Regulating Out-of-Network Hospital Payments: Disagreement Payoffs, Negotiated Prices, and Access

Elena Prager & Nicholas Tilipman

Northwestern University & University of Illinois at Chicago

March 17, 2022

Regulating out-of-network health care payments


npr WBEZ CHICAGO DONATE

Shots

POLICY-ISH

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November 22, 2021 · 10:22 AM ET

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MAY 21, 2019 HEALTH CARE


Forbes Billionaires Innovation Leadership Money

A New Bipartisan Bill Could Transform The Way We Pay For Hospital Care

Avik Roy Forbes Staff
The Apothecary Contributor Group
Policy
Commentary from Forbes' Policy Editor

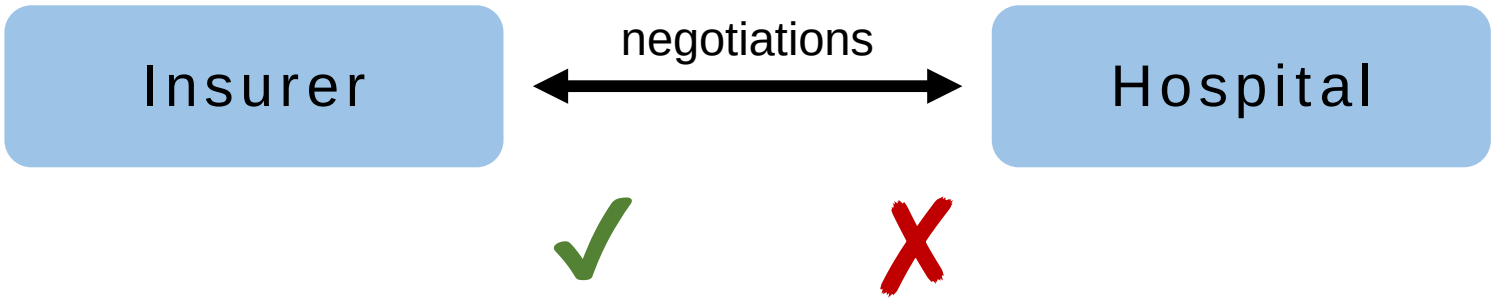
The best option, by far, would be to learn from Medicare Advantage, which pays out-of-network providers at Medicare's much more reasonable fee-for-service rates.

Out-of-network payments

Insurer

Hospital

Out-of-network payments



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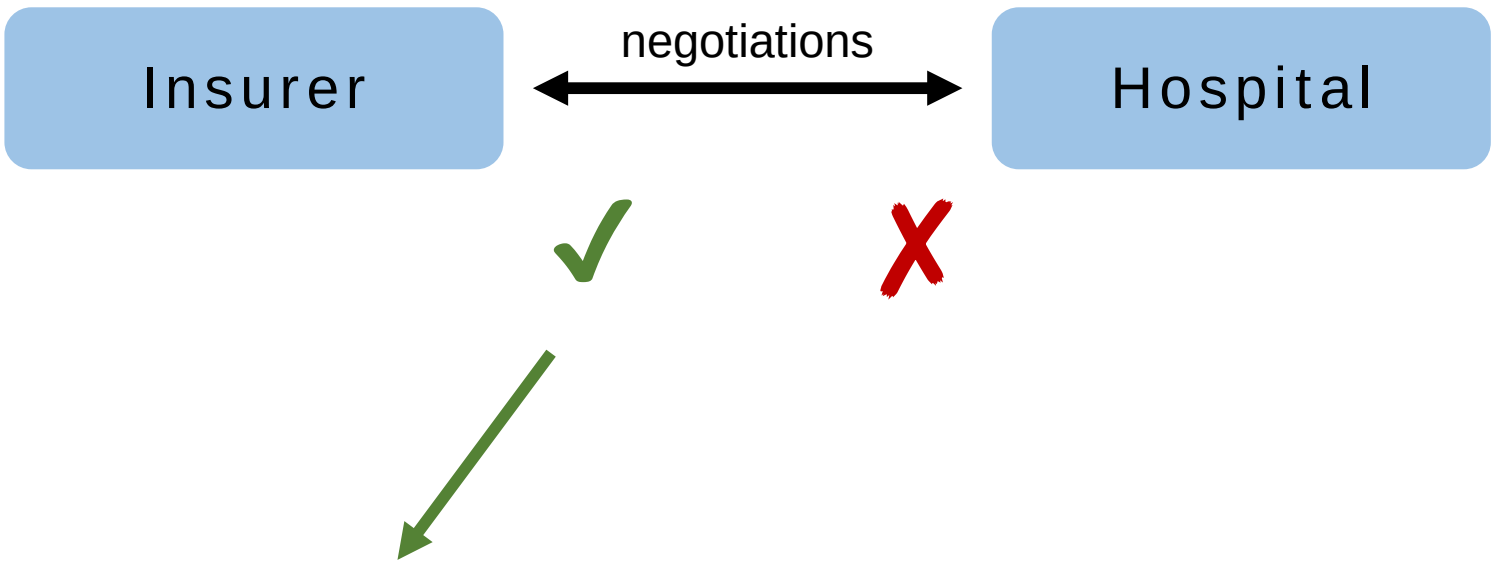
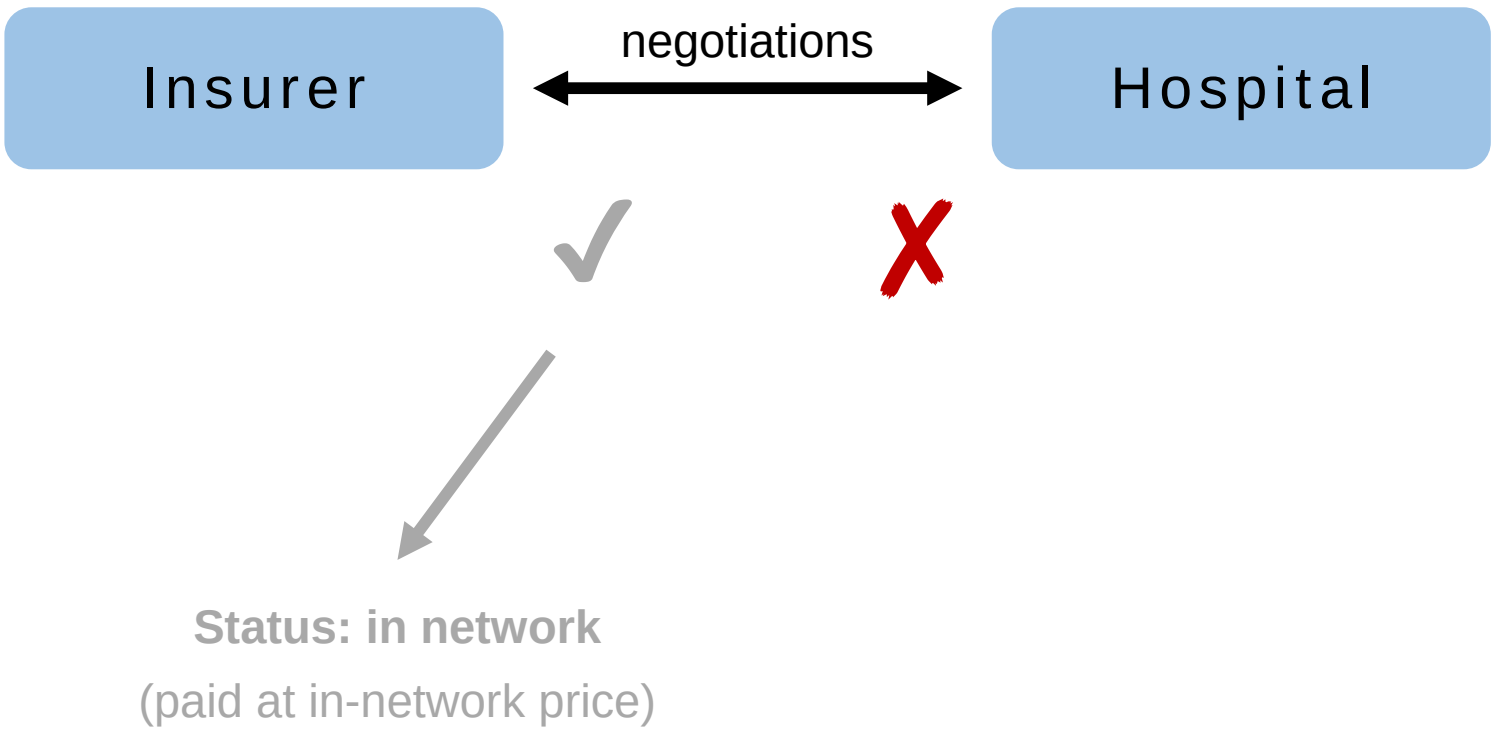


Status: in network

(paid at in-network price)

Out-of-network payments



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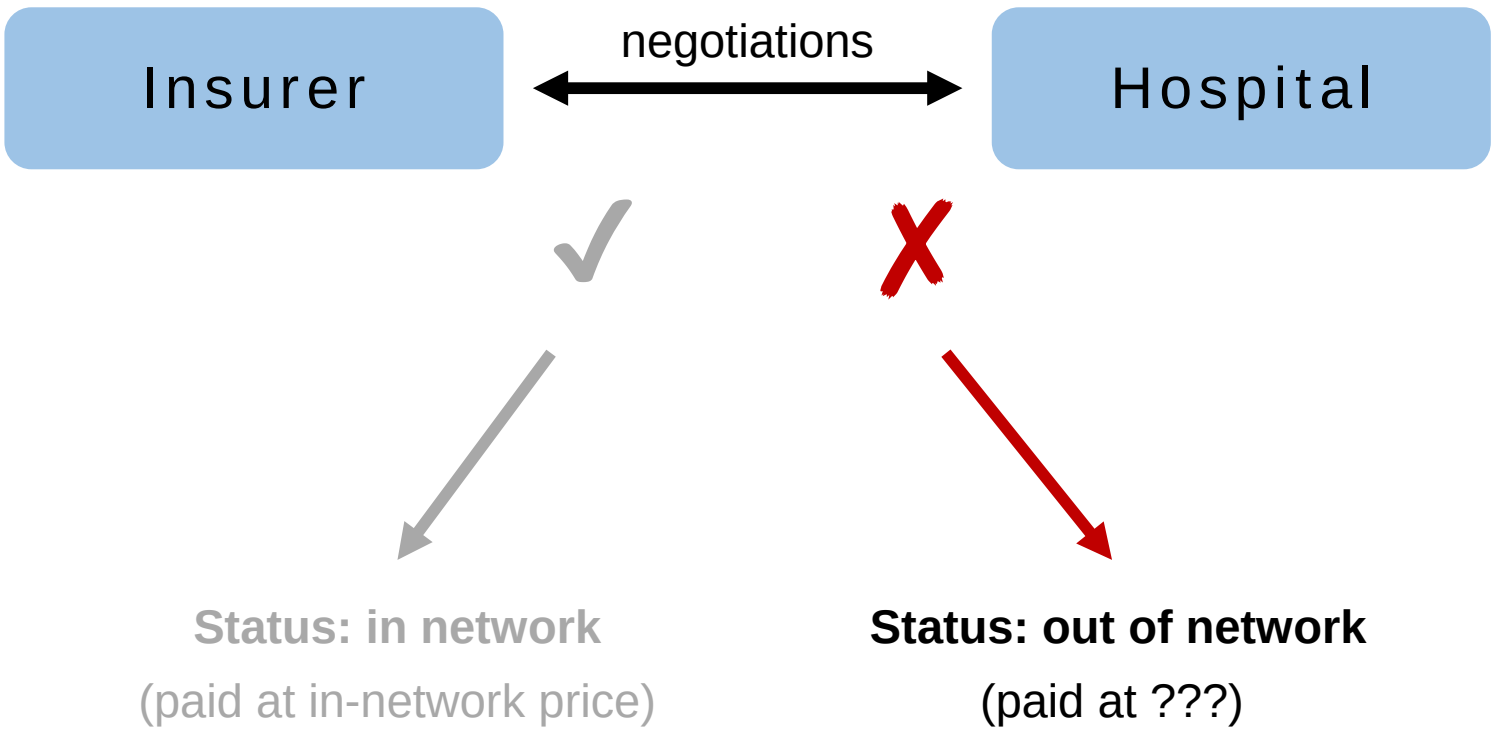

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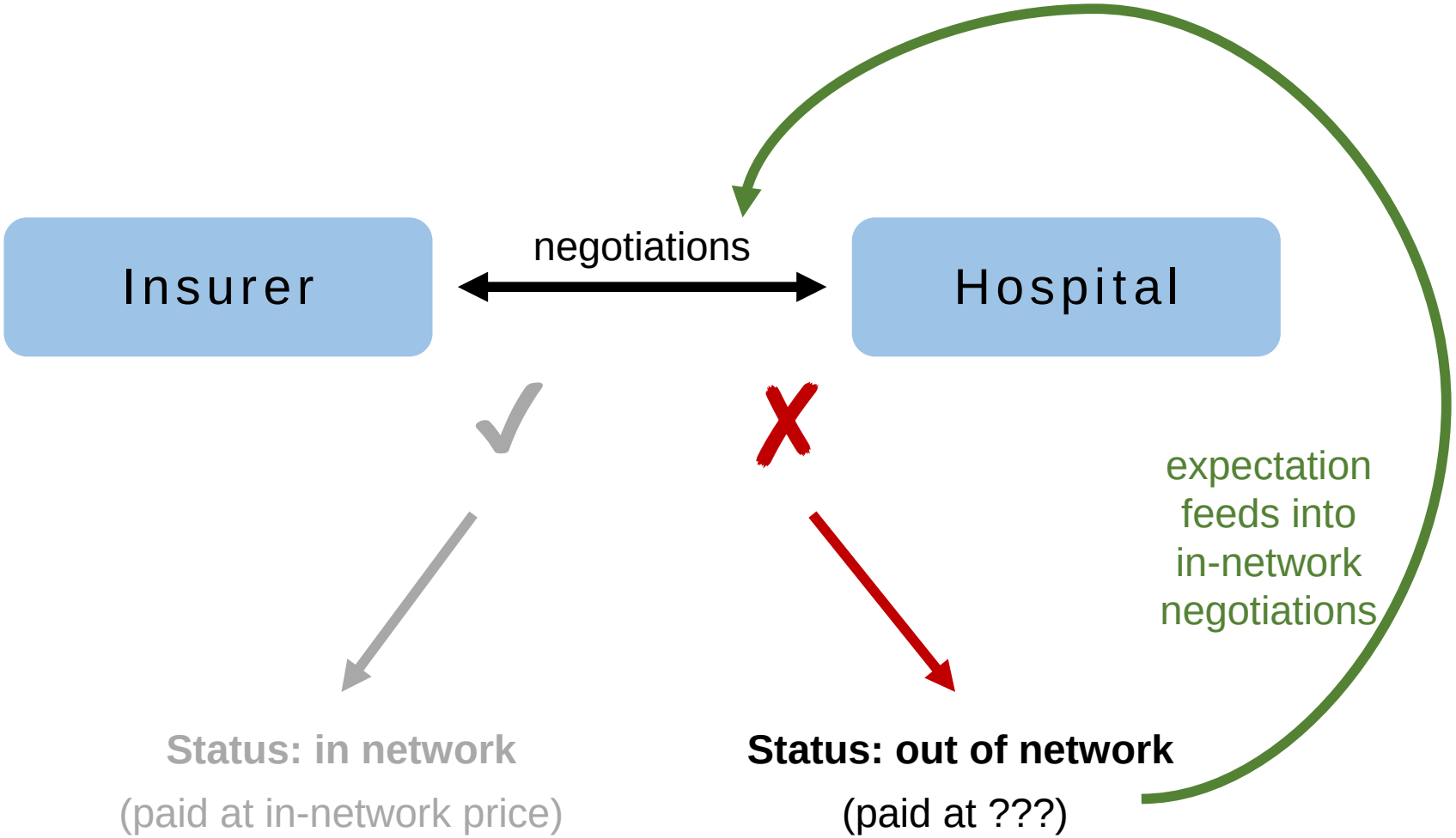

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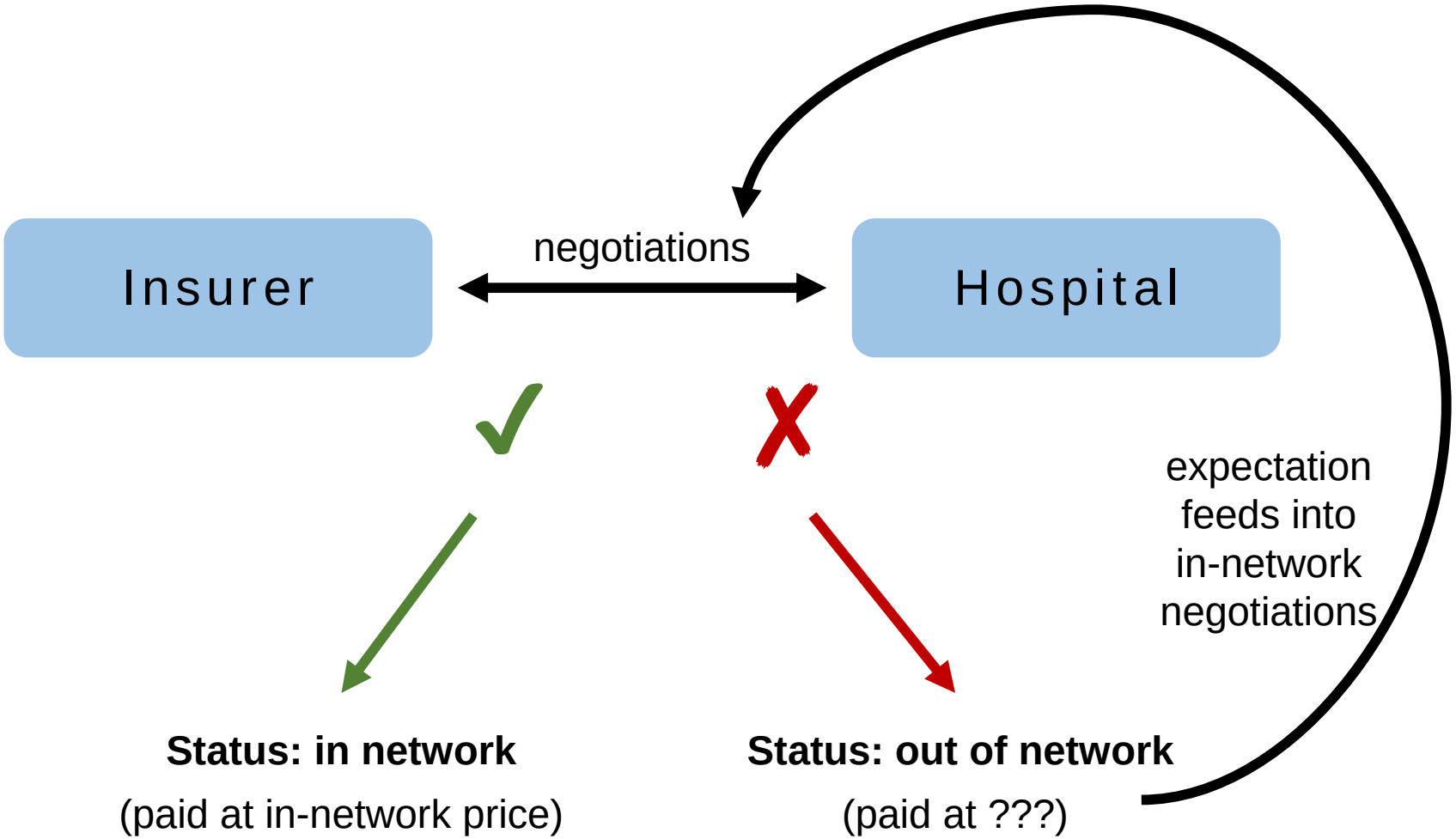
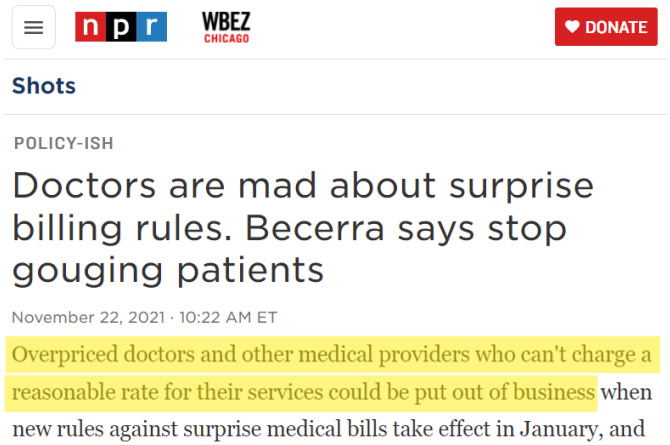


This paper: key questions

- Measurement: What are insurers currently paying out-of-network providers?
  - Empirical work has faced a barrier in accounting for these–prices not posted
- Main: What would be the impacts of out-of-network price regulations?
  - Intended consequences: in-network prices
  - Unintended conequences: access (hospital networks, hospital closures)

AHA Statement

Regulating out-of-network health care payments



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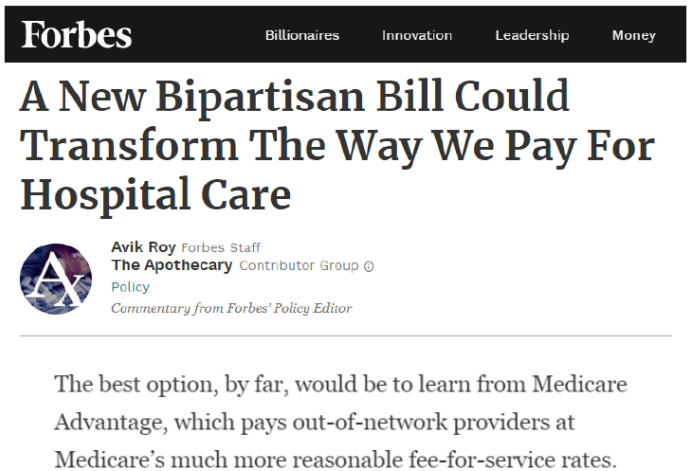

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A New Bipartisan Bill Could Transform The Way We Pay For Hospital Care

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The best option, by far, would be to learn from Medicare Advantage, which pays out-of-network providers at Medicare's much more reasonable fee-for-service rates.

This paper: what we do

- Propose a measure of out-of-network (OON) prices that
  1. Reflects insurers' actual payment policies
  2. Is replicable using typical claims data

- Use to estimate bargaining model with out-of-network transactions
  - Modify model to allow for volume>0 even without a contract

Current regulatory proposals

- Simulate counterfactual policy proposals' effects on equilibrium negotiated prices, network breadth, hospital exit
- Proposals to set OON reimbursements at:
  - Full charge prices (industry groups)
  - Median negotiated in-network rates (Sen. Lamar Alexander, R-TN; No Surprises Act 2021 rule implementation)
  - 200% of Medicare (Pete Buttigieg)
  - 120% of Medicare (Progressive Policy Institute)

This paper: findings

- Cutting current OON prices to Medicare would reduce in-network prices by $\sim 7\%$
- If consumers learn, long-run reduction could be $\sim 40\%$
  - But could also reduce network breadth by $\sim 40\%$ Intuition
- No evidence of entire providers exiting

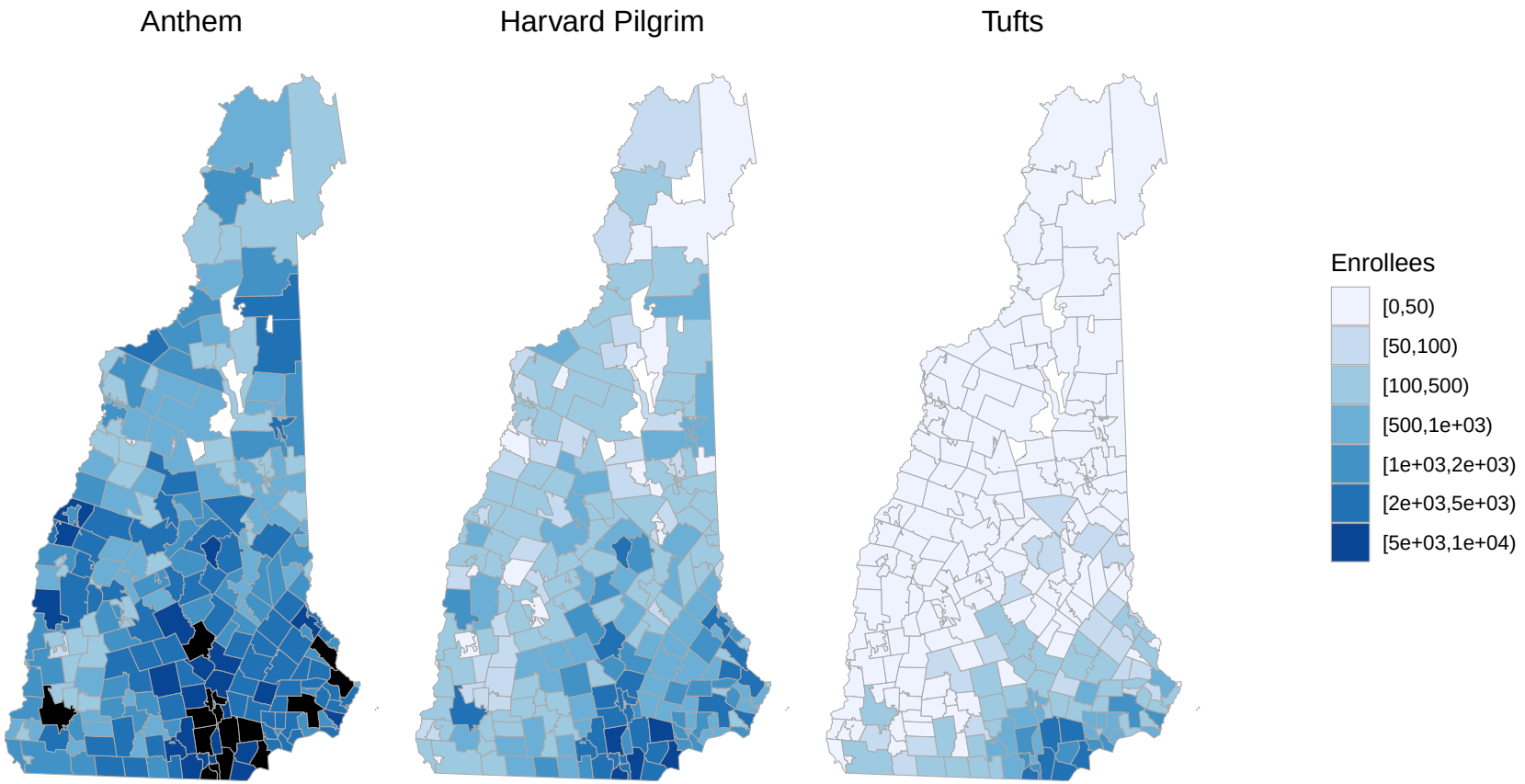
Setting: outpatient hospital care in New Hampshire

- NH has a large presence of regional health insurers
- Network breadth varies substantially Maps
  - Most insurers cover all 26 general acute care hospitals
  - Tufts (regional Mass-based insurer) covers only 8
- OON hospital transactions are nonnegligible: 7% of Tufts' total transactions, 14% of top OON services

- Sample: outpatient hospital care for residents of NH (choice set includes nearby MA hospitals)

Data

Networks reflect insurers' patient distribution



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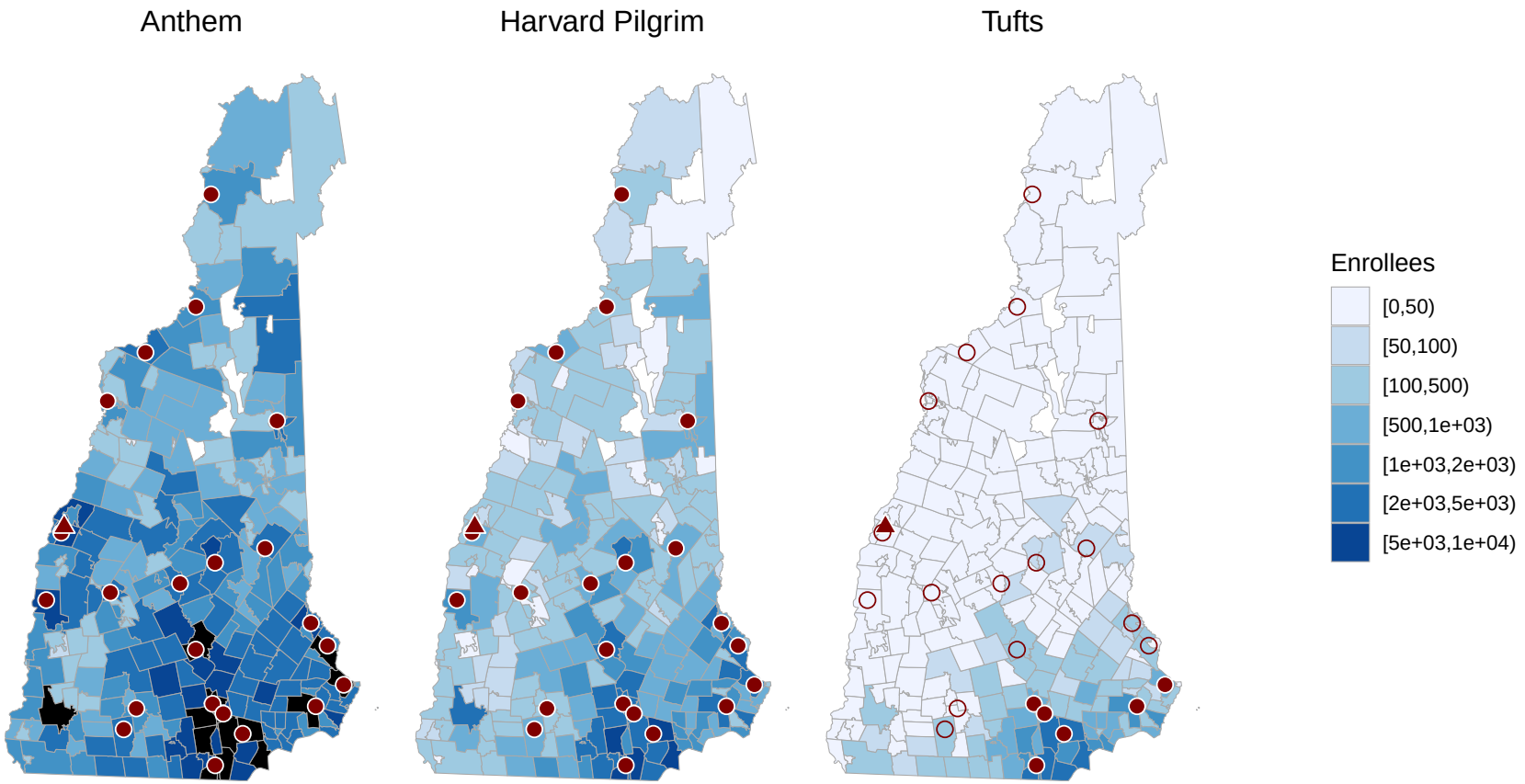

● = in-network hospital

○ = out-of-network hospital

Types of Prices

- Hospital charge/list price, p_h^c
  - Posted price

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- OON Price, p_{mh}^0
  - Insurer reimbursement for OON care
- Potential "balance bill", $p_h^c - p_{mh}^0$
  - What the patient may be charged for OON care

Insurer policies on OON prices

Insurer	Relevant Quote From Policy
Aetna	We get information from FAIR Health [...] For most of our health plans, we use the 80th percentile
BCBS of Mass.	based on a usual and customary fee schedule
Cigna	percentile (typically the 70th or 80th percentile) of billed charges, based upon the FAIR Health, Inc. data
Harvard Pilgrim	percentage of the cost of the care you receive up to the Usual, Customary and Reasonable Charge
Tufts	amount that we determine to be reasonable, based upon nationally accepted means and amounts of claims payment
United	frequently use the 80th percentile of the FAIR Health Benchmark Databases

FAIR Health benchmarks

- FAIR Health sells pricing data to insurers and providers
- Key product for this paper: Charge Benchmarks
  - Collects claims data from private payers + Medicare
  - Bins claims into procedure-market or diagnosis-market pairs (market $\approx$ 3-digit zip code)
  - Reports certain percentiles of charge prices within each bin

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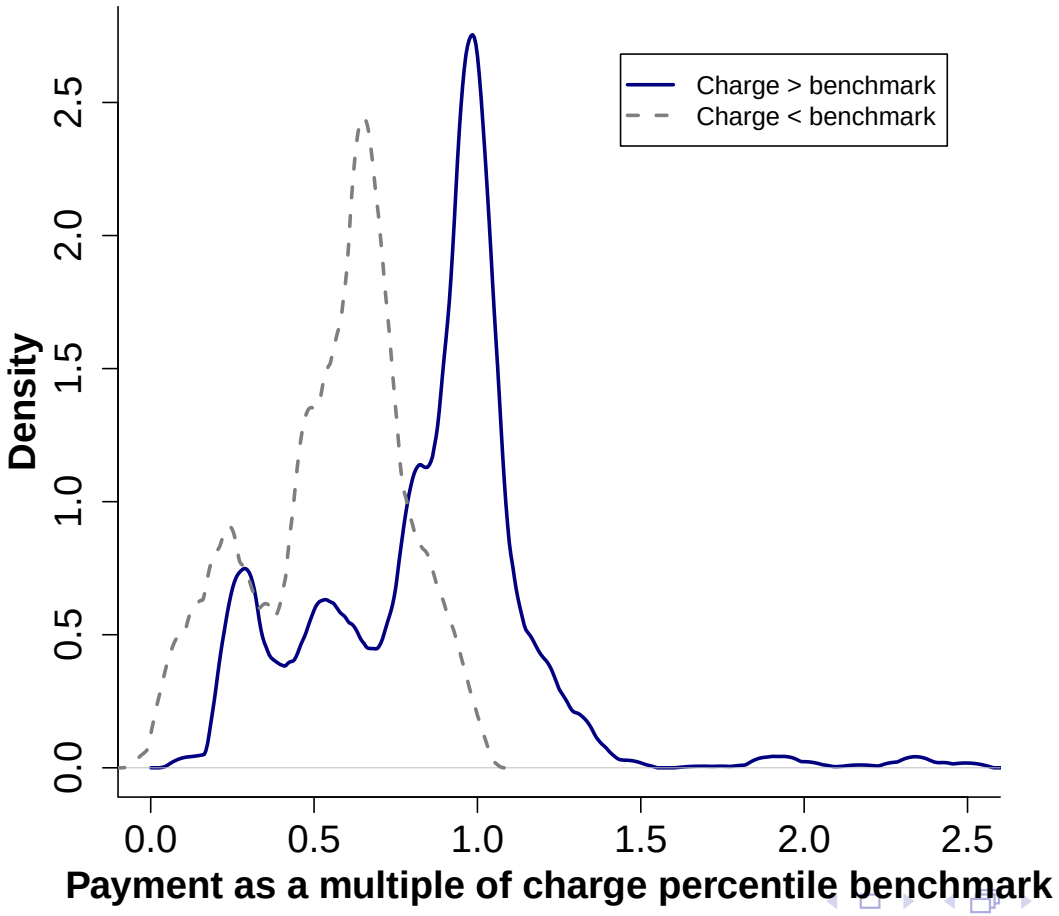
  - Bins claims into procedure-market or diagnosis-market pairs (market $\approx$ 3-digit zip code)
  - Reports certain percentiles of charge prices within each bin
- Insurers purchase the benchmarks and many use them as a reference* for setting OON reimbursements

* FAIR Health emphasizes that "*FAIR Health does not set UCR rates or out-of-network reimbursement amounts; those determinations are made by insurers themselves. FAIR Health data are intended to inform those decisions.*"

Out-of-network payments vs. charge benchmarks

OON payments by Tufts

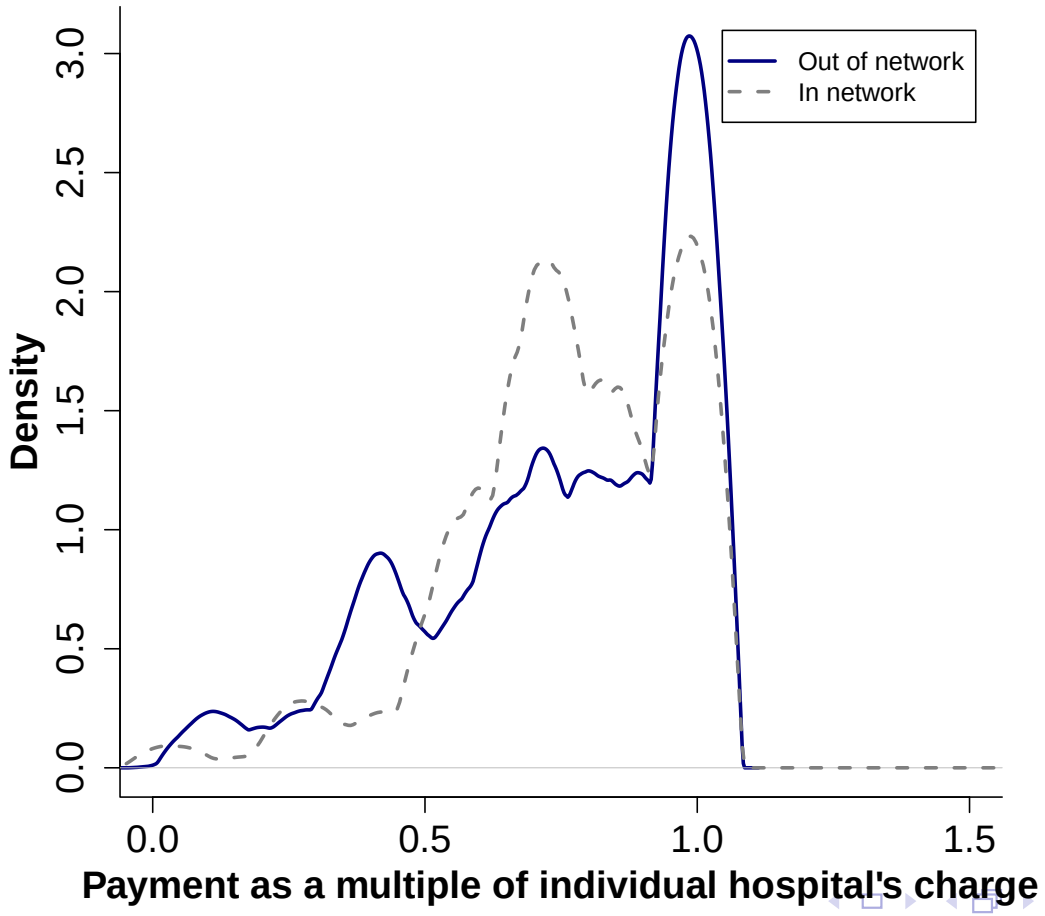
(as $\times$ of benchmark):



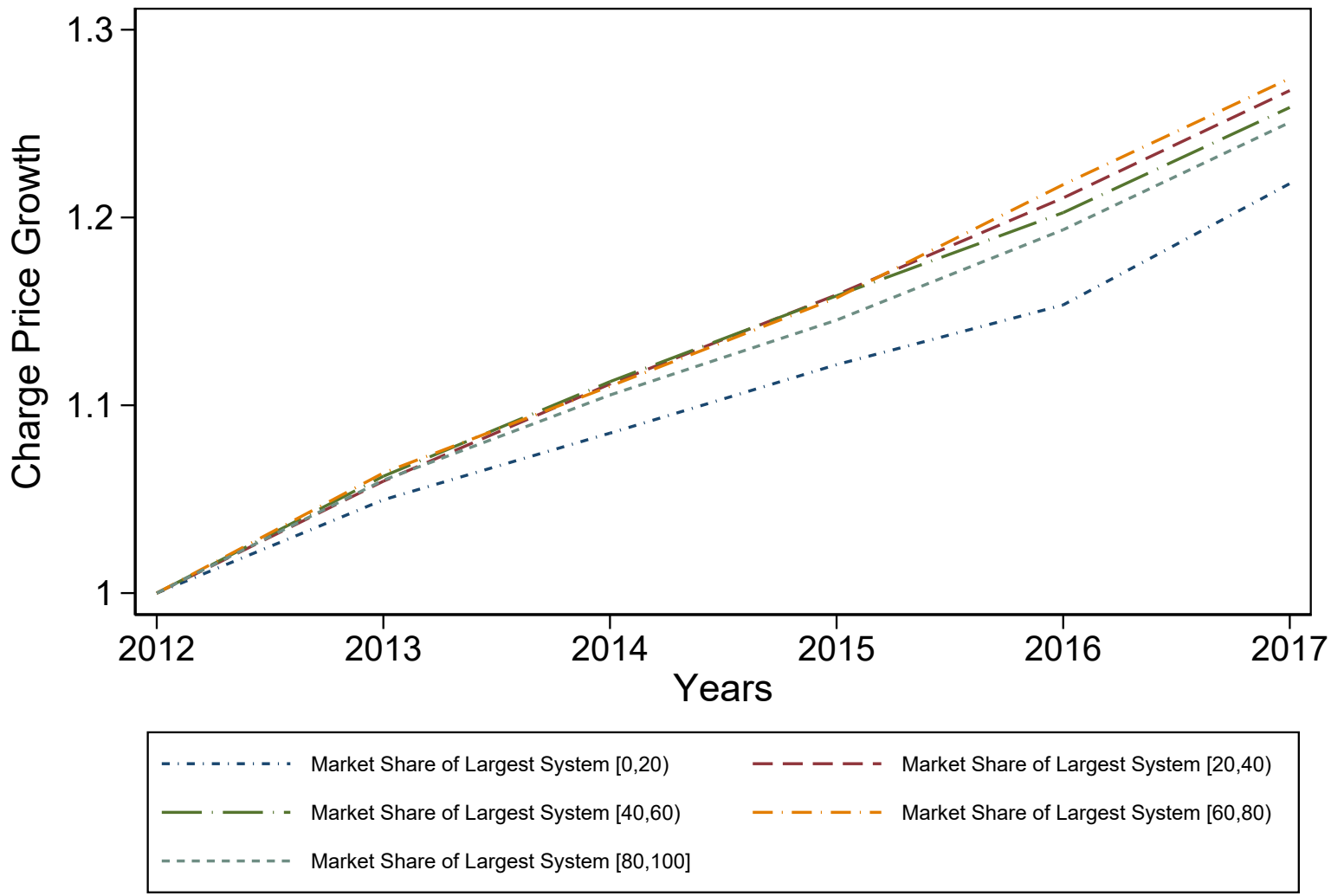
Out-of-network payments vs. list prices

OON payments by Tufts

(as $\times$ of list price, when list$<$benchmark):

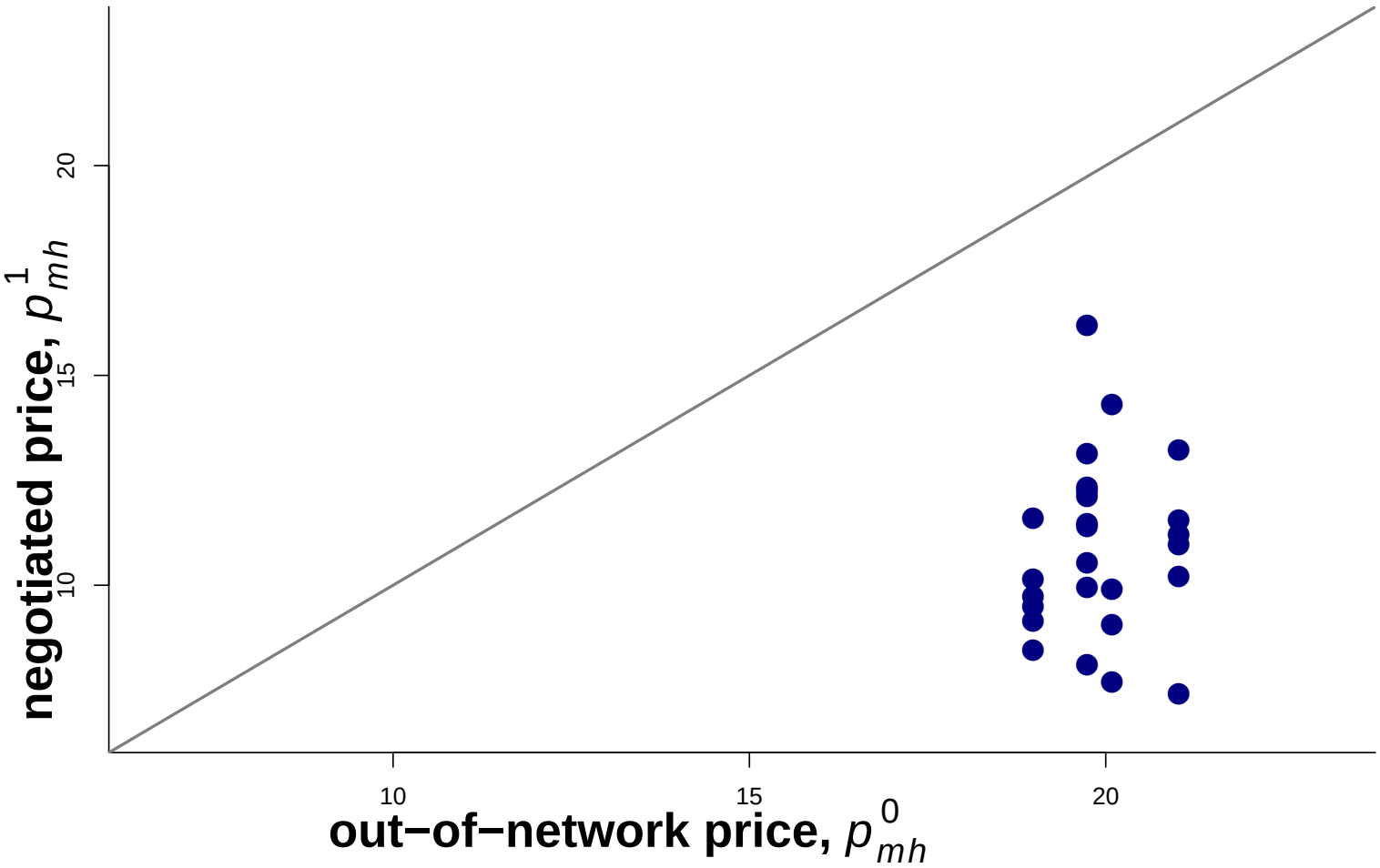


Strategic Charge Setting?



* Note: Hospitals with CAH status dropped.

OON Prices Favor Providers



Model stages

Bargaining game between insurers and hospitals negotiating over prices and network status:

1. Insurers and hospitals decide whether to enter negotiations
   Empirics: generates inequality moments from network inclusion/ exclusion conditions
2. Insurers and hospitals bargain over in-network prices
   Empirics: generates equality moments from price FOCs
3. Enrollees get sick, choose hospitals; hospitals get paid
   Empirics: standard discrete choice model of consumer demand for hospitals

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Hospital objectives

- Hospitals maximize profits:

$$\begin{aligned} \text{in network:} \quad & (p_{mh} - c_h)\,\sigma^1_{mh} \\ \text{out of network:} \quad & \left(p^0_{mh} + \mu\left(p^c_h - p^0_{mh}\right) - c_h\right)\sigma^0_{mh} \end{aligned}$$

  - p_{mh}, p^0_{mh}, p^c_h: in-network price, out-of-network price, charge price
  - c_h: marginal cost of treatment for representative patient
  - σ^1_{mh}, σ^0_{mh}: volume of patients from insurer m, in case of agreement vs. disagreement

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- For most hospitals, $0 < \sigma^0_{mh} < \sigma^1_{mh}$ and $p^*_{mh} < p^0_{mh} < p^c_{mh} \Longrightarrow$ trade off higher volume vs. lower prices

Insurer objectives

- Insurers maximize a weighted difference of enrollee surplus (WTP) and costs:

$$\begin{aligned} \text{in network:} \quad & \alpha_m W^1_{mh} - p_{mh}\sigma^1_{mh} - \psi^1_{mh} \\ \text{out of network:} \quad & \alpha_m W^0_{mh} - p^0_{mh}\sigma^0_{mh} - \psi^0_{mh} \end{aligned}$$

  - α_m: weight insurer places on enrollee expected utility
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- Omitted from notation: payments directly to physicians

Network formation setup

- Model stage 1: Insurers and hospitals decide whether to enter negotiations

- Insurer m and hospital h enter into price negotiations if ex-ante *joint* surplus from agreement is weakly positive:

$$\begin{aligned} E_{mh} &= \alpha_m \left(W^1_{mh} - W^0_{mh}\right) - \psi^1_{mh} + \psi^0_{mh} \\ &\quad + \left(-\sigma^1_{mh} + \sigma^0_{mh}\right) c_h + \mu \left(p^c_h - p^0_{mh}\right) \sigma^0_{mh} - b \\ &\geq 0 \end{aligned}$$

where b is a joint Coasian contracting cost

Equilibrium negotiated prices

- Model stage 2: Insurers and hospitals bargain over in-network prices
- In case of agreement:

$$
\begin{aligned}
p^*_{mh} &= \arg\max_{p_{mh}} S_m(h, p_{mh})^{\gamma} S_h(h, p_{mh})^{1-\gamma} \\
&= \frac{1}{\sigma^1_{mh}} \left[\begin{array}{l} (1-\gamma)\,\alpha_m \left(W^1_{mh} - W^0_{mh}\right) \\ +(1-\gamma\mu) p^0_m \sigma^0_{mh} + \gamma\mu p^c_h \sigma^0_{mh} \\ +\gamma c_h \left(\sigma^1_{mh} - \sigma^0_{mh}\right) - (1-\gamma)\left(\psi^1_{mh} - \psi^0_{mh}\right) \end{array} \right]
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\end{aligned}
$$

Parameters to estimate

- Volumes $\sigma^1_{mh}, \sigma^0_{mh}$ are predicted from demand model, treated as data

- Parameters to estimate:
  - Hospital marginal costs c_h
  - Insurers' bargaining weight γ
  - Insurers' weights on enrollee WTP α_m
  - Hospitals' balance bill collection fraction μ
  - Coasian contracting costs b

Identification

Data

- **Claims data:** New Hampshire and Massachusetts All-Payer Claims Databases (APCDs), 2012
- **Charge price benchmarks:** FAIR Health data, supplemented with APCDs
- **Hospital networks:** hand-collected
- **Additional hospital characteristics:** American Hospital Association annual surveys

Hospital Demand Estimates

	(1) IV Deg 4	
In-Network Hospital	2.2871***	(0.2573)
Other In-Network Provider	3.2236***	(0.0506)
Balance Bill ($)	-0.0055	(0.0044)
Distance (miles)	-0.2445***	(0.0037)
Distance^2	0.0008***	(0.0000)
Distance $\times$ Intensity Weight	-0.0000	(0.0000)
Hospital FEs	Yes	
Up to Deg 4 of 1st Stage Resid	Yes	
Pseudo R^2	0.723	
Choices	102501	

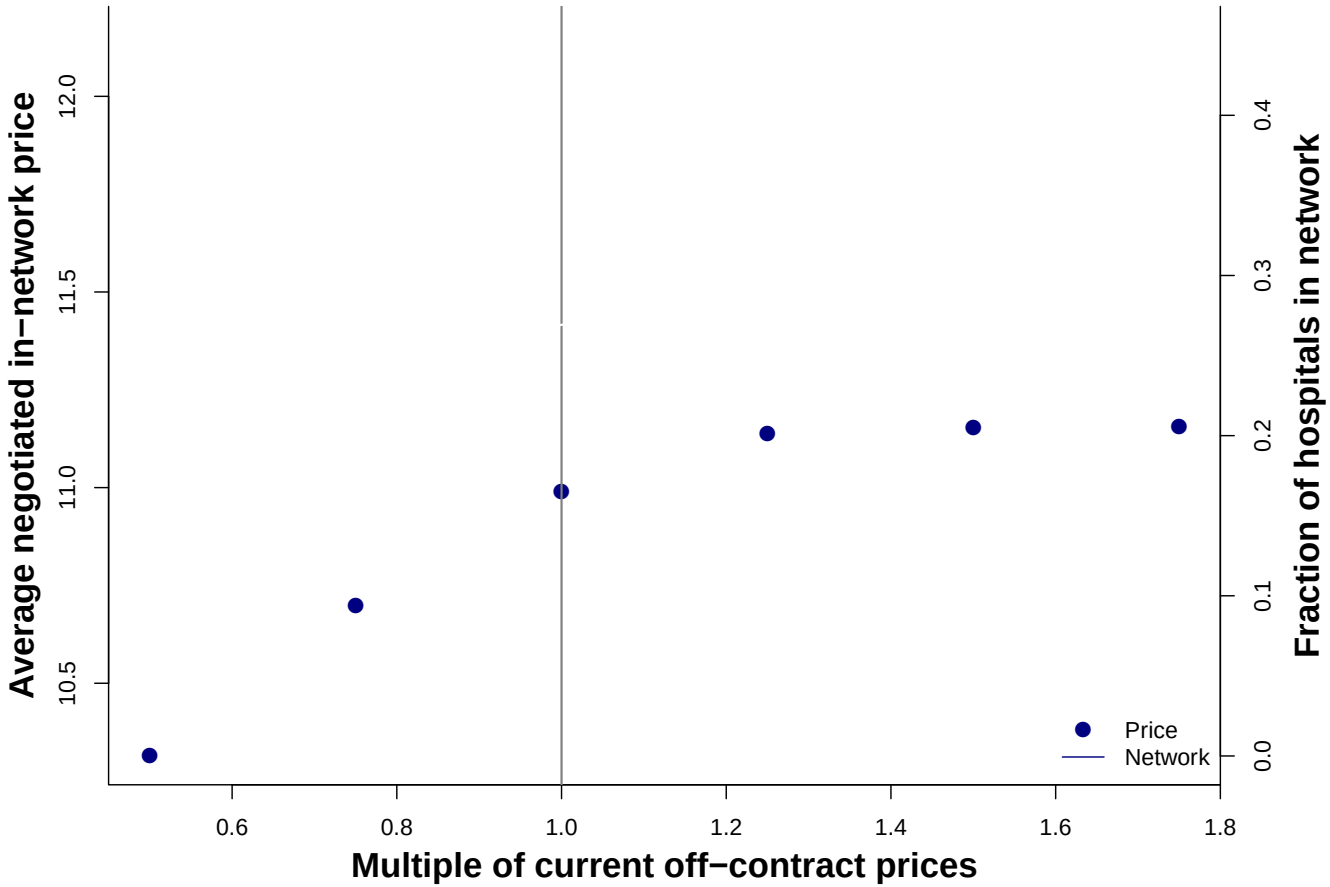
Bargaining results

Variable	With OON
Selected hospital costs (c_h):	
Catholic Medical Center	\$4.48
Dartmouth Hitchcock Medical Center	\$18.64
Elliot Hospital	\$5.77
Exeter Hospital	\$5.91
Insurer parameters:	
Bargaining weight γ	0.52
Anthem's weight on WTP α_{Anthem}	159
Cigna's weight on WTP α_{Cigna}	234
Harvard's weight on WTP $\alpha_{HarvardPilgrim}$	190
Aetna's weight on WTP α_{Aetna}	200
United's weight on WTP α_{United}	271
Tufts' weight on WTP α_{Tufts}	127
Contracting Cost b	\$5,565
Share of Balance Bill μ	0.63

Counterfactuals

- Simulate prices, networks setting OON prices to:
  - Multiples of charge price benchmarks
  - Multiples of Medicare reimbursements
- Two flavors of market conditions
  1. Hospitals can turn away OON patients if payment $< mc$
  2. Hospitals must accept all patients (à la EMTALA); if profit across insurers < 0, call it a service line "closure"
- Approximate long run using reduced OON disutility

Counterfactuals: multiples of OON benchmarks



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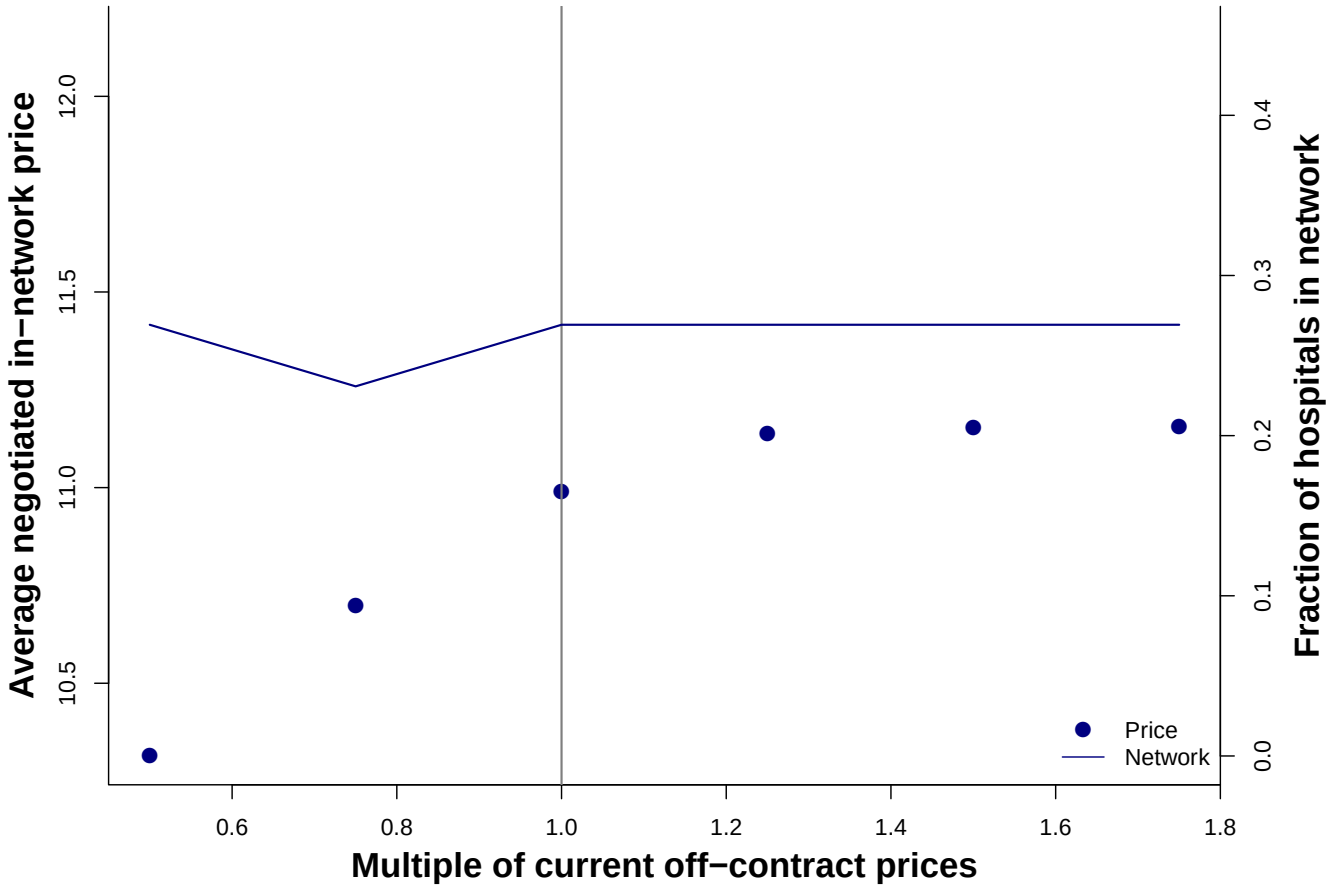
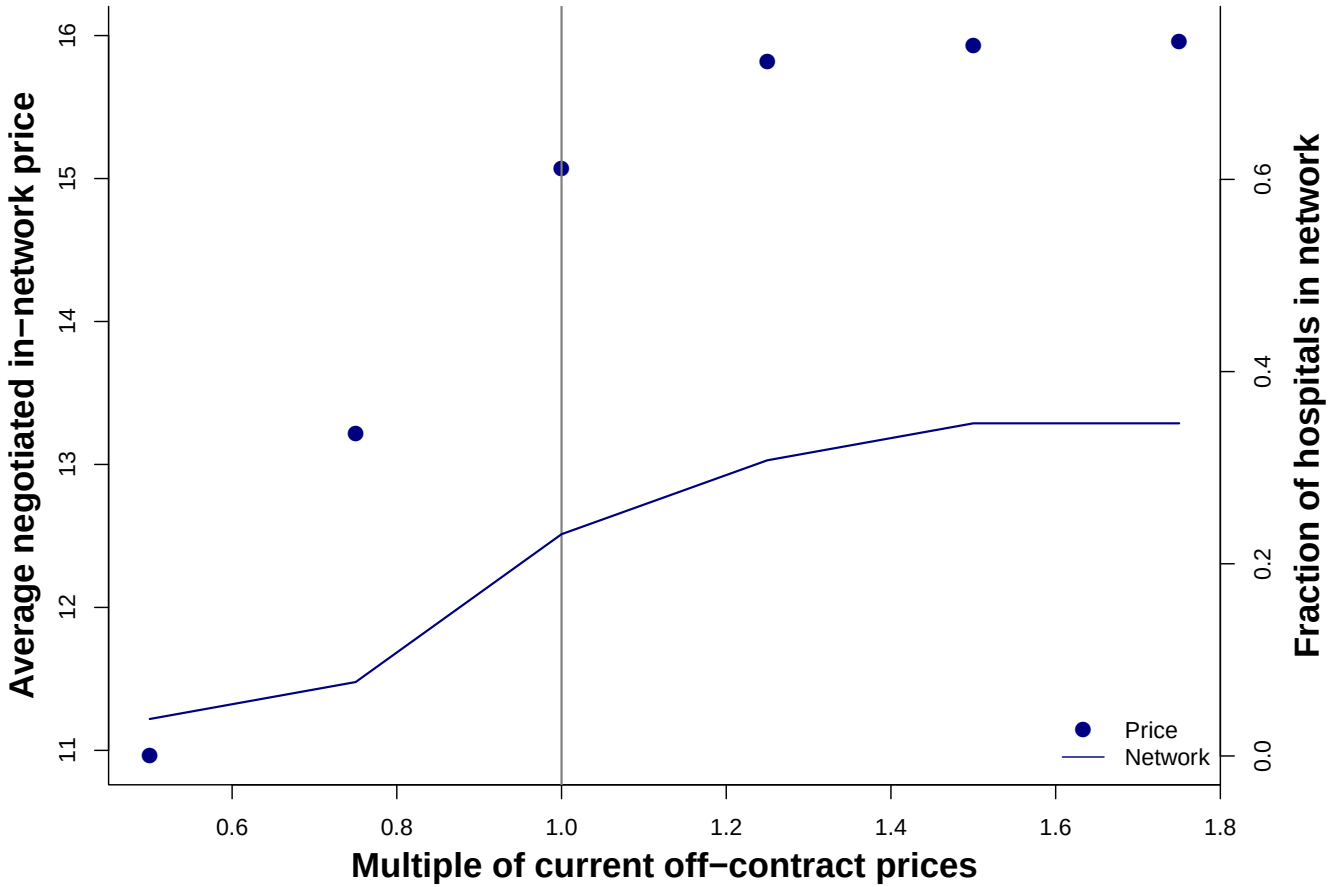
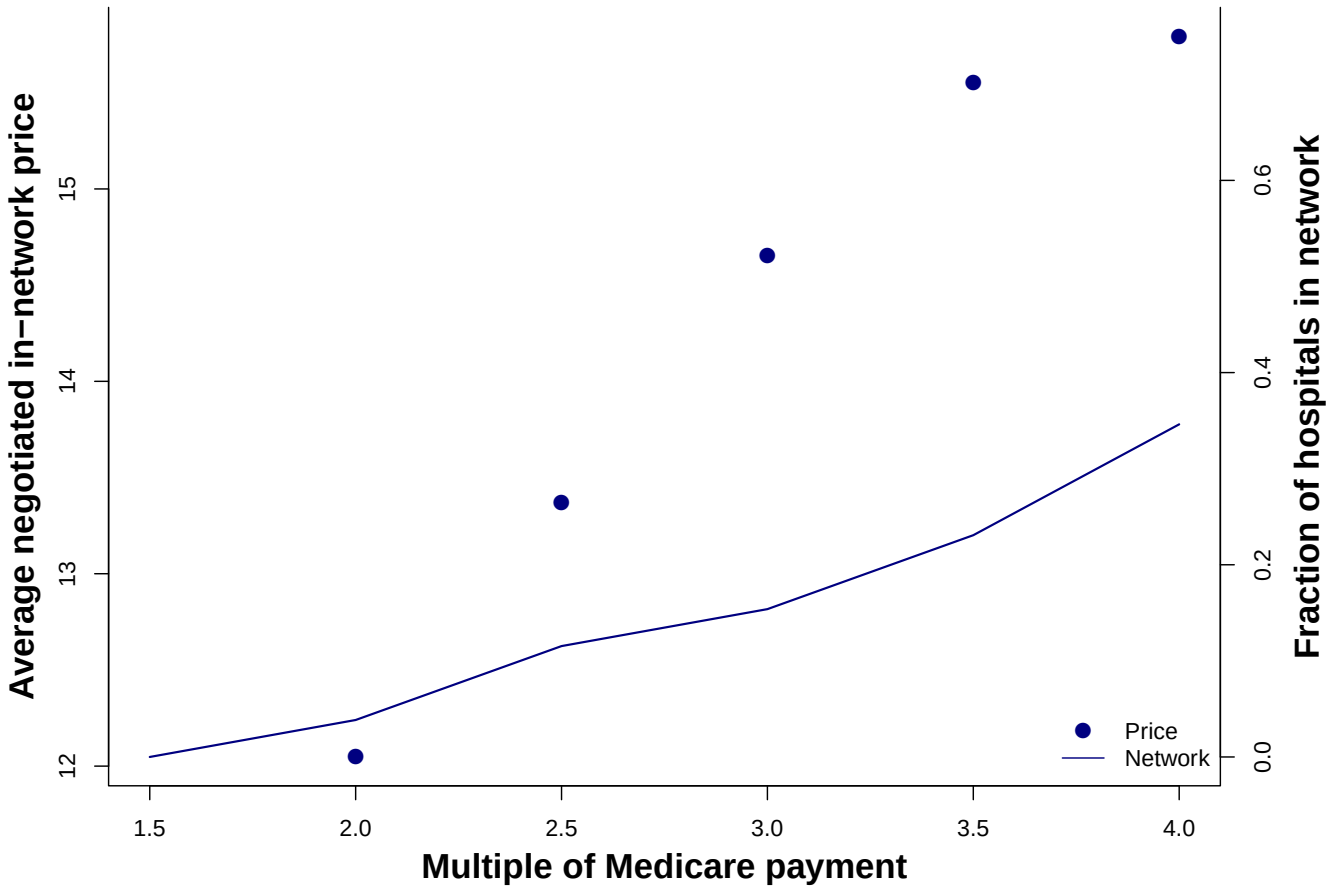


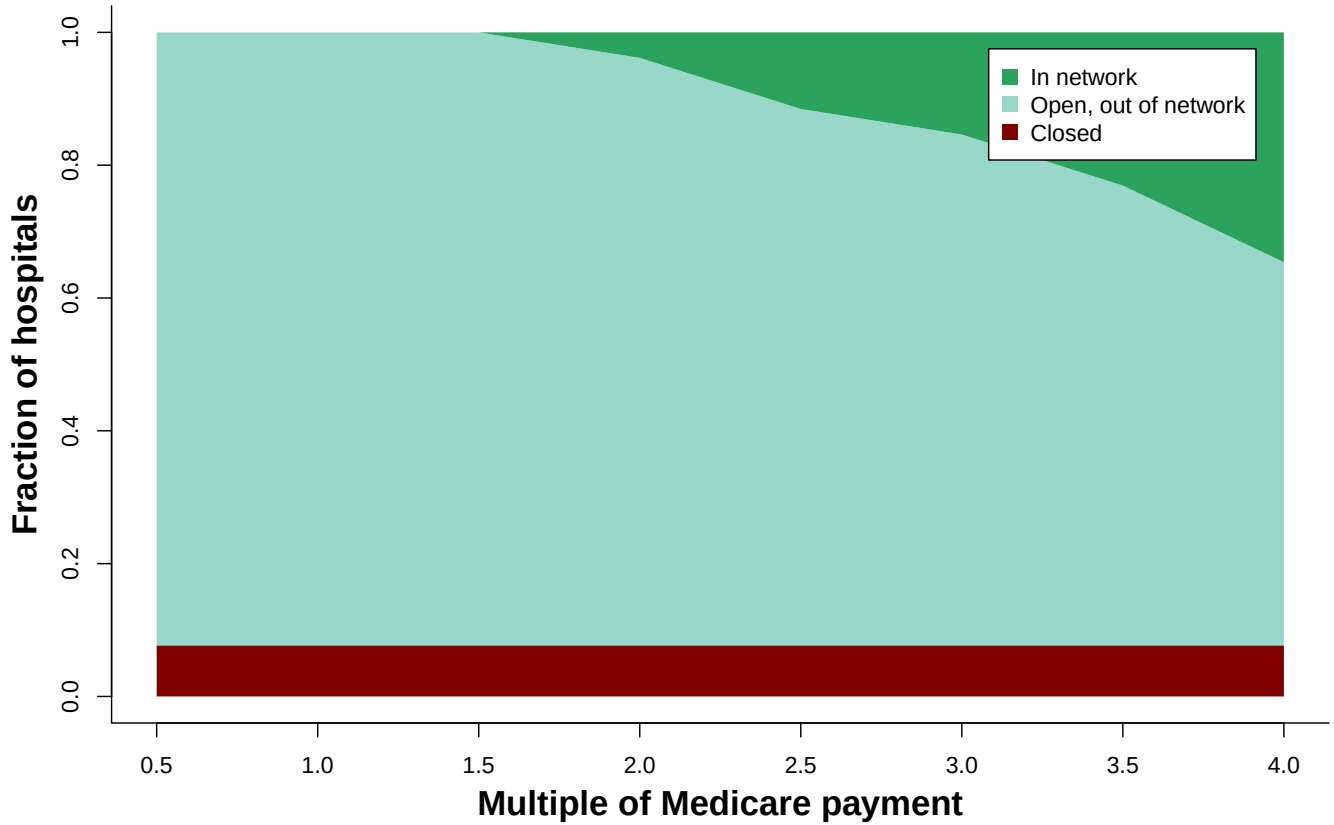
Longer run: multiples of OON benchmarks



Longer run: peg OON price to Medicare



Longer run: service line closures?



Conclusions

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  - Dynamic response by hospitals

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  - Dynamic response by hospitals
- Incorporating off-contract transactions is...
  - **Important:** predicts different equilibria
  - **Feasible:** OON prices can be measured in available data
- Regulating off-contract reimbursements could have large impacts, but only if consumers adjust
  - Substantial reduction in in-network prices
  - Trade-off against network breadth, hospital exit

Thank You

THANK YOU!