Insurer-Provider Networks in the Medical Care Market

Theory-testing

Measurement

Methodology

Main idea

* Model demand for hospitals and health plans, accounting for the hospital network of each plan in modeling the consumer’s choice of plan
* Given demand for plans and hospitals, models the supply side negotiation between hospitals and plans for their equilibrium networks, which determines the division of profits
  + Plans choose networks in two-stage process conditional on their expectations regarding other plan choices and prices demanded by hospitals
* To increase their share of the surplus from contracting, hospitals have incentives to:
  + Invest in quality to attract more patients, lower costs
  + Merge with other providers, to improve bargaining position
  + Under-invest in capacity
* Findings
  + “Star” hospitals capture $6700 more per patient than other providers, on costs of $11,000
  + Hospitals with capacity constraints have markups of $6900 per patient more than those without constraints
  + System hospitals have $180,000/month greater profits than other providers

Model

* Stages
  + 0. Plans choose quality and products; Hospitals choose capacity, location, quality, product mix. Merge decision made here.
  + 1. Hospitals make simultaneous take-it-or-leave-it price offers to all plans in the market
  + 2. Plans choose whether to accept these offers, forming their hospital network
  + 3. Plans set premiums to maximize profits after a change in networks
  + 4. Consumers and employers jointly choose plans
  + 5. Sick consumers visit hospitals; plans pay hospitals per service provided.

Data

* Insurer plan data cover all managed care insurers in 43 major markets across the US for Q3, Q4 of 2002 (cross-section)
  + Premiums earned, number of enrollees, tax status of each carrier
  + Data on clinical performance and patient satisfaction with health plans
* Hospital data from Medstat from private insurers; included encounter-level data on hospital admissions of relevant enrollees during 2 year period.
  + Patient’s diagnosis and characteristics, identity of hospital, type of plan
  + Hospital characteristics from AHA
* Data on network of hospitals offered to hospitals by every HMO/POS plan in every market considered in March/April 2003

Comments

* Would be valuable to model endogenous capacity choice, to consider the welfare consequences of the outcomes of the negotiating process and the decision to merge
* Inference for moment inequalities that find a set more complicated
* Counterfactuals in the case of set identification