates which variables are optional.
4. ACA-related: only one year of data is available before the ACA.

Thank You!

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