



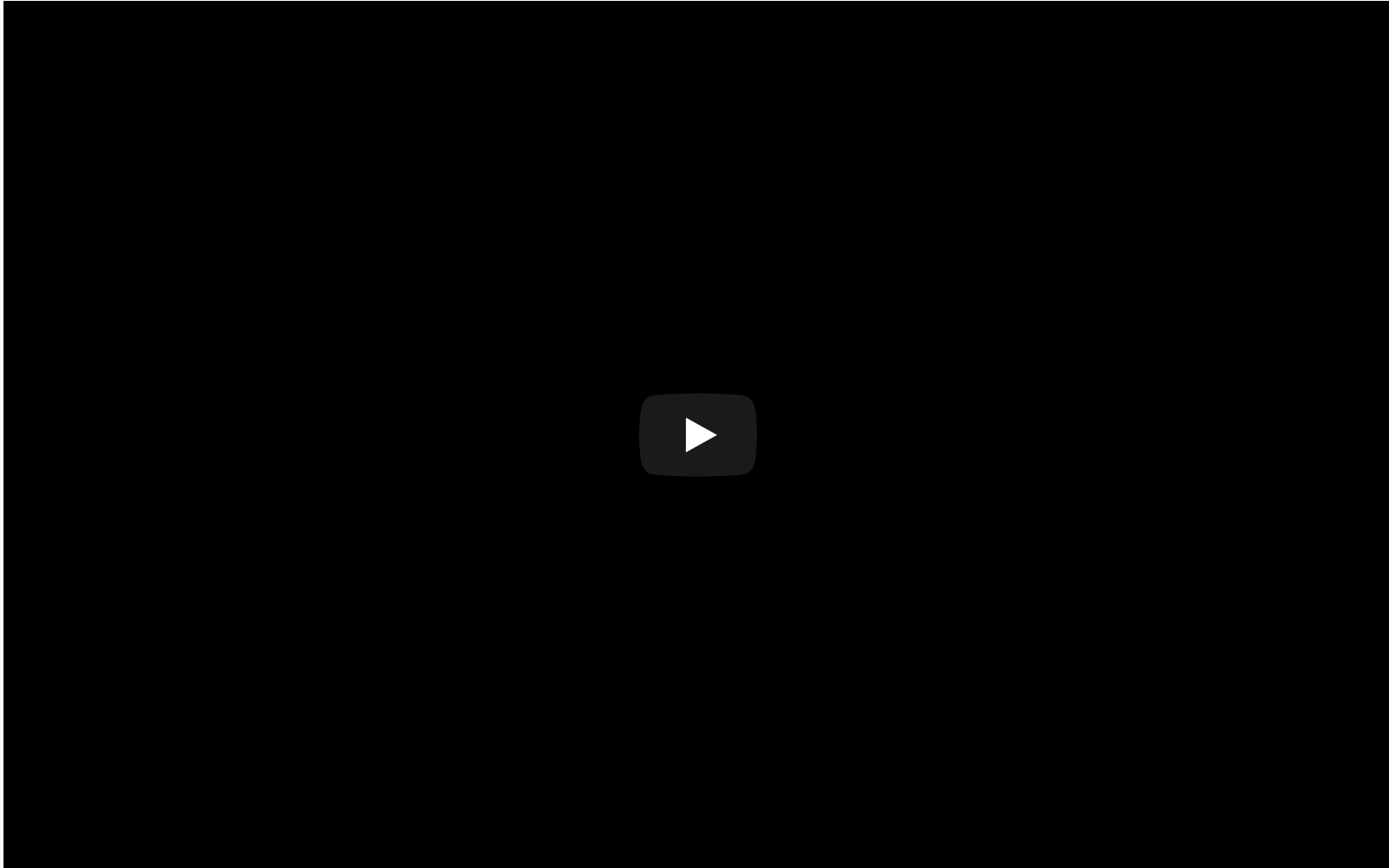
Sticker Shock!

Economics and Hospital Pricing

Ian McCarthy | Emory University

Thursday, March 3, 2022

Health care in the U.S.



Outline

Some thoughts on U.S. health care...

1. Quality is OK
2. The System is Confusing
3. Prices are Really High!
4. Economics can help

Health Care in the U.S.

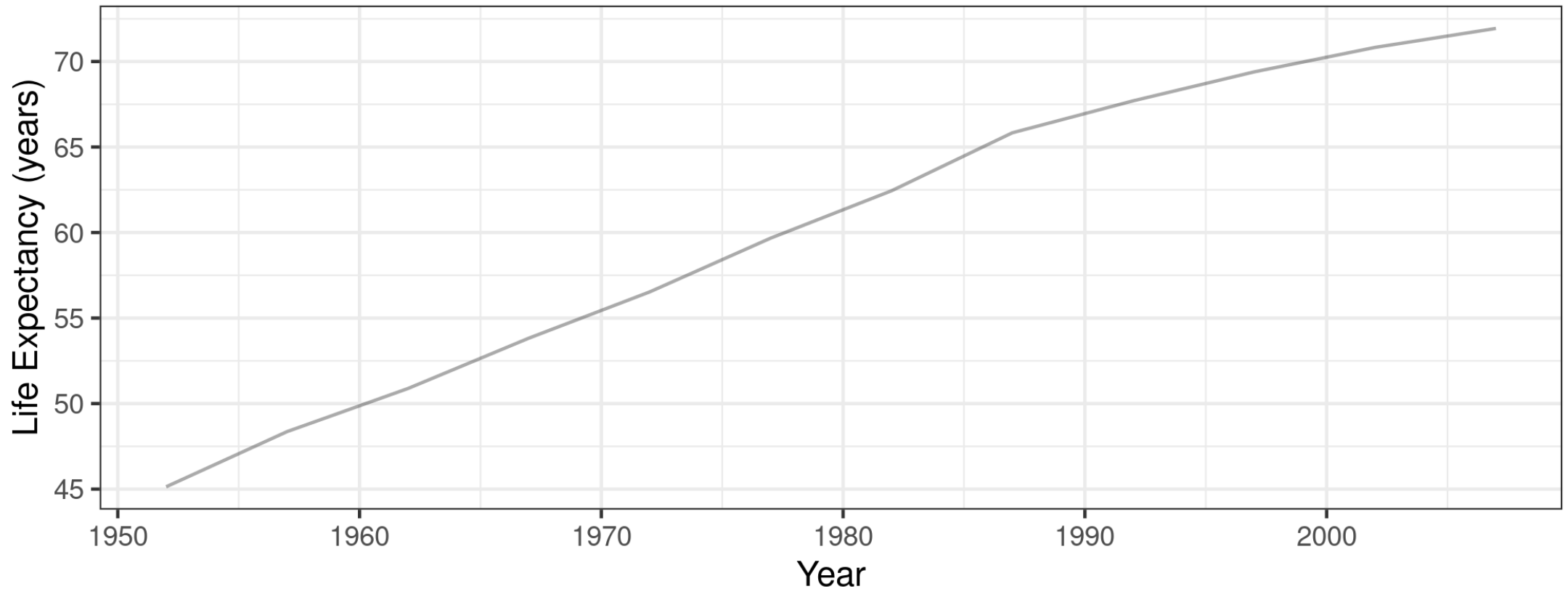
Health improvements worldwide

We've made *major* improvements in life expectancy (and many other measures of health) across the world

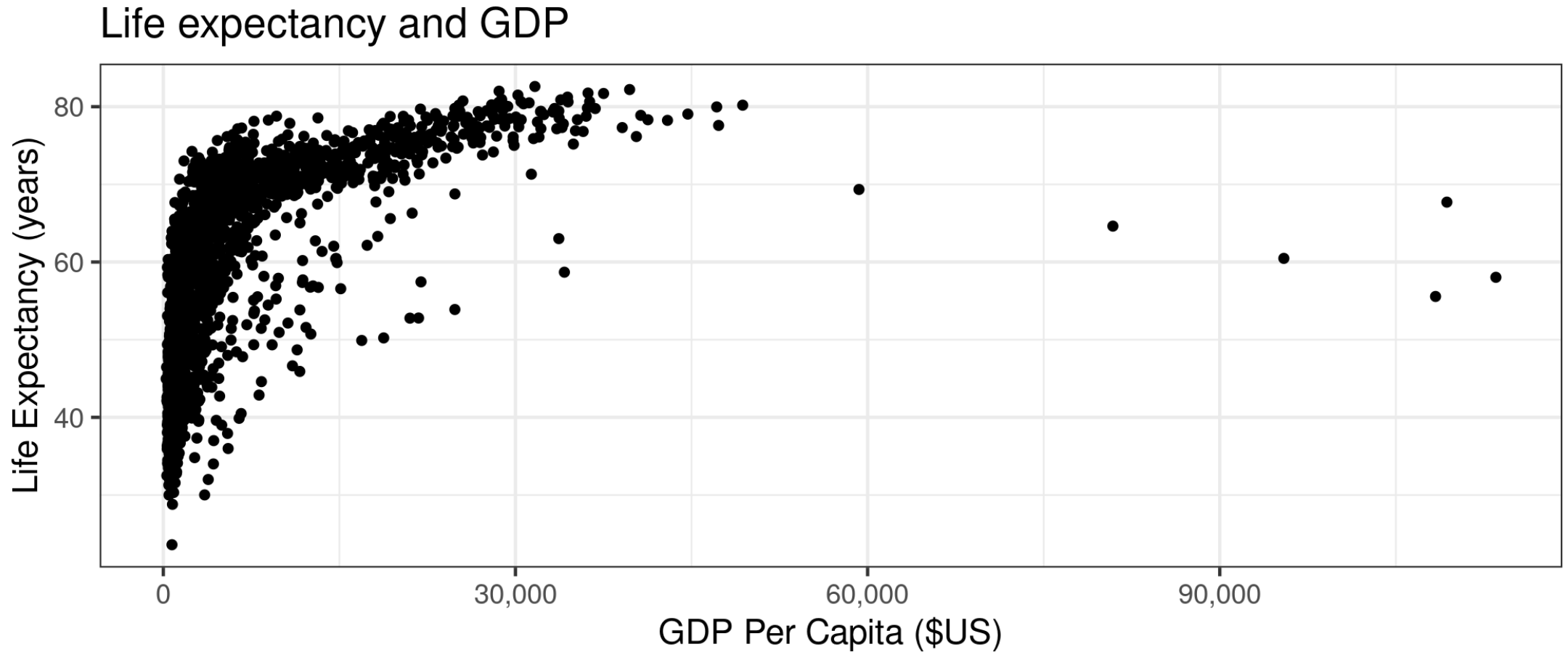
- Poverty reduction
- Technology development and innovation
- Technology diffusion and adoption
- Access to better services, including health care

Health improvements worldwide

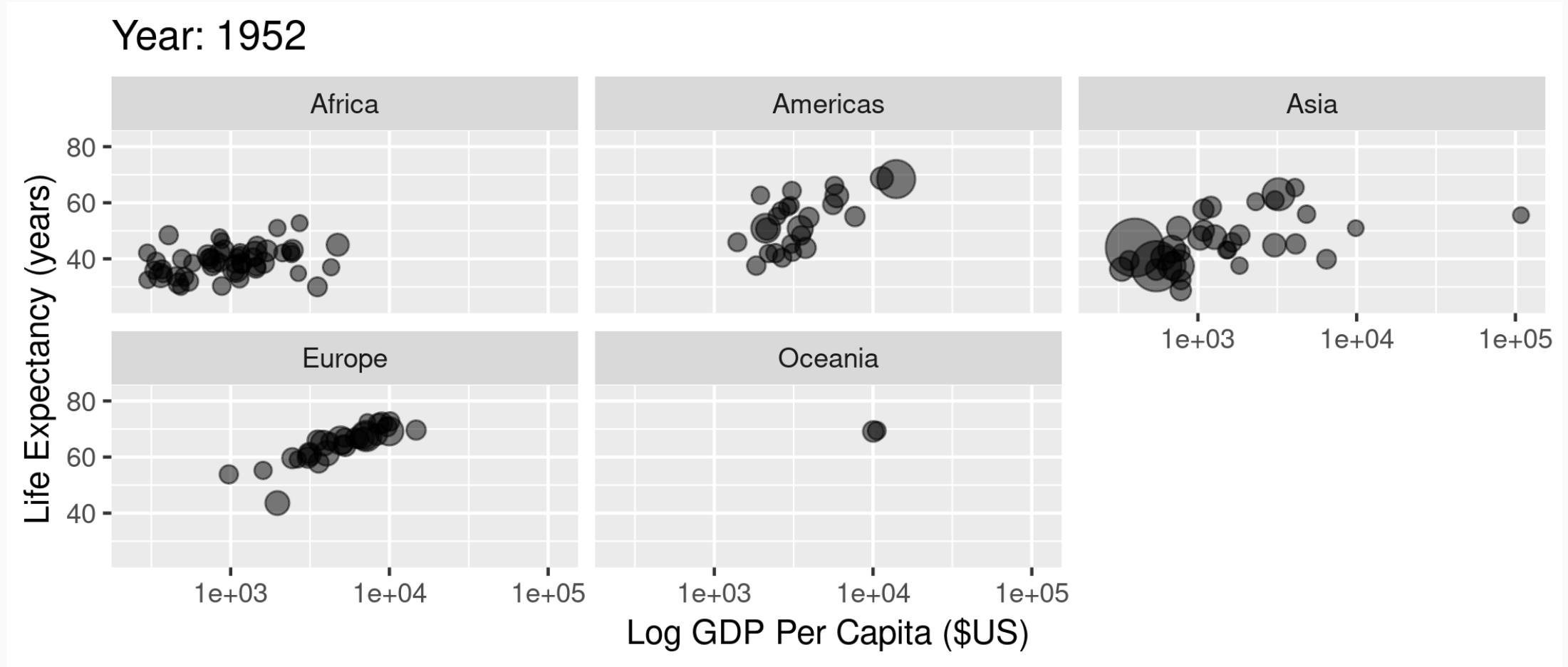
Median life expectancy across the world



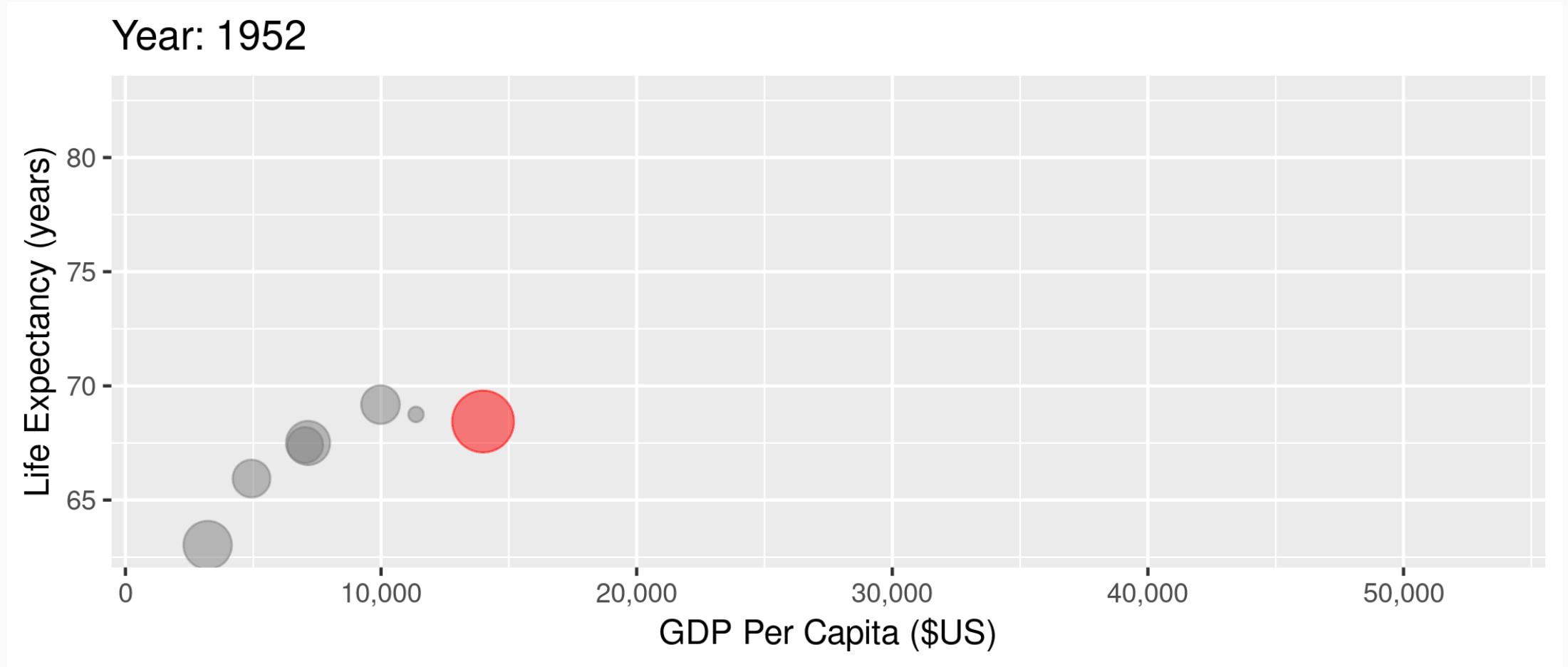
Health improvements related to economic growth



Health improvements related to economic growth

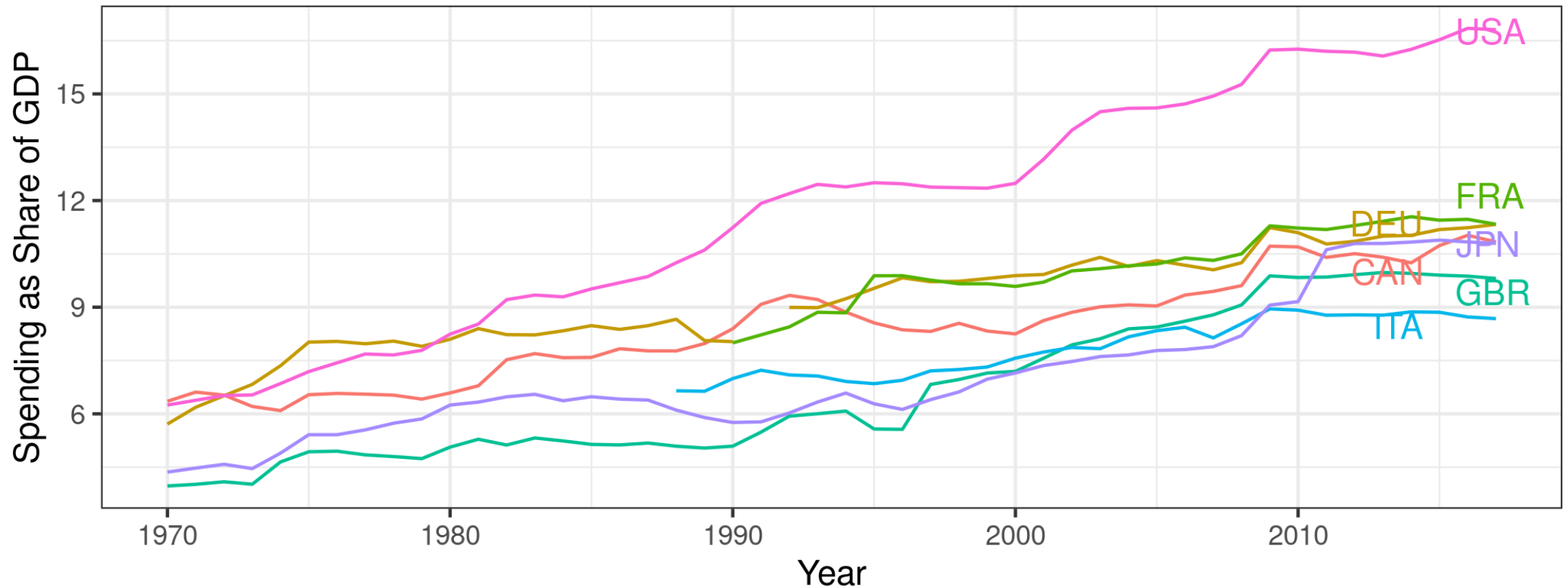


But the U.S. is unique

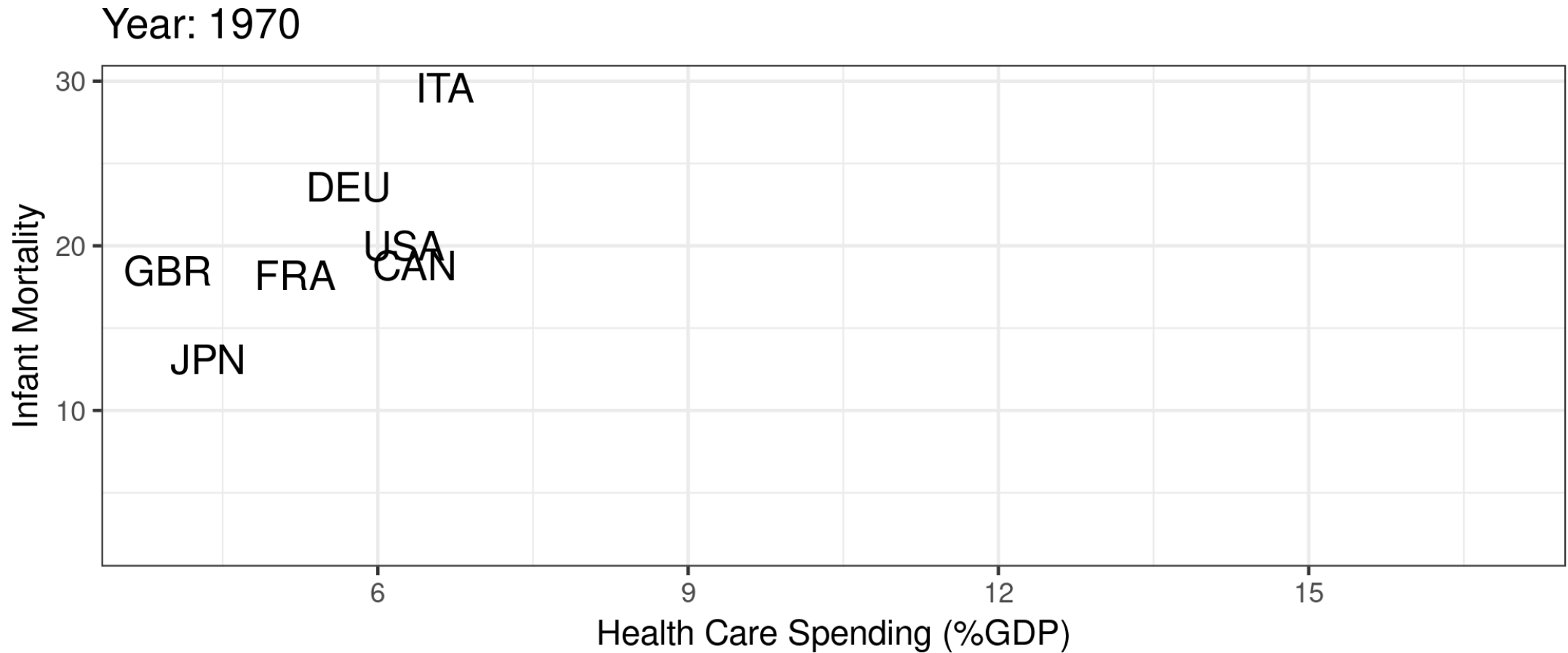


The U.S. has very high spending

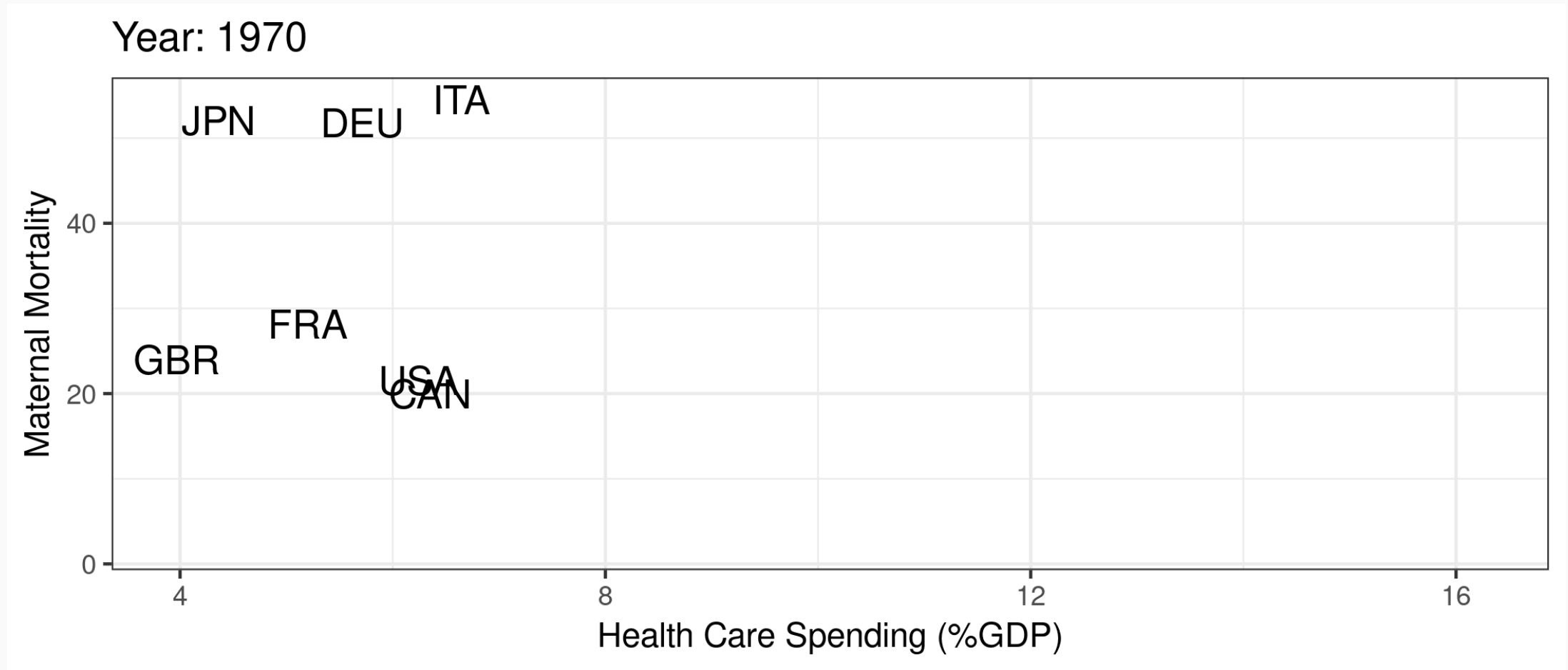
Health Care Spending over Time



And our spending doesn't pay off in some areas



And our spending doesn't pay off in some areas



U.S. Health Care is Confusing!

"Nobody knew health care could be so complicated"

-- Donald Trump

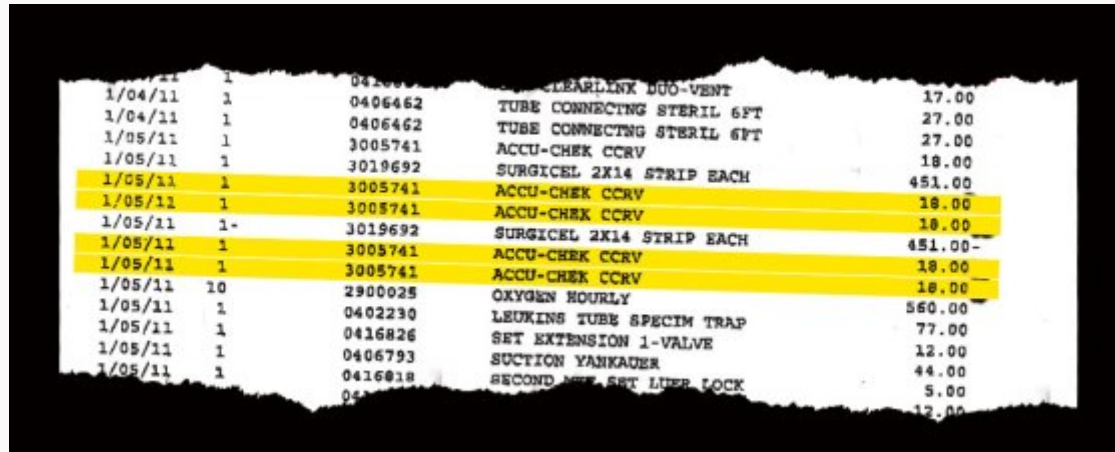
Fragmentation

A common criticism of U.S. health care is that it is extremely fragmented:

- different ways to get insurance
- mix of providers, organizational structures, and reliance on referrals
- separate billing (for the most part)

Complicated bills

Our fragmented system has led to a ridiculously complex and convoluted billing process



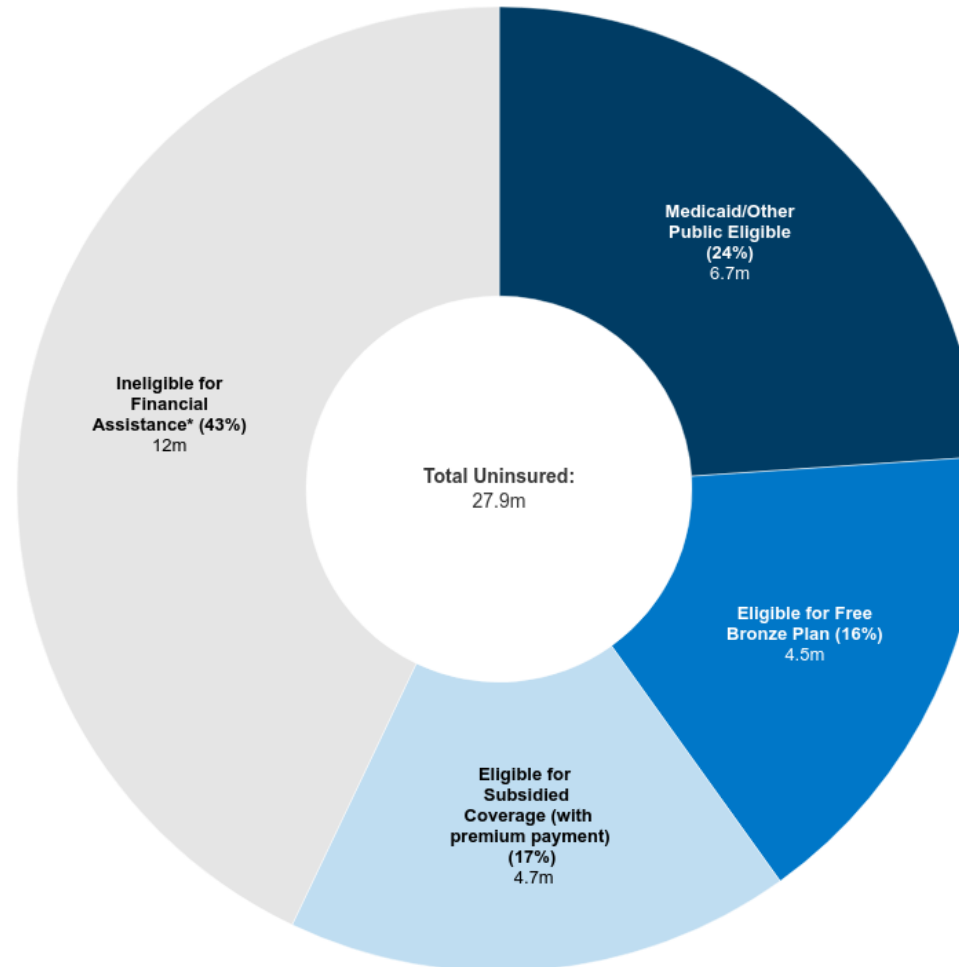
1/04/11	1	0416000	CLARILINK DDO-VENT	17.00
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1/05/11	1	0406462	TUBE CONNECTING STERIL 6FT	27.00
1/05/11	1	3005741	ACCU-CHEK CCRV	18.00
1/05/11	1	3019692	SURGICEL 2X14 STRIP EACH	451.00
1/05/11	1	3005741	ACCU-CHEK CCRV	18.00
1/05/11	1	3005741	ACCU-CHEK CCRV	18.00
1/05/11	1	3019692	SURGICEL 2X14 STRIP EACH	451.00
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1/05/11	1	3005741	ACCU-CHEK CCRV	18.00
1/05/11	10	2900025	OXYGEN HOURLY	560.00
1/05/11	1	0402230	LEUKINS TUBE SPECIM TRAP	77.00
1/05/11	1	0416826	SET EXTENSION 1-VALVE	12.00
1/05/11	1	0406793	SUCTION YANKAER	44.00
1/05/11	1	0416818	SECOND SET LUTER LOCK	5.00
		0416818		12.00

Brill, Steven. 2013. "Bitter Pill: Why Medical Bills are Killing Us." *Time Magazine*.

What does all this complexity mean?

1. Too many uninsured

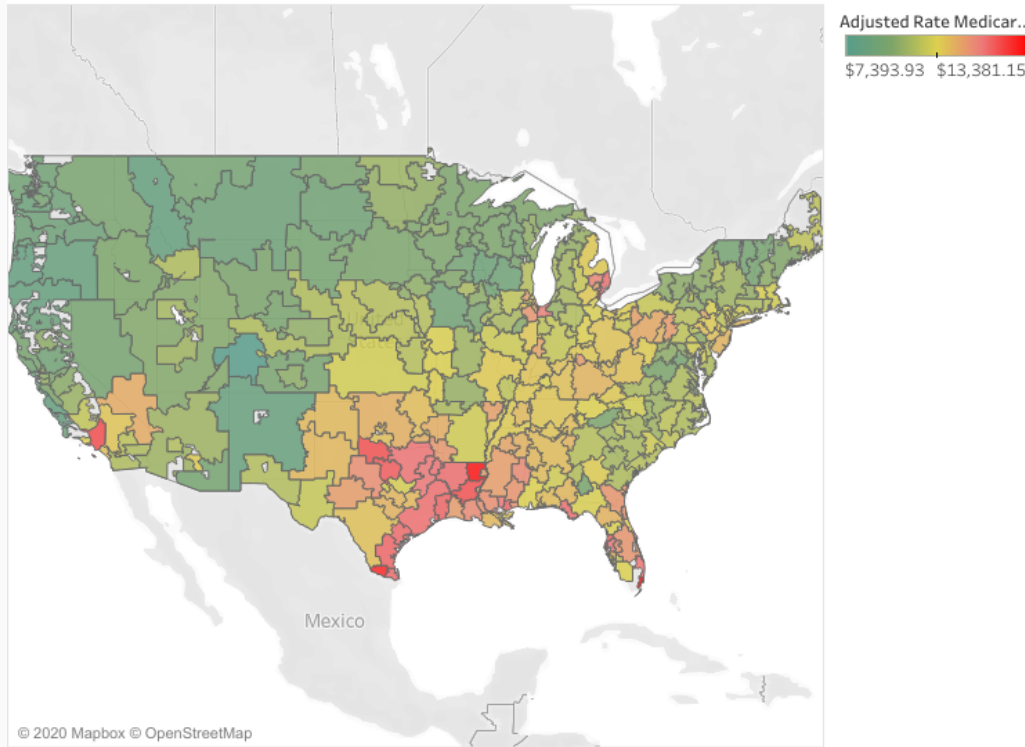
Distribution of Eligibility for ACA Health Coverage Among the Non-elderly Uninsured Before the Pandemic



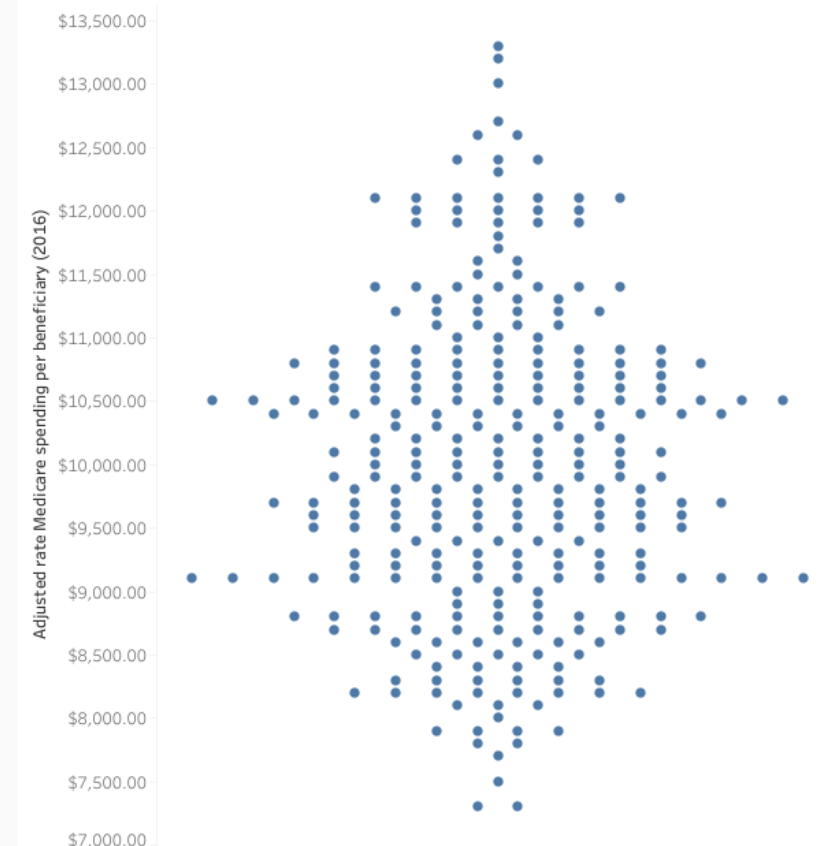
NOTE: *Ineligible for Financial Assistance includes people in the Medicaid Coverage Gap and those ineligible for tax credits due to income, ESI offer, or citizenship status.
SOURCE: KFF analysis based on 2019 Medicaid eligibility levels and 2018 American Community Survey.

2. Variation in health care delivery and spending

Map: Price-Adjusted Total Medicare Reimbursements per Enrollee (Parts A and B), by HRR (2016)
(Price, Age, Sex, and Race adjusted)

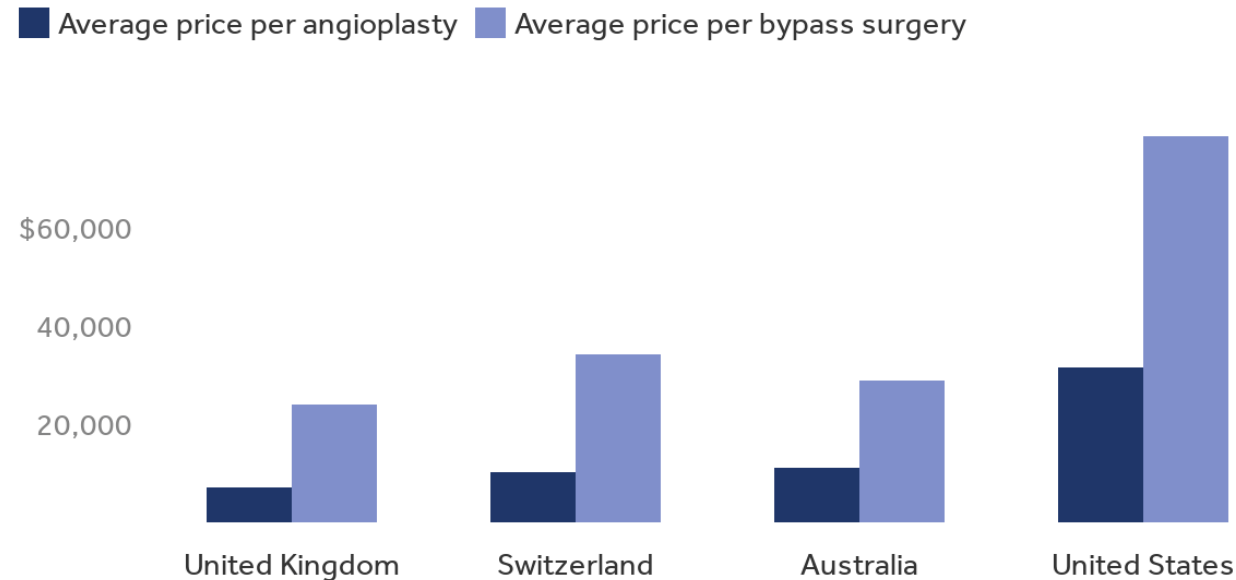


Distribution: Price-Adjusted Total Medicare Reimbursements per Enrollee (Parts A and B), by HRR (2016)
(Price, Age, Sex, and Race adjusted)



3. Really high prices

Average price of an Angioplasty, 2014; Average price of coronary bypass surgery, 2014



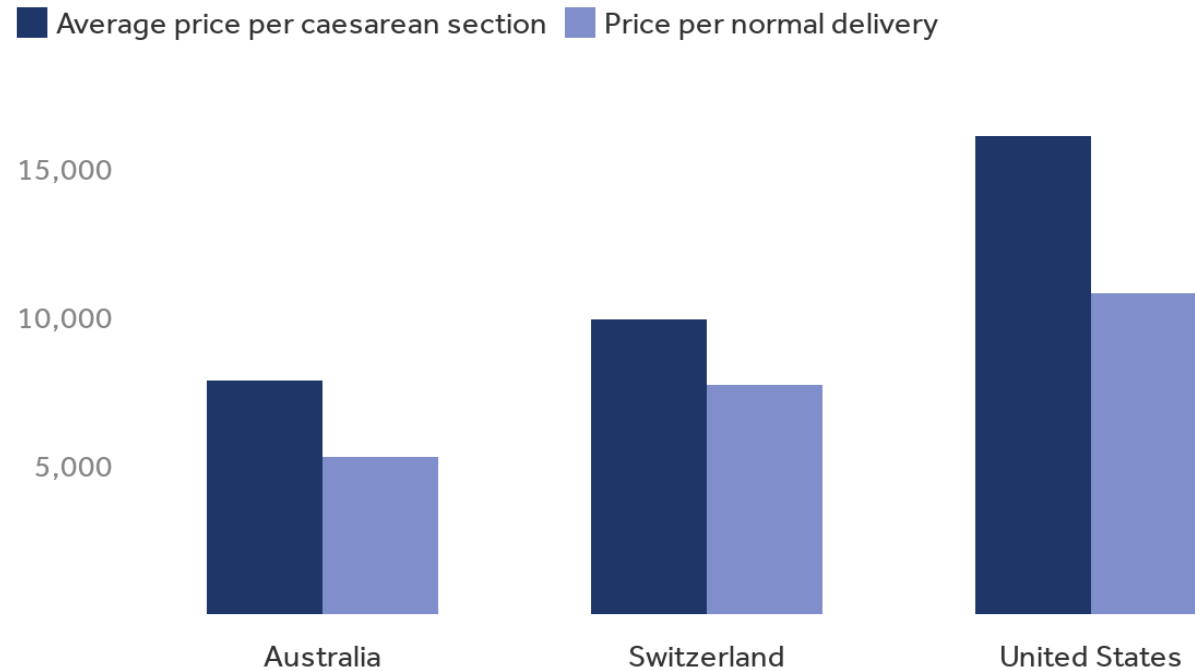
Note: Data for United States represents average cost in employer-sponsored plans. Data from Australia, Switzerland and the United Kingdom represent average private sector costs.

Source: International Federation of Health Plans (2015), "2015 Comparative Price Report, Variation in Medical and Hospital Prices by Country" (Accessed on January 30, 2018).

Peterson-KFF
Health System Tracker

3. Really high prices

Average price of caesarean section and of normal delivery, 2014



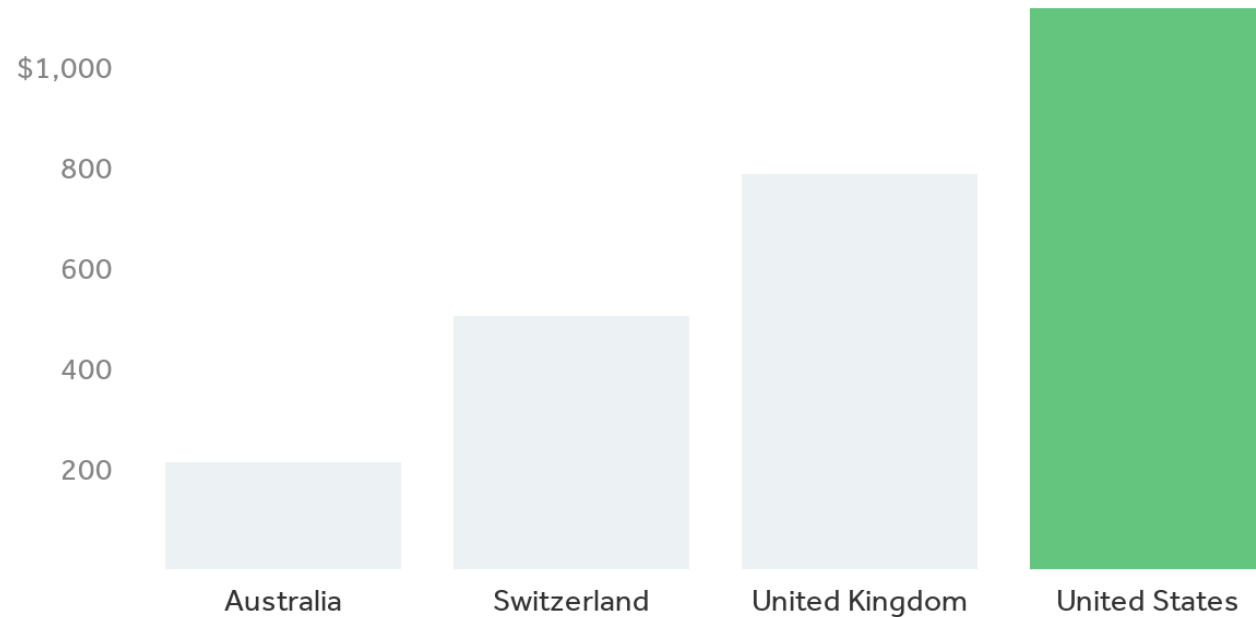
Note: Data for United States represents average cost in employer-sponsored plans. Data from Australia, Switzerland and the United Kingdom represent average private sector costs.

Source: International Federation of Health Plans (2015), "2015 Comparative Price Report, Variation in Medical and Hospital Prices by Country" (Accessed on January 30, 2018).

Peterson-KFF
Health System Tracker

3. Really high prices

Average price of an MRI, 2014



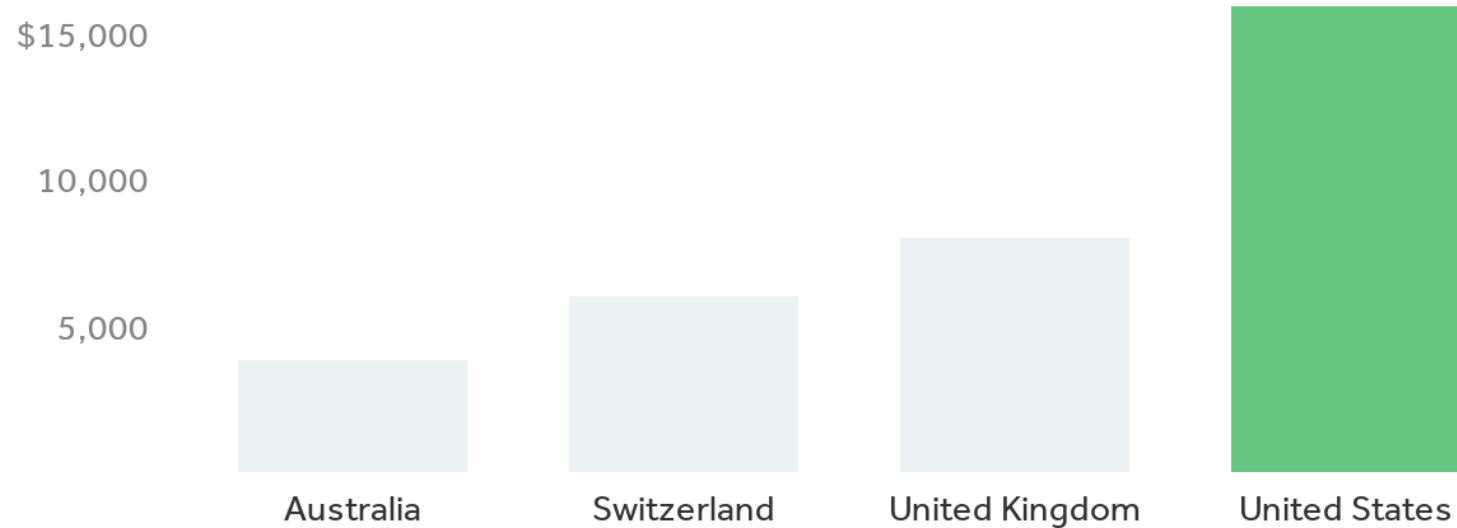
Note: Data for United States represents average cost in employer-sponsored plans. Data from Australia, Switzerland and the United Kingdom represent average private sector costs.

Source: Kaiser Family Foundation analysis of data from International Federation of Health Plans (2015), "2015 Comparative Price Report, Variation in Medical and Hospital Prices by Country"

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Health System Tracker

3. Really high prices

Average price of appendectomy, 2014



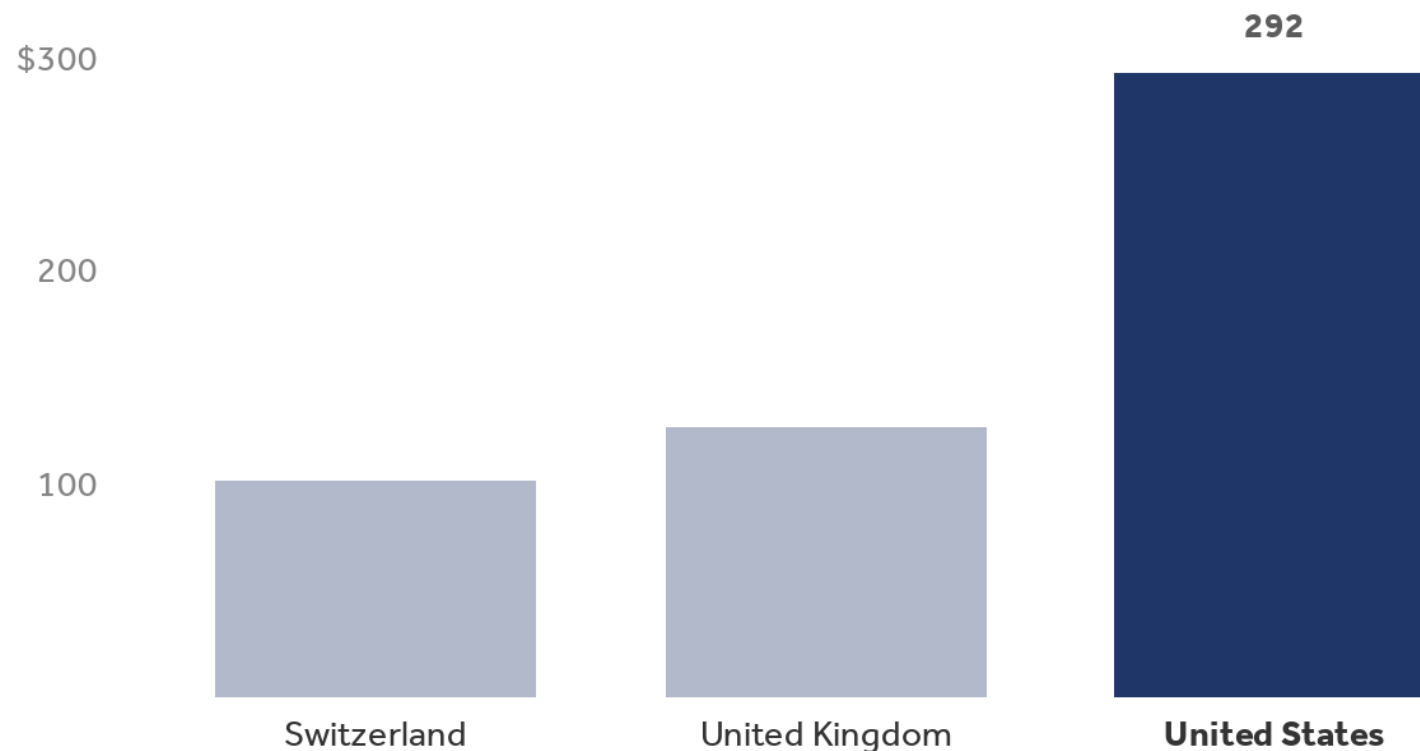
Note: Data for United States represents average cost in employer-sponsored plans. Data from Australia, Switzerland and the United Kingdom represent average private sector costs.

Source: Kaiser Family Foundation analysis of data from International Federation of Health Plans (2015), "2015 Comparative Price Report, Variation in Medical and Hospital Prices by Country"

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Health System Tracker

3. Really high prices

Average price Xarelto, 30 capsules, 20mg, 30 day supply, 2014



Source: International Federation of Health Plans 2015
Comparative Price Report

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Health System Tracker

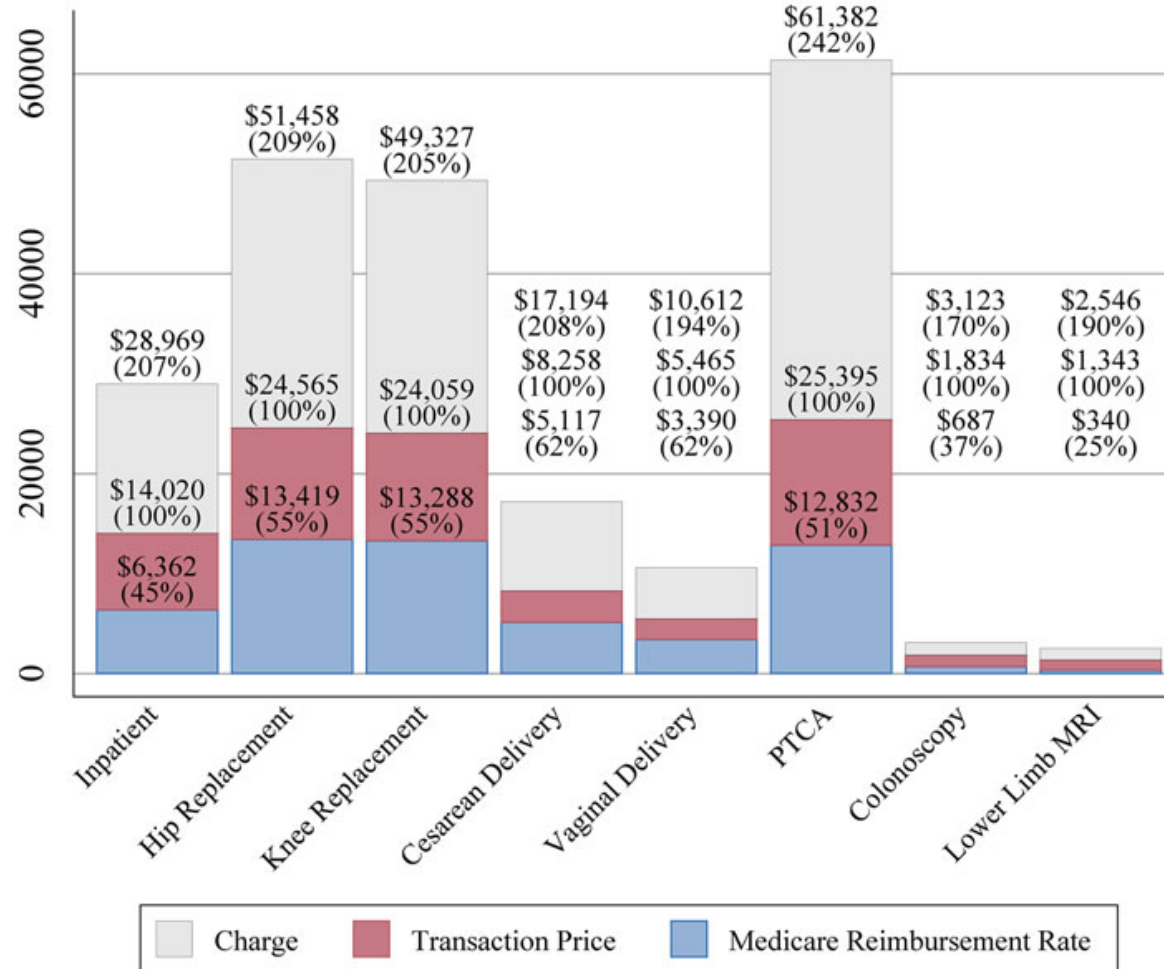
Why are prices so high?

How are prices generated?

- Negotiation with private insurers (bargaining problem)
- Set payment from Medicare and Medicaid
 - Medicaid managed care (80%)
 - Medicare Advantage (45%)
- Uninsured patients (charge amounts)

Price \neq charge \neq cost \neq patient out-of-pocket spending

Why does it matter?



What is a hospital price?

Not clear what exactly is negotiated...

Fee-for-service

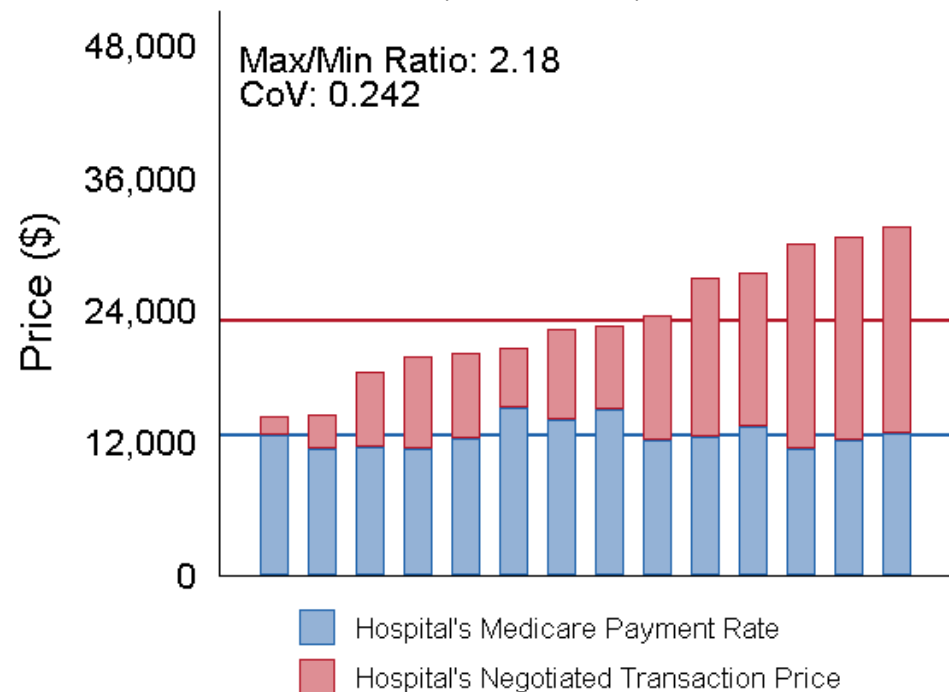
- price per procedure
- percentage of charges
- markup over Medicare rates

Capitation

- payment per patient
- pay-for-performance
- shared savings

Hospital prices in real life

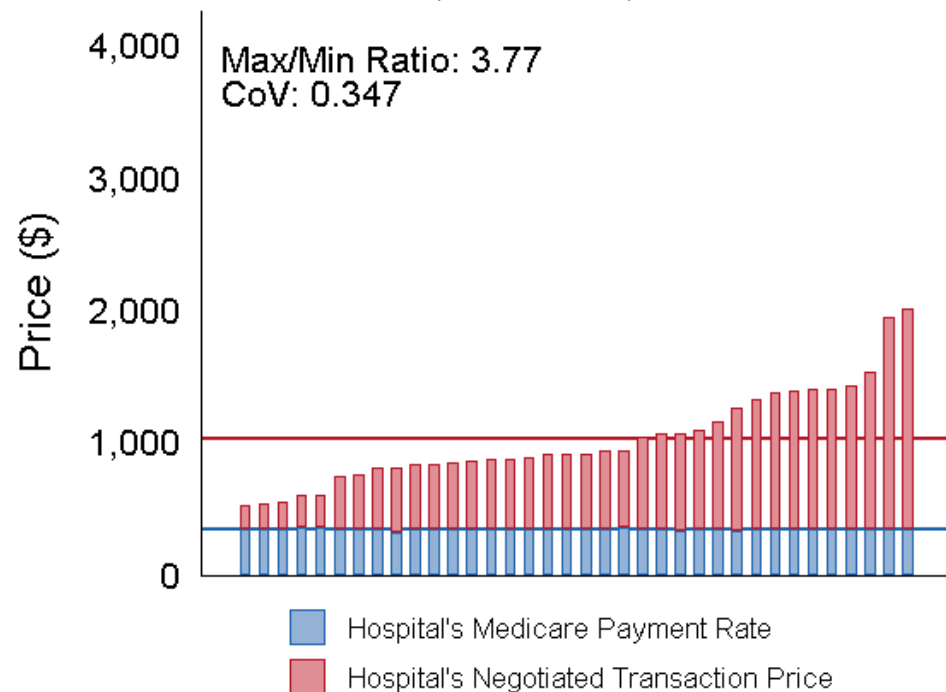
Hospital Prices for Hip Replacement
Atlanta, GA HRR, 2008-2011



Note: Each column captures a hospital's negotiated transaction price and Medicare reimbursement. Prices are averaged from 2008-2011 and presented in 2011 dollars. CoV captures the coefficient of variation of hospital negotiated transaction prices within the HRR. Max/Min captures the max/min ratio of hospital's negotiated transaction prices within the HRR. Horizontal lines indicate average rates and prices within the region.

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Hospital Prices for Lower Limb MRI
Atlanta, GA HRR, 2008-2011



Note: Each column captures a hospital's negotiated transaction price and Medicare reimbursement. Prices are averaged from 2008-2011 and presented in 2011 dollars. CoV captures the coefficient of variation of hospital negotiated transaction prices within the HRR. Max/Min captures the max/min ratio of hospital's negotiated transaction prices within the HRR. Horizontal lines indicate average rates and prices within the region.

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Where does economics fit in here?

Health care and economics (in general)

Lots of interesting economic issues in health care (not all unique to the U.S.):

1. Extremely heterogeneous products
2. Asymmetric information between patients and physicians
3. Unobservable quality (experience good)
4. Unpredictable need (inability to shop in many cases)
5. Distortion of incentives due to insurance
6. Adverse selection (asymmetric information between patients and insurers)

How is the U.S. unique?

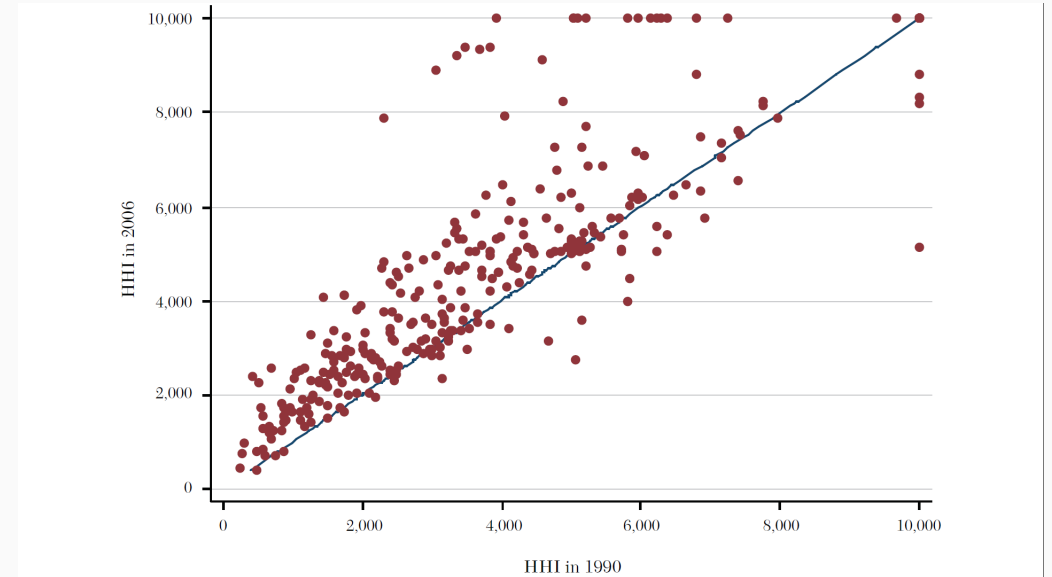
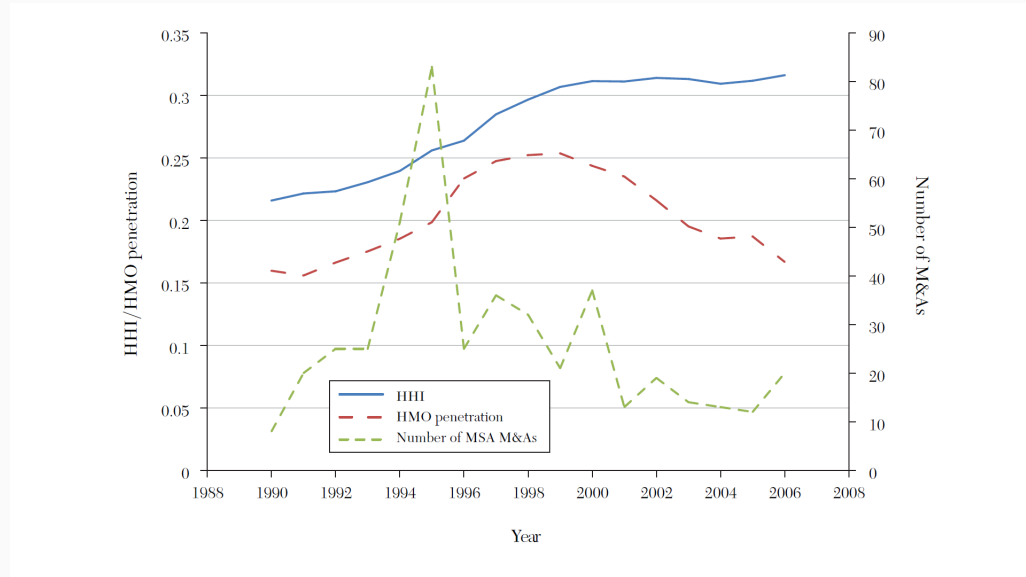
- These factors exist in other markets and in other countries, but...
- Health care is unique in the combination of these issues
- U.S. is unique in the extent of these issues in health care (policy problems)
- We have a market based system but without sufficient competition...

Trends in competitiveness

Almost any way you define it, hospital markets are more and more concentrated (less competitive) in recent decades.

- 1990: 65% of MSAs highly concentrated, 23% unconcentrated
- 2006: 77% highly concentrated, 11% unconcentrated

Hospital concentration over time



Source: Gaynor, Ho, and Town (2015). The Industrial Organization of Health Care Markets. Journal of Economic Literature.

Hospital concentration over time

- More data and [interactive report](#) from the Health Care Cost Institute.
- [Presentation](#) from the National Institute for Health Care Management

Why?

Historical perception of hospital competition as "wasteful" and assumption that more capacity means more (unnecessary) care:

- Limit public spending by limiting competition
- Prevalence of certificate of need (CON) laws

Effects of reduced competition

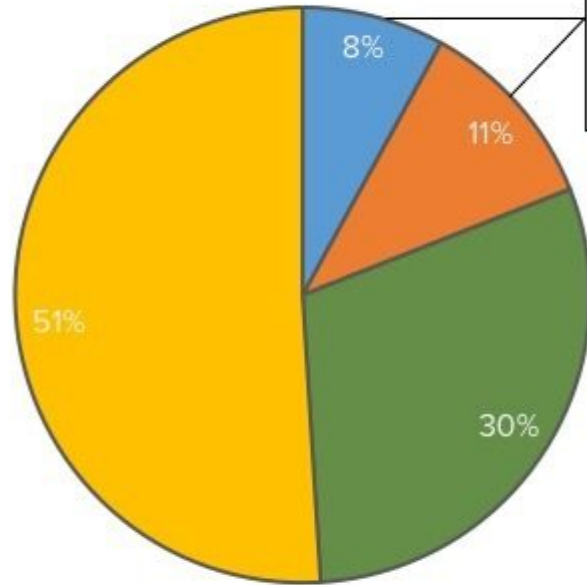
1. Higher prices
2. Lower quality, 2020 NEJM Paper
3. Maybe lower costs (but not passed on to lower prices)

Effects for both "in-market" and "out-of-market" mergers

Types of hospitals involved in mergers



Many Mergers and Acquisitions Are Between Large, Strong Partners



■ > \$1B ■ \$500M - \$1B ■ \$100M - \$500M ■ < \$100M

Annual Revenue of Seller or Smaller Partner in Transaction

In one fifth of the announced 2018 deals, the seller or smaller partner had **net annual revenues of more than \$500M**

Across all announced deals in 2018:

- ❑ the average revenue of the smaller partner was \$409 million, the highest figure in a decade of tracking
- ❑ only 20 percent of the deals involved a “financially distressed” partner

For full slide deck and all references see <https://www.nihcm.org/categories/hospital-consolidation-trends-impacts-outlook>.

Types of hospitals involved in mergers

- Ascension-Presence: Largest non-profit system in US adds 10 hospitals to existing 9 hospitals in Chicago
- Fairview-HealthEast: 11 hospital system becomes largest in Twin Cities area
- Hospital corporation of america (HCA) adds 4 hospitals to the 10 existing HCA hospitals in Houston
- Northwestern-Centegra: Forms 10 hospital system in Chicago
- Emory-DeKalb: Forms 10 hospital system in Atlanta
- Jefferson-Einstein: Forms 18 hospital system in Philadelphia area

Source: NIHCM Hospital Consolidation Trends

Different merger types

Essentially two types of mergers:

1. "Within-market"
2. "Out-of-market"

Within-market mergers

- Most well-understood merger type
- Established tools for examination in anti-trust
- Defining the market is still a contentious issue

Within-market mergers

- Listed previously (Emory-DeKalb, etc.)
- **Big** price effects
 - 20 to 40% in many studies
 - Up to 60% in some studies
 - Bigger increases the closer are the hospitals
 - Price increases spillover to other hospitals too
- Account for about 50% of all mergers since 2000

Out-of-market mergers

- Less understood
- No formal structure for analyzing in court
- These types of mergers are essentially permitted without risk of DOJ/FTC challenge

Out-of-market mergers

- Involve larger systems spanning different isolated markets
 - Advocate-Aurora: 27 hospital system in IL and WI
 - Baptist Memorial-Mississippi Baptist: 22 hospitals in TN, AR, and MS
 - UPMC-Pinnacle: 24 hospital system recently added 8 in central PA
 - Catholic Health Initiatives-Dignity Health: 142 hospitals in 21 states
 - HCA: 177 hospitals in 21 states
 - RCCH HealthCare Partners: 89 hospitals in 30 states, focusing on non-urban areas
- About 35% of all mergers are out-of-market but in same state, 15% out-of-state
- Smaller but meaningful price increases, 5 to 10%

1. Out of market mergers and common customers



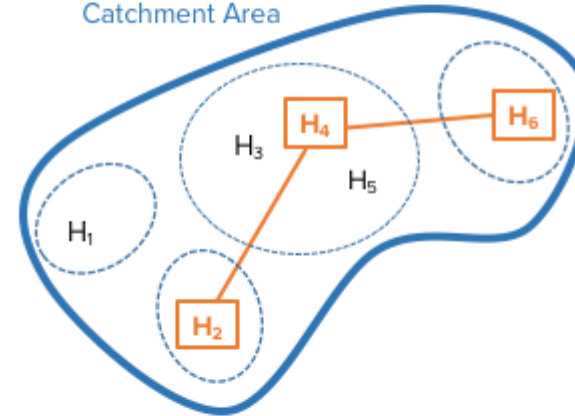
Broader Merger Geographies Require New Approaches by the FTC

These emerging conceptual frameworks have not yet been used in a federal merger challenge, despite the rapid pace of cross-market and multimarket hospital mergers.

Cross-Market Regional Mergers^a

- ❑ Employers often draw workers from numerous distinct markets within a broader geographic region.
- ❑ To sell insurance to these employers, insurers must build a hospital network covering all markets where their employees live.
- ❑ A merger that gives a hospital system a presence in several of these distinct markets also gives that system more market power – **even if it does not increase hospital concentration within any of the smaller markets.**
- ❑ By negotiating on an “all or nothing” basis, the system can force insurers to include all system members in the network and to pay them higher prices.

Employer's Workforce Catchment Area



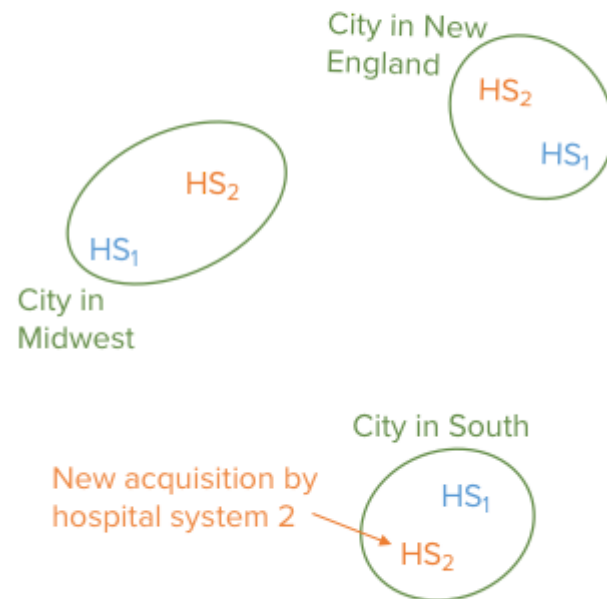
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2. Out of market mergers and multimarket contact



Broader Merger Geographies Require New Approaches by the FTC

These emerging conceptual frameworks have not yet been used in a federal merger challenge, despite the rapid pace of cross-market and multimarket hospital mergers.



Mergers Across Distant Markets^a

- ❑ As large hospital systems (HSs) expand their geographic reach nationally, they are increasingly competing against one another in multiple far-flung markets.
- ❑ The mutual forbearance hypothesis posits that such systems may avoid competing strenuously in any given common market so as to not set off vigorous competition with rival system members in other common markets.
- ❑ Consolidations that increase the extent of multimarket contact can lead to higher hospital prices – **even when the markets of the merging entities do not overlap at all and there is no increase in market power locally.**

For full slide deck and all references see <https://www.nihcm.org/categories/hospital-consolidation-trends-impacts-outlook>.

Where do we go from here?

1. Adopt sensible policies
2. Antitrust enforcement