

Health Insurance and Healthcare Market Design

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Road map

NB: Healthcare markets versus health insurance markets

1. Introduction and literature overview
2. Market design in health insurance markets
3. Market design in healthcare markets

What is market design in health insurance markets?

- Prices are involved, but in almost every health insurance market on Earth, there are a lot of **rules!**
 - (Why? : asymmetric information + equity objectives)
 - *Demand side*: Eligibility criteria, mandates, subsidies...
 - *Supply side*: Product regulation, risk adjustment, community rating...
 - To a first order, these rules (and not WTP and WTA) determine who gets what health insurance contract
- Understanding equilibrium effects of these rules and suggesting improvements to them has become a huge area of economic research

Literature overview (Health insurance markets)

- **Market segmentation (eligibility criteria / community rating / length of contracts)** : Bundorf Levin Mahoney (2012); Ghili Handel Hendel Whinston (2021); Atal Fang Karlsson Ziebarth (2020); Dickstein Ho Mark (2021); Veiga (2022)
- **Mandates** : Einav and Finkelstein (2011); Azevedo and Gottlieb (2017); Geruso Layton McCormack Shepard (2019)
- **Subsidies** : Einav Finkelstein Cullen (2010); Einav Finkelstein Tebaldi (2019), Finkelstein Hendren Shepard (2019); Weyl and Veiga (2017), Decarolis Polyakova Ryan (2020); Tebaldi (2022)
- **Risk adjustment** : Glazer and McGuire (2000); Brown Duggan Kuziemko Woolston (2014); Einav et al (2016); Geruso Layton Prinz (2019)
- **Product regulation** : Abaluck and Gruber (2020); Marone and Sabety (2022), Ho and Lee (2021); Shepard (2022)

Market design in healthcare markets

- Many different types of settings

Key themes

- Centralized assignment
 - Capacity constraints and queueing
 - Ordeals
 - Match value between providers and patients
 - Balancing equity and efficiency
- Market design economists have only just scratched the surface of these markets

Literature overview (Healthcare markets)

- **Labor supply in healthcare markets (medical match)** : Roth and Peranson (1999); Bulow Levin (2006); Kojima et al (2013); Ashlagi et al (2014); Agarwal (2015)
- **Kidney exchange** : Roth Sönmez Ünver (2004, 2005, 2007); Rees et al (2012); Ashlagi Roth (2014); Agarwal Ashlagi Azevedo Featherstone Karaduman (2019); Agarwal Ashlagi Rees Somaini Waldinger (2021); Agarwal Hodgson Somaini (2020)
- **Ordeals** : Sylvia Ma Shi Rozelle (2021); Zeckhauser (2021)
- **Hospitals (for non-emergency procedures)** : Gaynor Proper Seiler (2016)
- **Primary care physicians** : Santos Gravelle Proper (2015); Mark (2021); Marone and Waldinger (in progress)
- **Vaccines** : Sönmez et al (2021); Agarwal et al (2021); Pathak Persad Sönmez Ünver (2022)

2. Market design in health insurance markets

Key market design tools in health insurance markets

- **Market segmentation** : How consumers are grouped into risk pools
- **Community rating** : Rule that premiums cannot vary within a segment
- **Eligibility criteria** : Which consumers belong to a segment
- **Length of contracts** : Which time periods belong to a segment
- **Product regulation, entry restrictions** : Specifications on allowable contract characteristics
- **Risk adjustment** : Redistribution of costs *across insurers* operating in a given market segment
- **Subsidies, mandates, price regulation** : (Further) manipulation of prices facing consumers

Market segmentation

- **US** : Segmentation between young/elderly, rich/poor, states, employers; One-year contracts
 - **Norway** : Segmentation between children/adults, employers; One-year contracts
- Community rating in each segment (Why? Protection from reclassification risk!)

Market segmentation

- **US** : Segmentation between young/elderly, rich/poor, states, employers; One-year contracts
- **Norway** : Segmentation between children/adults, employers; One-year contracts

At what level is risk pooled among working-age adults?

US			Norway		
Basic healthcare → Highest quality/amenity healthcare			Basic healthcare → Highest quality/amenity healthcare		
High income	Employer	Individual	National	Employer	Individual
Low income	State/National (Medicaid)	State/Employer size (HIX)			

Market segmentation

- **US** : Segmentation between young/elderly, rich/poor, states, employers; One-year contracts
- **Norway** : Segmentation between children/adults, employers; One-year contracts
- *Key question* : How best to segment health insurance markets? I.e., at what level to implement community rating (if at all)?
- *Two recent papers* :
 - Dickstein Ho Mark (2021) : Impact of combining small-group & individual market segments in U.S. ACA exchanges
 - Veiga (2022) : Is community rating counter-productive when individuals can choose not to participate?

Product regulation

- **US :**

- Public sector: Medicaid provides single contract, Medicare allows some choice;
- Private sector: Minimum coverage requirements (ACA)

- **Norway :**

- Public sector: Govt provides single contract
- Private sector: Nada

- *Key questions :*

- How to get people to truthfully express their preferences/type in order to achieve efficient allocations? Can choice alone do this? (Marone and Sabety, 2022)
- Are minimum coverage requirements a good thing? (Azevedo Gottlieb, 2017)
- How much coverage to offer in the public sector and how/whether to restrict the private sector? (Starc and Town, 2019)

Risk adjustment

- Critical if market has community rating + multiple insurers serving a single risk pool
 - (Why? : Otherwise a race to the bottom)
- **US** : - Public sector : Across Medicaid Managed Care & Medicare Advantage plans
 - Private sector : Across insurers on ACA Exchanges
- **Norway** : - Public sector : N/A (just one insurer)
 - Private sector : N/A (pooling only at employer level)
- *Key questions*:
 - How to measure prospective risk? (Einav et al., 2016)
 - How to adjust for endogenous utilization / insurer strategic response to mechanism? (Geruso and Layton, 2020)
 - Is it working well in the US? (Brown et al., 2014; Geruso Layton Prinz, 2019)

Price regulation

- **US** : Subsidies in ACA exchanges, mandate penalty (at one time), Cadillac tax (at one time), tax break for health insurance, minimum MLR requirements
- **Norway** : None (or : subsidies set so the public contract is free for everyone)

Key questions:

- How to best reconcile a fairness motive with an efficiency motive (or just a desire for people to have options)?
- How can subsidies be used to effectively combat adverse selection? (Tebaldi, 2022)
- How can subsidies be used as a complement or substitute to other market design tools? (Einav Finkelstein Tebaldi, 2019)

3. Market design in healthcare markets

Key market design tools in healthcare markets

- NB: Prices not used as a market clearer for fairness reasons (ie as a matter of policy), not because it *couldn't* be used as a market clearer (like in two-sided matching markets)
- **Capacity constraints, entry restrictions** : How much/what types of capacity to have in gov-owned healthcare services? Whether to restrict private supply?
- **Subsidies, price regulation** : How much should public healthcare cost at point of service? Should there be any constraints on pricing in private sector?
- **Waiting lists** : How to allocate scarce capacity given stochastic demand?
- **Centralized assignment** : How to allocate a set of healthcare resources at a particular point in time given known demand (e.g., GPs, vaccines)

Allocating hospital capacity for non-emergency surgery

- **US** : Patients solicit estimated wait-times and choose which waitlist to join
 - **Norway** : Patients provided an estimated wait-time at different hospitals and then choose which waitlist to join
- Both : Can't switch waitlist without starting over ; Hospital access varies based on insurance

Key questions (for public healthcare systems...):

- Should consumers have a choice over hospitals? (historically, not the case in many public healthcare systems!)
 - How to set up the waitlist mechanisms if consumers are going to have a choice?
- Supply/demand arrive stochastically; mechanism needs to consider dynamics
- Should agents join a 'global' waitlist and then choose a hospital once they get to the front? Or else choose which hospital they will wait for from the beginning? Or else allow patients to switch waitlists based on developments in waiting time?

Allocating primary care physicians (PCPs)

- If insurer wants to **capitate** payments to PCPs, need an administrative enrollment link between patients and PCPs
- **US** (Kaiser HMOs) : Centralized online enrollment portal, if PCP you want not accepting new patients, choose a different PCP and *check back later*
- **Norway** : Centralized online enrollment portal, if PCP you want not accepting new patients, choose a different PCP and *join the waitlist for the one you want*
- *Key questions*:
 - Should there be waitlists at all? Is the “ordeal” allocation of ‘check back later’ more efficient?
 - If waiting lists, should consumers be able to join multiple waiting lists at one time?
 - Should consumers waiting for one another’s PCPs be allowed to switch with one another?

Concluding thoughts

- A very large body of work considering the impacts of policy in health insurance markets (primarily in the US context)
 - Less work evaluating health insurance market design questions more relevant outside of the US
 - Especially as relates to regulating a private insurance market alongside universal public coverage
- A growing literature on market design questions in healthcare settings, but much much more that can be done here
 - Like in other contexts, a key barrier has been access to data on the relevant markets, but this may be increasingly available (especially outside the US)
- Combining market design and health economics seems like a very fruitful area for research!