Screening in Contract Design: Evidence from the ACA Health Insurance Exchanges

Michael Geruso, Timothy Layton and Daniel Prinz

Discussant: Sebastian Fleitas

University of Leuven

November 2, 2017

Summary

- Risk adjustment transfers and reinsurance introduced in ACA Exchanges as a way to compensate for enrolling costly consumers:
  - No denied coverage or price discrimination based on health
  - Risk adjustment transfers and reinsurance may not work well
  - Firms may design contracts to screen out unprofitable consumers
  - The existence and the extent of screening is an empirical question

Summary

- Risk adjustment transfers and reinsurance introduced in ACA Exchanges as a way to compensate for enrolling costly consumers:
  - No denied coverage or price discrimination based on health
  - Risk adjustment transfers and reinsurance may not work well
  - Firms may design contracts to screen out unprofitable consumers
  - The existence and the extent of screening is an empirical question
- This paper: effect of "payment errors" in ACA Exchanges using a DID approach:
  - Compares Exchanges to Employer Sponsored Insurance (ESI)
  - Controls for plan and drug class fixed effects
  - Parallel trends assumption in class-specific costs and revenues

Results and Contributions

- Very nice paper: important, transparent, detailed and clear!

Results and Contributions

- Very nice paper: important, transparent, detailed and clear!
- Two main results:
  - Overall, risk adjustment & reinsurance neutralize selection
  - There are "adjustment errors" that firms use for screening:
    - More restrictions to drugs associated to less profitability
    - Insurers are relatively sophisticated: not only respond to costs

Results and Contributions

- Very nice paper: important, transparent, detailed and clear!
- Two main results:
  - Overall, risk adjustment & reinsurance neutralize selection
  - There are "adjustment errors" that firms use for screening:
    - More restrictions to drugs associated to less profitability
    - Insurers are relatively sophisticated: not only respond to costs
- Main Contributions:
  - Adds to a literature that highlights important role of non-price characteristics in strategic behavior:
    - Use of screening strategies by firms
    - For regulation, role of EHB and updates of risk adjustment systems
    - For modeling, dealing with endogeneity of characteristics, especially in multi-dimensional settings
  - ACA Exchanges: important and relatively new, less well understood

Comment #1: Heterogeneity and Identification

- Heterogeneity in cost-revenue difference by drug classes
  - Consumer heterogeneity or cost heterogeneity? ($\neq$ conditions)
  - Does standard deviation of $\bar{C}_c - \bar{R}_c$ play a role? (policy relevant)

Comment #1: Heterogeneity and Identification

- Heterogeneity in cost-revenue difference by drug classes
  - Consumer heterogeneity or cost heterogeneity? ($\neq$ conditions)
  - Does standard deviation of $\bar{C}_c - \bar{R}_c$ play a role? (policy relevant)
- Concerns about identification:
  - Selection induced by strategy: pricing out of the market?
  - May lead to different demand elasticities across the two markets?
  - Drug & plan FE don't account for $\neq$ elasticities across markets in specific conditions

Comment #1: Heterogeneity and Identification

- Heterogeneity in cost-revenue difference by drug classes
  - Consumer heterogeneity or cost heterogeneity? ($\neq$ conditions)
  - Does standard deviation of $\bar{C}_c - \bar{R}_c$ play a role? (policy relevant)
- Concerns about identification:
  - Selection induced by strategy: pricing out of the market?
  - May lead to different demand elasticities across the two markets?
  - Drug & plan FE don't account for $\neq$ elasticities across markets in specific conditions
- Screening also affecting the control group? (Selection into ESI)

Comment #1: Heterogeneity and Identification

- Heterogeneity in cost-revenue difference by drug classes
  - Consumer heterogeneity or cost heterogeneity? ($\neq$ conditions)
  - Does standard deviation of $\bar{C}_c - \bar{R}_c$ play a role? (policy relevant)
- Concerns about identification:
  - Selection induced by strategy: pricing out of the market?
  - May lead to different demand elasticities across the two markets?
  - Drug & plan FE don't account for $\neq$ elasticities across markets in specific conditions
- Screening also affecting the control group? (Selection into ESI)
- Higher variance of price elasticity in unprofitable drug classes would increase scope for selection
  - Estimate heterogeneity in price elasticity using claims sample

Comment #2: Is this also a story about higher costs?

- Unprofitable drug classes correlated with higher restrictions
  - ▶ Are drugs a signal for unprofitable conditions (screening)?
  - ▶ Or utilization of some drugs represents higher costs?

Comment #2: Is this also a story about higher costs?

- Unprofitable drug classes correlated with higher restrictions
  - ▸ Are drugs a signal for unprofitable conditions (screening)?
  - ▸ Or utilization of some drugs represents higher costs?
- Effect concentrated in the very unprofitable conditions
  - ▸ For the three measures of profitability (Table A1)
 - ▸ Also when controlling for Pharmacy Benefits Managers

Table A9: Robustness: Patterns Persist within Pharmacy Benefits Managers

Dependent Variable:	Fraction of Class Tiered Specialty or Higher							
	Ratio (Cost/Revenue)		Ellis-McGuire Measure		Ratio (Cost/Revenue)		Ellis-McGuire Measure	
Selection Incentive Variable:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Exchange X Selection incentive	0.041***	0.041*	0.039**	0.001	0.046***	0.047**	0.042**	0.003
	(0.013)	(0.022)	(0.015)	(0.014)	(0.014)	(0.022)	(0.017)	(0.015)
Exchange X Selection incentive ventile 20		0.003		0.307***		-0.005		0.316***
		(0.106)		(0.091)		(0.110)		(0.093)
Therapeutic class FEs	X	X	X	X	X	X	X	X
Plan FEs	X	X	X	X	X	X	X	X
PBM FE X selection incentive	X	X	X	X				
PBM FE X state X selection incentive					X	X	X	X
Therapeutic classes	220	220	220	220	220	220	220	220
Observations (plan X state X class)	838,034	838,034	838,034	838,034	749,280	749,280	749,280	749,280

Comment #2: Is this also a story about higher costs?

- Higher share of drug costs in unprofitable drug classes

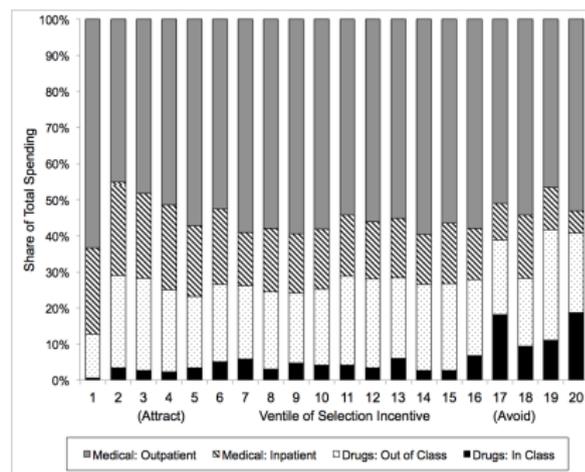**Figure 3:** Determinants of Enrollee Costs by Selection Incentive Strength
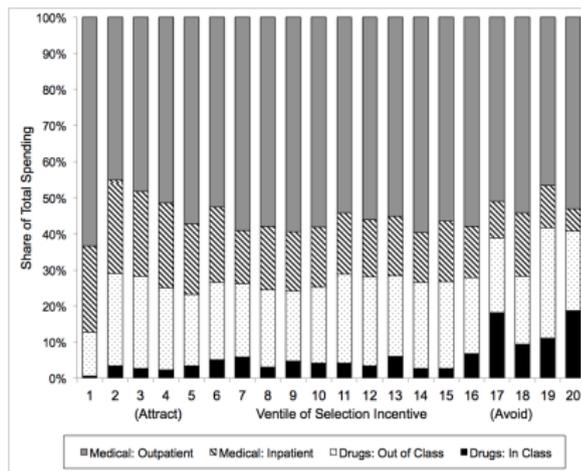
Note: Figure decomposes total enrollee costs into inpatient, outpatient and drug costs. Drugs costs are divided according to whether the drug is inside or outside of the defining therapeutic class. Each of the 220 therapeutic class is ranked according the strength of the selection incentive, and then binned into twenty ventiles of the incentive measure. Classes are associated with increasingly unprofitable patients moving from left to right.

Comment #2: Is this also a story about higher costs?

- Higher share of drug costs in unprofitable drug classes

Figure 3: Determinants of Enrollee Costs by Selection Incentive Strength

Note: Figure decomposes total enrollee costs into inpatient, outpatient and drug costs. Drugs costs are divided according to whether the drug is inside or outside of the defining therapeutic class. Each of the 220 therapeutic class is ranked according to the strength of the selection incentive, and then binned into twenty ventiles of the incentive measure. Classes are associated with increasingly unprofitable patients moving from left to right.

- It may be useful to control for drug share of costs $\times$ Exchange
  - Identifying screening from variation in other costs

Comment #3: Competition in this market

- How do we think about competition in this market?
  - ▶ Competition would make firms best respond in equilibrium
    - ★ Study heterogeneity by market characteristics (e.g. number of competitors)

Comment #3: Competition in this market

- How do we think about competition in this market?
  - Competition would make firms best respond in equilibrium
    - ⋆ Study heterogeneity by market characteristics (e.g. number of competitors)
  - Are there dynamic competition elements in this context?
    - ⋆ Are firms learning how to play the regulation?
    - ⋆ Inertia documented in health care markets ⇒ Dynamic competition for "profitable" consumers in formulary design?

Comment #3: Competition in this market

- How do we think about competition in this market?
  - ▶ Competition would make firms best respond in equilibrium
    - ⋆ Study heterogeneity by market characteristics (e.g. number of competitors)
  - ▶ Are there dynamic competition elements in this context?
    - ⋆ Are firms learning how to play the regulation?
    - ⋆ Inertia documented in health care markets ⇒ Dynamic competition for "profitable" consumers in formulary design?
  - ▶ It may be possible to test this hypothesis exploring...
    - ⋆ Vintage of plans in the market
    - ⋆ Market shares of plans by condition
    - ⋆ Approximating market shares by condition using share of expenditures