
Hospital Consolidation:

The Biggest Driver of Health Costs That (Almost) Nobody Talks About

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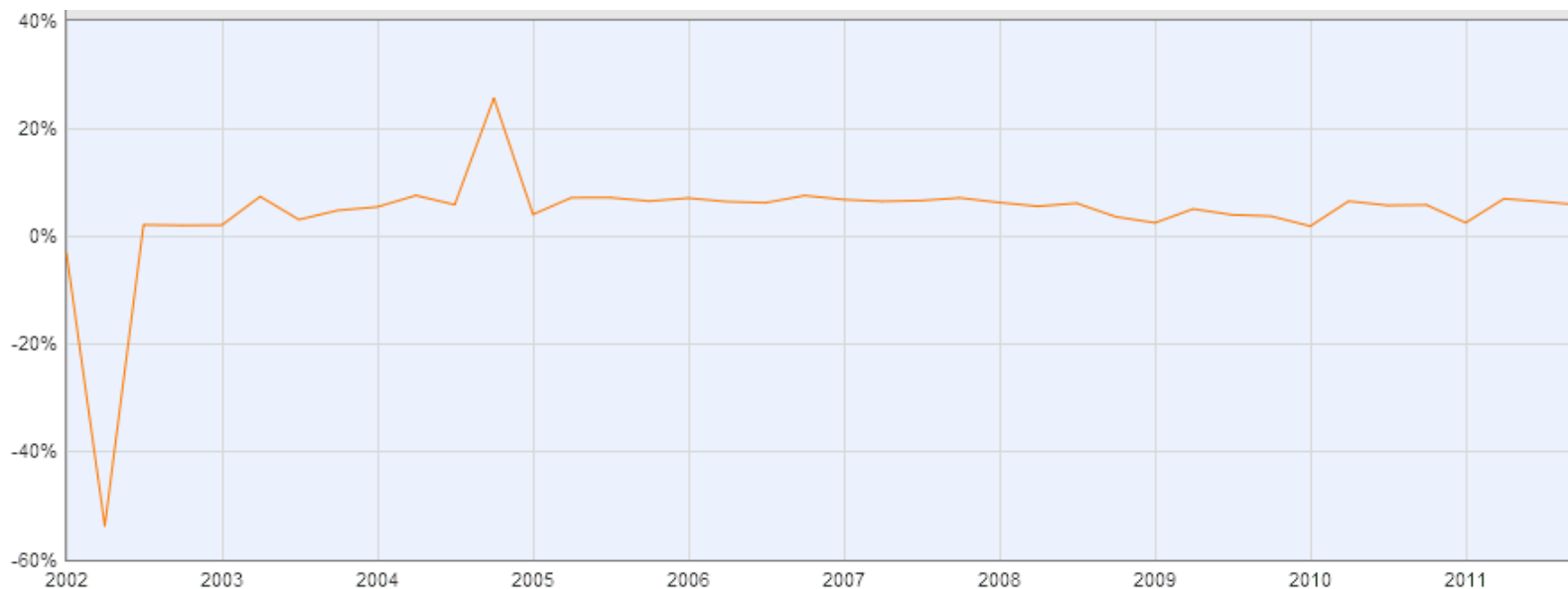
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The Asymmetry of Health Reform Politics

- In political circles, there is an overwhelming emphasis on reforming the way we **buy** health care
 - Inefficiencies of third-party payment
 - Medical-loss ratios and insurer profits
 - Single-payer approaches
 - Consumer-driven health care / health savings accounts
 - Rate reviews and controls
 - Premium support
 - Fee-for-service
- There is comparatively little emphasis on reforming how we **sell** health care

Insurer Profits Don't Drive Health Costs

- For-profit insurer margins have remained largely constant over time
 - Aetna 10-year average: 5.79% profit margin

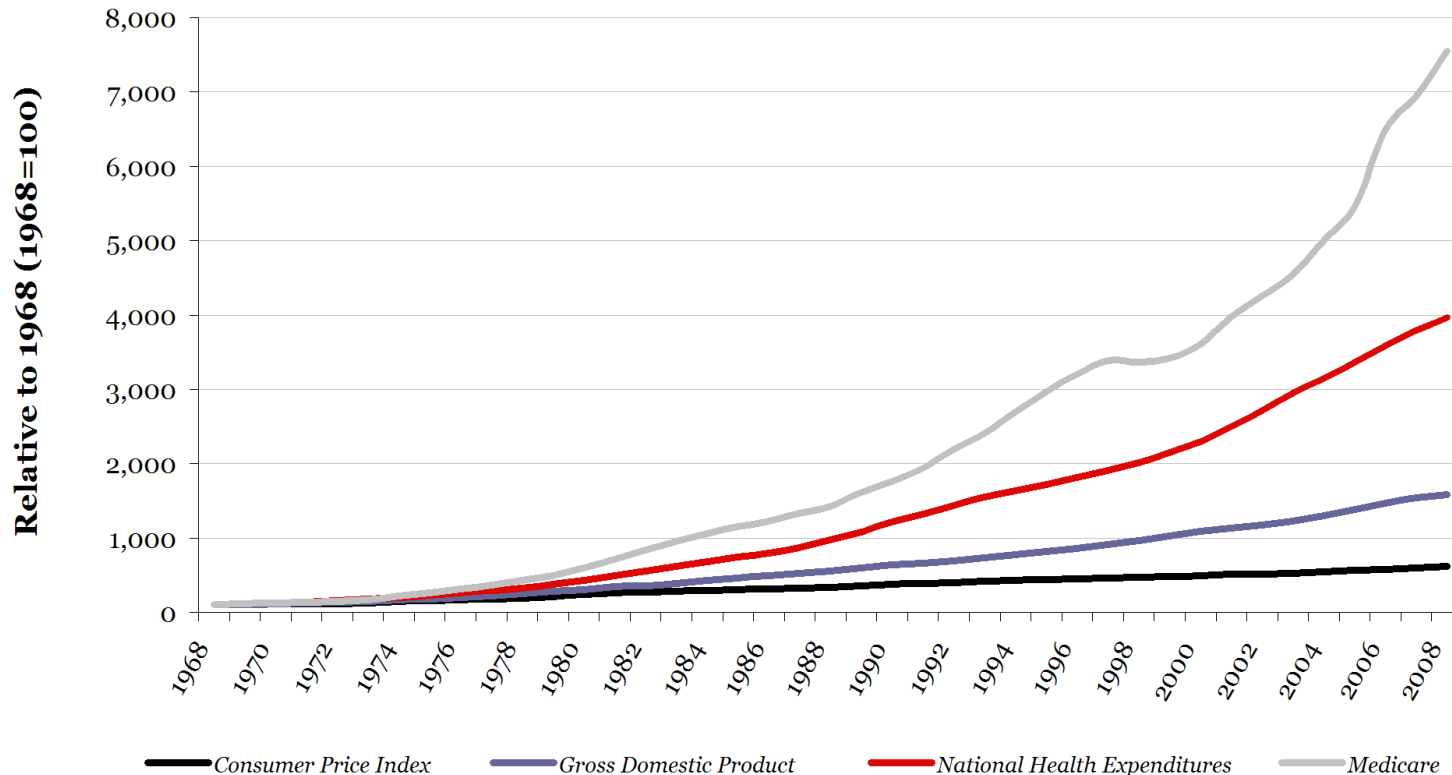


Source: http://ycharts.com/companies/AET/profit_margin#zoom=10

And Yet, Health Spending Keeps Going Up

Source: Congressional Budget Office

Growth in National Health Expenditures, 1968-2008



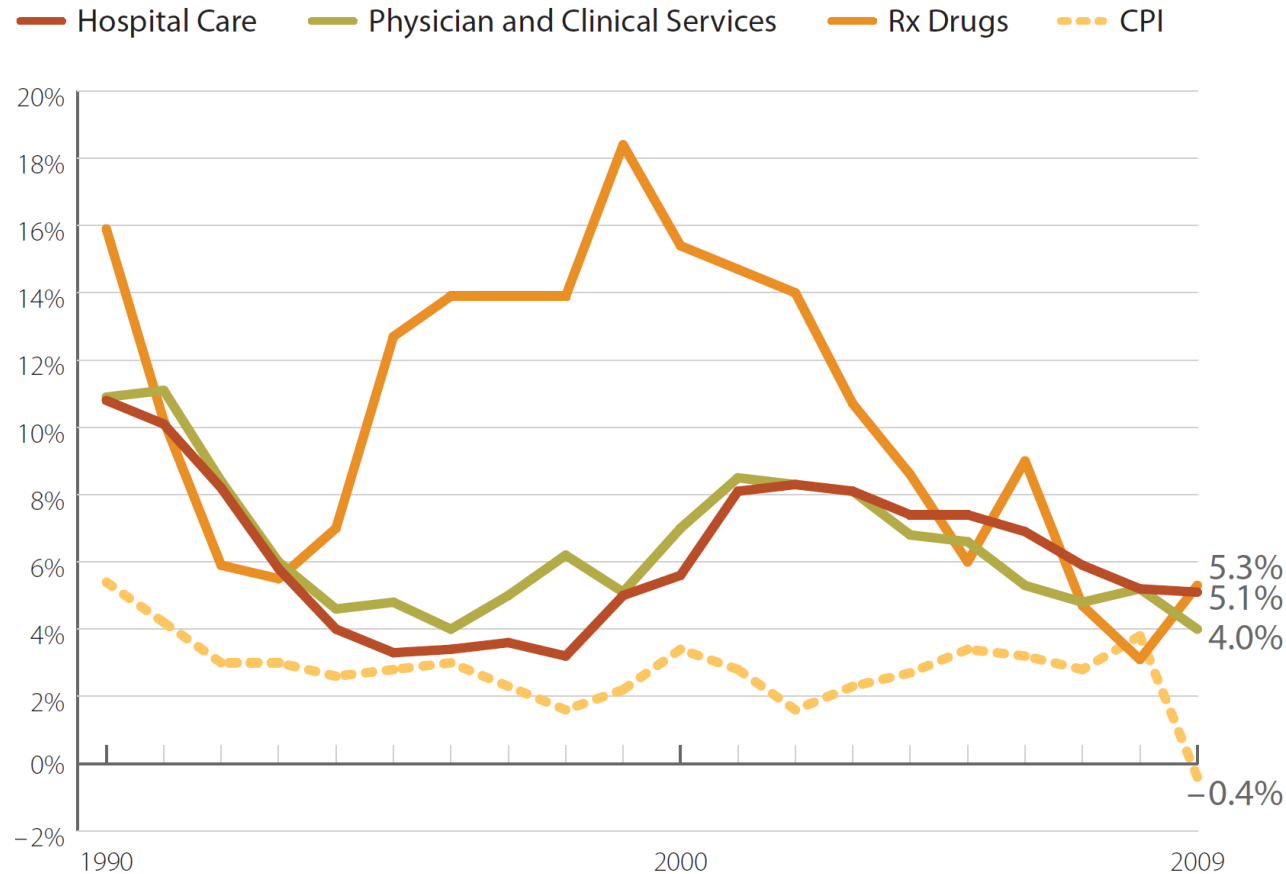
Hospital Spending is Still the Key Driver

Source: California HealthCare Foundation 2011 Almanac

	SPENDING LEVELS (in billions)			DISTRIBUTION			GROWTH
	1989	2008	2009	1989	2008	2009	2009/2008
National Health Expenditures	\$647	\$2,391	\$2,486	100%	100%	100%	4.0%
Hospital Care	\$226	\$722	\$759	35%	30%	31%	5.1%
Physician and Clinical Services	\$143	\$487	\$506	22%	20%	20%	4.0%
Dental and Other Care	\$66	\$279	\$292	10%	12%	12%	4.5%
Nursing Care Facilities	\$39	\$133	\$137	6%	6%	6%	3.1%
Home Health Care	\$10	\$62	\$68	2%	3%	3%	10.0%
Prescription Drugs	\$35	\$237	\$250	5%	10%	10%	5.3%
Other Medical Products	\$33	\$77	\$78	5%	3%	3%	0.8%
Administration	\$34	\$164	\$163	5%	7%	7%	-0.6%
Public Health Activities	\$18	\$73	\$77	3%	3%	3%	5.9%
Investment	\$44	\$157	\$156	7%	7%	6%	-0.6%

Hospital Spending Growth in Context

Source: California HealthCare Foundation 2011 Almanac



- Declining growth in early 1990s (red line)
- Increased growth in late 1990s-early 2000s
- Declining growth in late 2000s

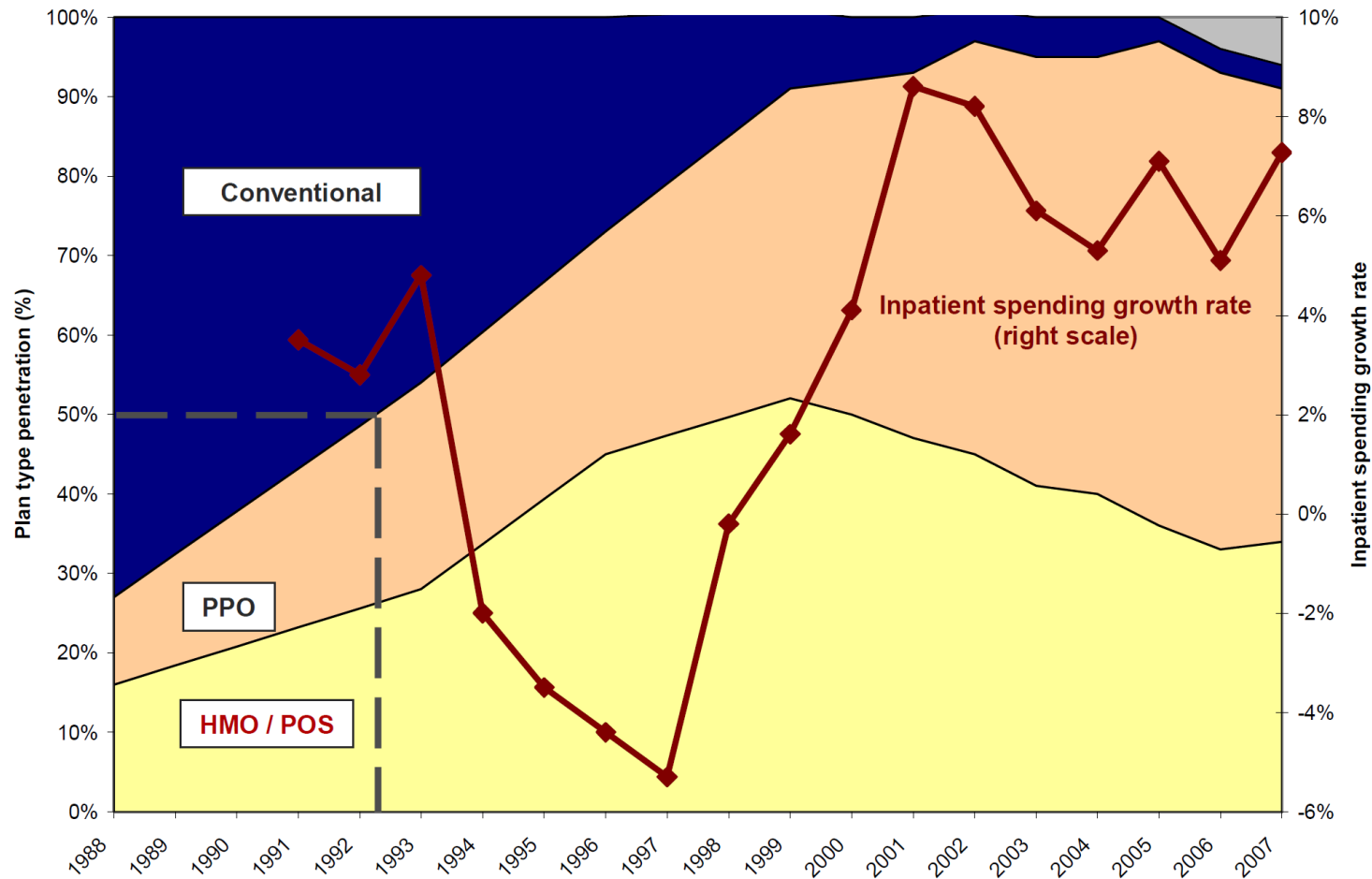
Brief History of Hospital Spending Growth

Source: Adapted from Capps, 2009

- **Late 1980s to early 1990s: rapid growth**
 - High spending growth, 8-10% overall (4% inpatient)
- **Early 1990s: declining growth**
 - Dramatic increase in managed care penetration
 - Shorter lengths of stay; more outpatient utilization
- **Mid-1990s: slow growth**
 - Approx. 3-4% per year overall; -2% to -5% inpatient only
- **Mid-to-late 1990s: increasing growth**
 - Hospital merger wave
- **Late 1990s to 2007: rapid growth**
 - Approx. 7% overall; 6-8% inpatient
- **2007 to present: declining growth**
 - Lower utilization; reductions in government reimbursements

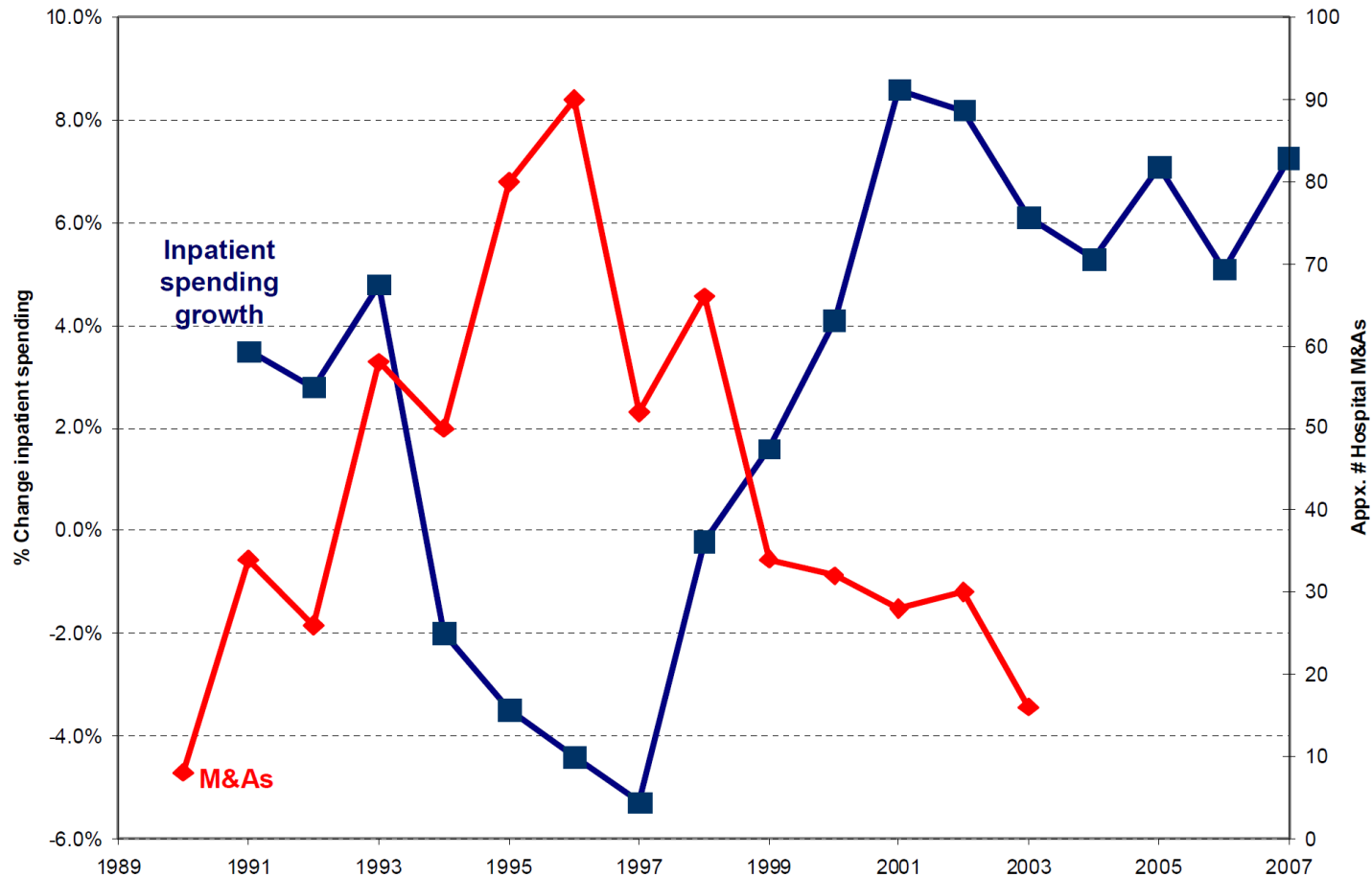
Managed Care Controlled Costs, For a Time

Source: Capps 2009; from Claxton et al. 2007, Strunk et al. 2002, Ginsburg et al. 2006, CMS NHE data



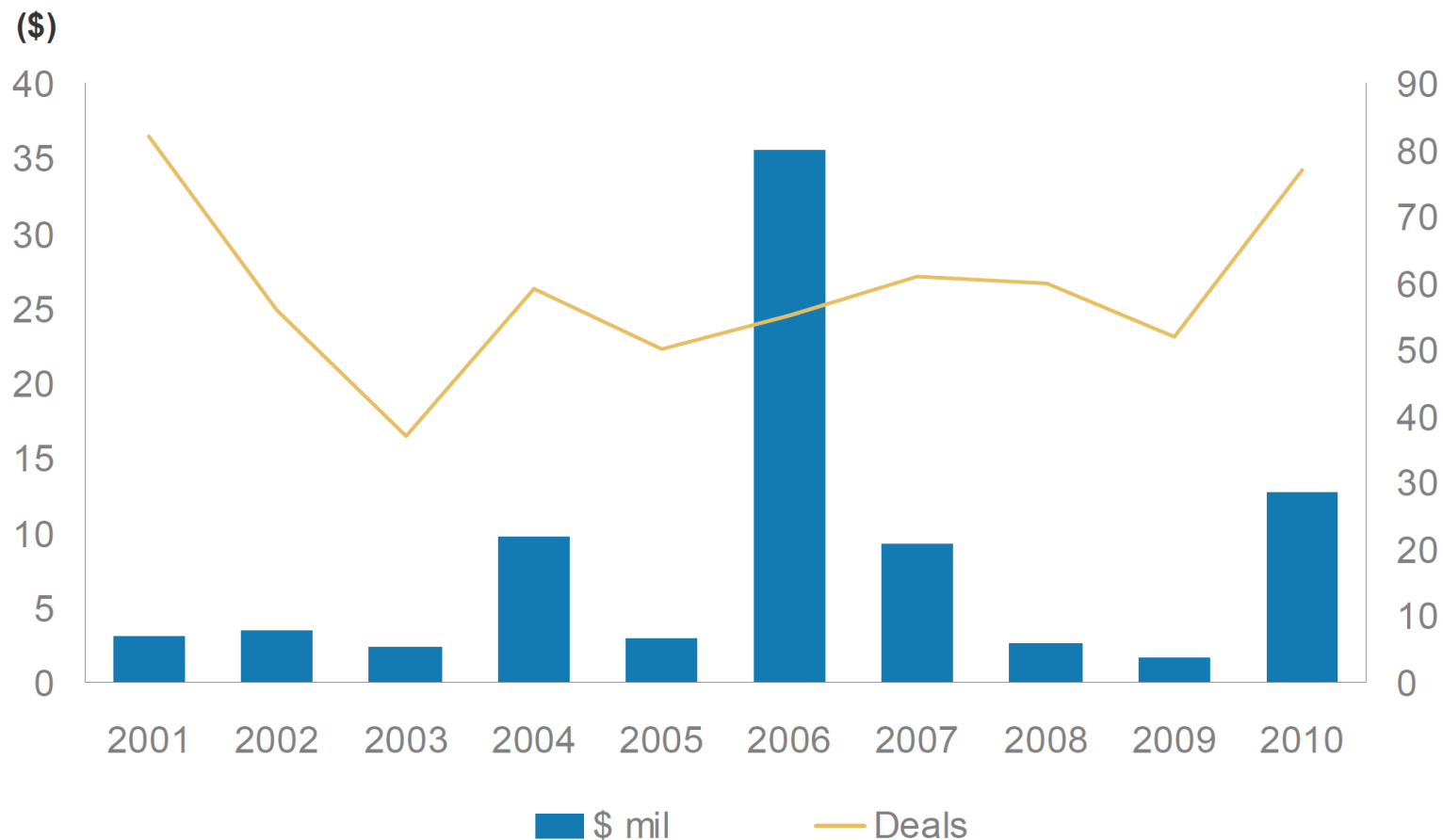
Hospital M&A is a Response to Low Growth

Source: Capps 2009; from Strunk et al. 2002, Ginsburg et al. 2006, CMS NHE data, Williams et al. 2006



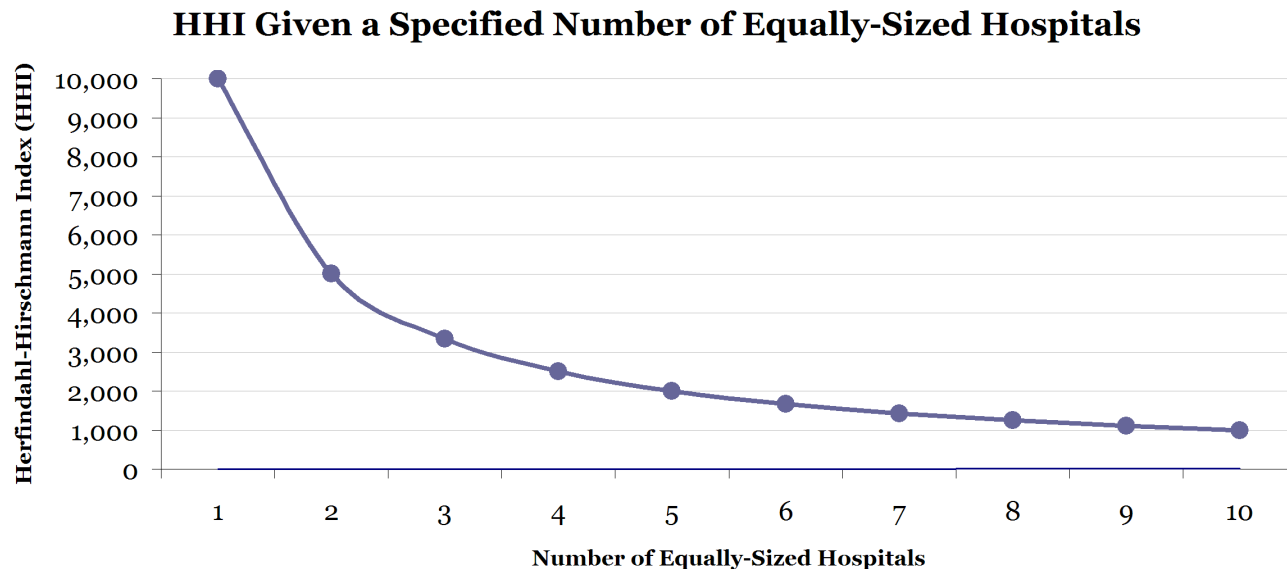
Hospital Mergers Have Rebounded

Source: Morgan Stanley and Irving Levin Associates, 2011



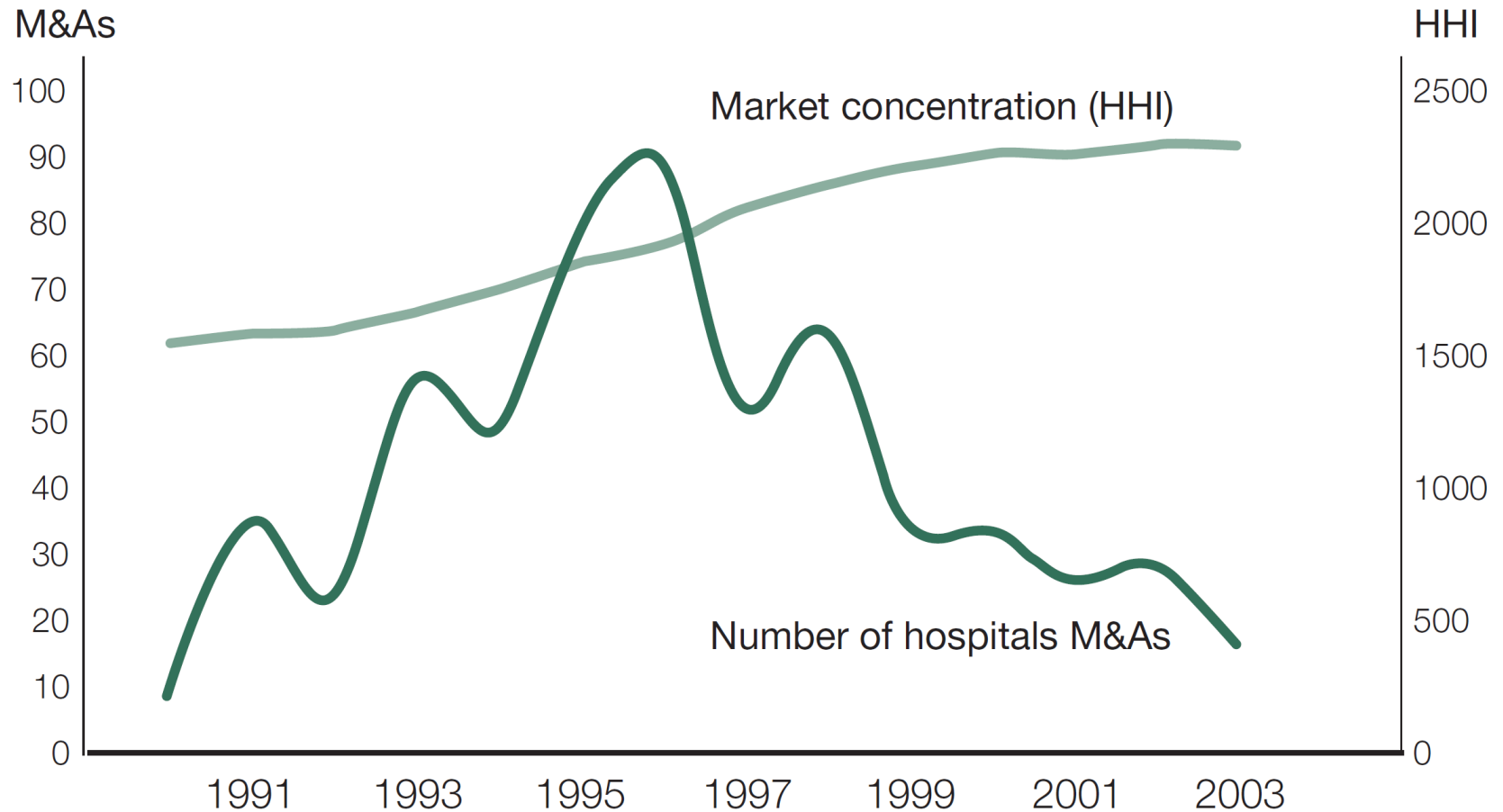
Measuring Hospital Concentration with HHI

- HHI is the favored method for measuring market concentration
 - Sum of the squares of market share percentages
 - E.g., two hospitals each with 50% share = $50^2 + 50^2 = 5,000$
 - DOJ/FTC consider markets with $HHI > 1,800$ “highly concentrated”
 - *But they use a much higher threshold (~5,000) for hospital mergers*



Hospital Concentration Greatly Increased

Source: Vogt and Town, 2006; American Hospital Association



How Much Do Hospital Mergers Hike Costs?

- Structure-Conduct-Performance (SCP) literature is mixed, and suffers from methodological issues
 - SCP studies don't analyze actual mergers, but correlate HHI changes to price increases
 - Estimated increase of 5% from HHI increase of 800
- Vogt and Town 2006:
 - “The SCP methodology requires assessment of several difficult-to-measure variables, including price of services, market structure and factors that affect hospital costs. Because researchers using this approach exercise wide latitude in how they define and measure those variables, inconsistencies and even inaccuracies can creep into the findings...even well conducted SCP studies have significant shortcomings and tend to underestimate the effect of consolidation on prices.”

SCP Studies Have Inconsistent Controls

- SCP studies require numerous assumptions

Measure	Weaker approach	Stronger approach
Price	<ul style="list-style-type: none">• Charges• Discounts from charges• Adjusted charges	Transaction prices with controls for: <ul style="list-style-type: none">• Patient conditions and severity• Insurance type
Definition of the market	<ul style="list-style-type: none">• MSAs• Counties	Hospital-specific definition: <ul style="list-style-type: none">• Fixed radius• Patient flows
Controls for marginal costs	No or poorly designed controls for marginal costs	Controls for marginal costs include: <ul style="list-style-type: none">• Wages• Scale of operations• Hospital teaching status• Hospital ownership status

Source: Vogt and Town, 2006

SCP Studies Have Yielded Mixed Results

Study	Data			Price		Measurement strengths
	Year	Place	Services	Measure	Merger effect	
Noether (43)	1977-78	U.S.	Various diagnoses	Charges	-1%	Controls for marginal costs
Staten, Umbeck and Dunkelberg (45)	1983	IN	All inpatient	Discounts from charges	+2%	
Melnick et al. (41)	1987	CA	All inpatient	Transaction price	+2%	Price measure, market definition, controls for marginal cost
Dranove, Shanley and White (29)	1988	CA	Hospital cost centers	Adjusted charges	+5%	
Dranove and Ludwick (27)	1989	CA	10 common procedures	Adjusted charges	+17%	Controls for marginal cost
Lynk (38)	1989	CA	10 common procedures	Adjusted charges	-1%	Controls for marginal cost
Brooks, Dor and Wong (18)	1988-92	U.S.	Appendectomy	Transaction price	+2%	Price measure
Simpson and Shin (44)	1993	CA	All discharges	Net revenue per discharge	+10%	Controls for marginal cost
Keeler, Melnick and Zwanziger (36)	1994	CA	10 common procedures	Adjusted charges	+6%	Market definition, controls for marginal cost
Lynk and Neumann (39)	1995	MI	All inpatient	Transaction price	-3%	Price measure
Dor, Grossman and Koroukian (25)	1995-96	U.S.	Heart bypass	Transaction price	+2%	Price measure
Dor, Koroukian and Grossman (26)	1995-96	U.S.	Angioplasty	Transaction price	+3%	Price measure
Capps and Dranove (19)	1997-01	Various	All inpatient	Transaction price	+4%	Price measure, market definition

* The merger effect is the effect on price predicted by the study for a consolidation from five equally sized hospitals to four hospitals in the market, amounting to an increase in the HHI from 2,000 to 2,800.

Source: Vogt and Town, 2006

Event Studies Use Superior Methods

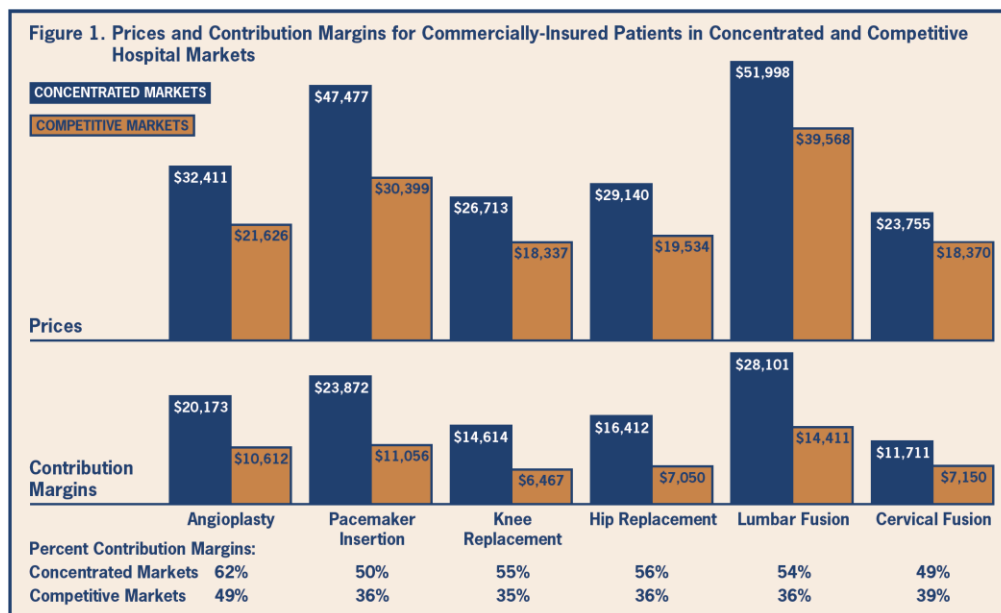
- Event studies do a better job of controlling for how costs would have increased if a merger didn't happen
- Dafny (2006) looked at price increases by *rivals* of merged hospitals in a specific market
 - Between 1989 and 1996, a rival's merger resulted in an average **40% increase in price by 1997** for neighboring hospitals within seven miles
 - Price increase is greater for hospitals that are closer together
 - Failing to instrument for rivals' mergers produces a statistically insignificant estimate of <2%

Other Event Studies

- Vita and Sacher (2001)
 - Analyzed a merger of two hospitals in Santa Cruz, CA
 - Prices at merged hospital rose 23%, 17% at rival
- Krishnan (2001)
 - Mergers among 22 OH and 15 CA hospitals
 - Compared mergers with HHI increases $>2,000$ to those <250
 - Prices rose 10% in $>2,000$ group vs. <250 group
- Capps and Dranove (2003)
 - Used transaction prices from a PPO to analyze 12 hospitals involved in consolidation from 1997-2001
 - Large price hikes vs. controls; 66% in one instance

Concentration Increases Hospital Profits

- Robinson (2011) compared prices for procedures in consolidated vs. competitive hospital markets
 - Procedures cost 44% more in consolidated markets
 - Nearly all profit: margins in consolidated markets 41% higher



Mergers Don't Measurably Increase Quality

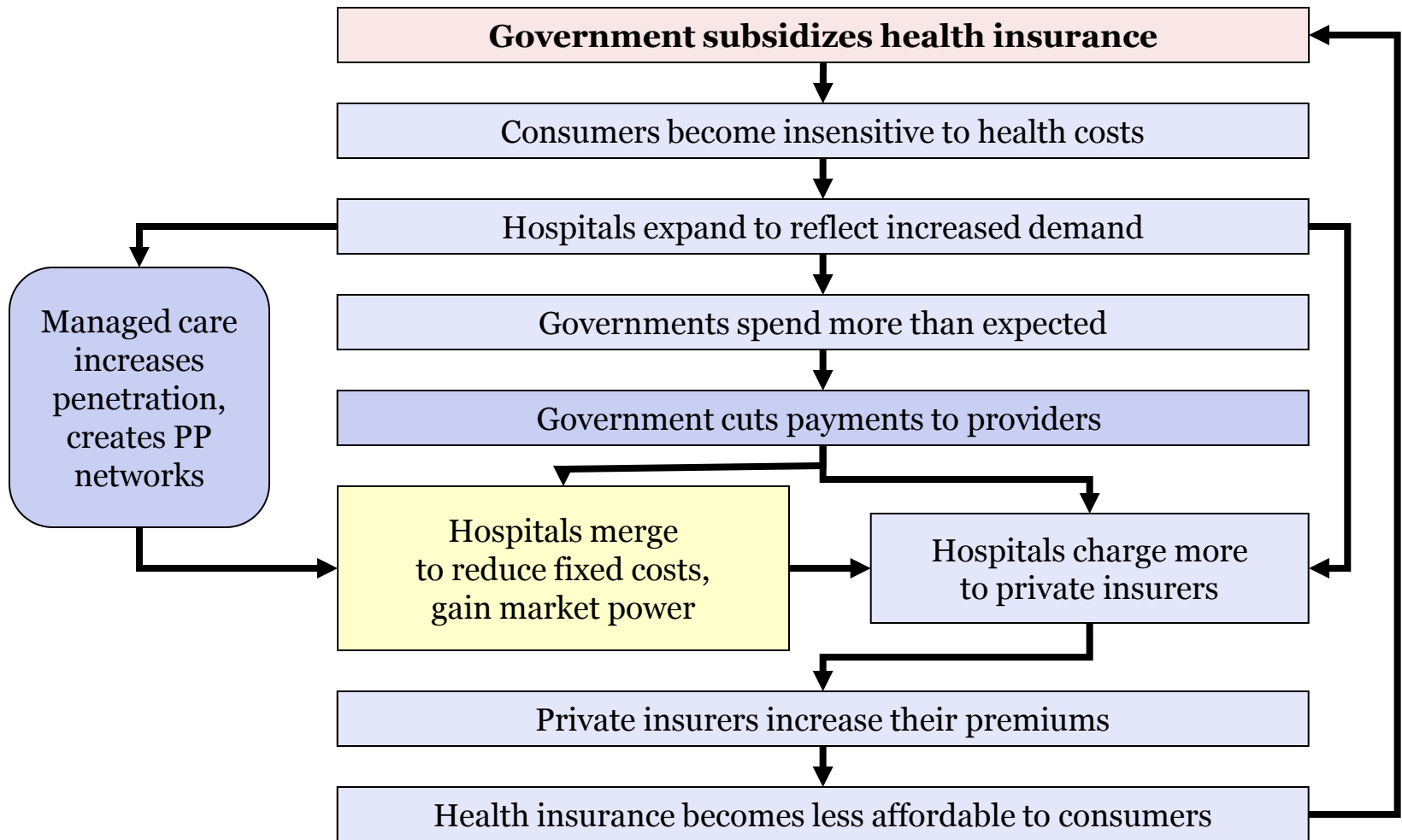
Source: Vogt and Town, 2006

Author	Geographic scope	Patients	Type of data analyzed	Quality measure	Effect of increasing concentration on quality
Shortell et al. (64)	Multiple states	All	Cross-section	Mortality for 16 conditions/procedures aggregated	No effect
Hamilton and Ho (58)	CA	All	Mergers	Newborn 48 hour discharge rate, AMI, stroke mortality	No effect
Kessler and McClellan (57)	U.S.	Medicare	Longitudinal	AMI mortality	Decreases
Mukamel et al. (59)	U.S.	Medicare	Cross-section	All cause, AMI, CHF, pneumonia and stroke mortality	No effect
Sari (62)	U.S.	All	Longitudinal	7 HCUP QI categories	Decreases
Mukamel et al. (60)	CA	All	Cross-section	All cause, AMI, CHF, pneumonia and stroke mortality	Increases
Gowrisankaran and Town (55)	LA county	All	Cross-section	AMI and pneumonia mortality	Decreases for HMO patients; increases for Medicare patients
Shen (63)	U.S.	Medicare	Longitudinal	AMI mortality	No effect
Kessler and Geppert (56)	U.S.	Medicare	Longitudinal	AMI mortality	Decreases
Volpp et al. (66)	NJ and NY state	Under-65	Longitudinal	Cardiac catheterization rate, revascularization rate, AMI mortality	Increases
Mutter and Wong (61)	U.S.	All	Cross-section	38 HCUP QI measures	Increases for some procedures, decreases for others

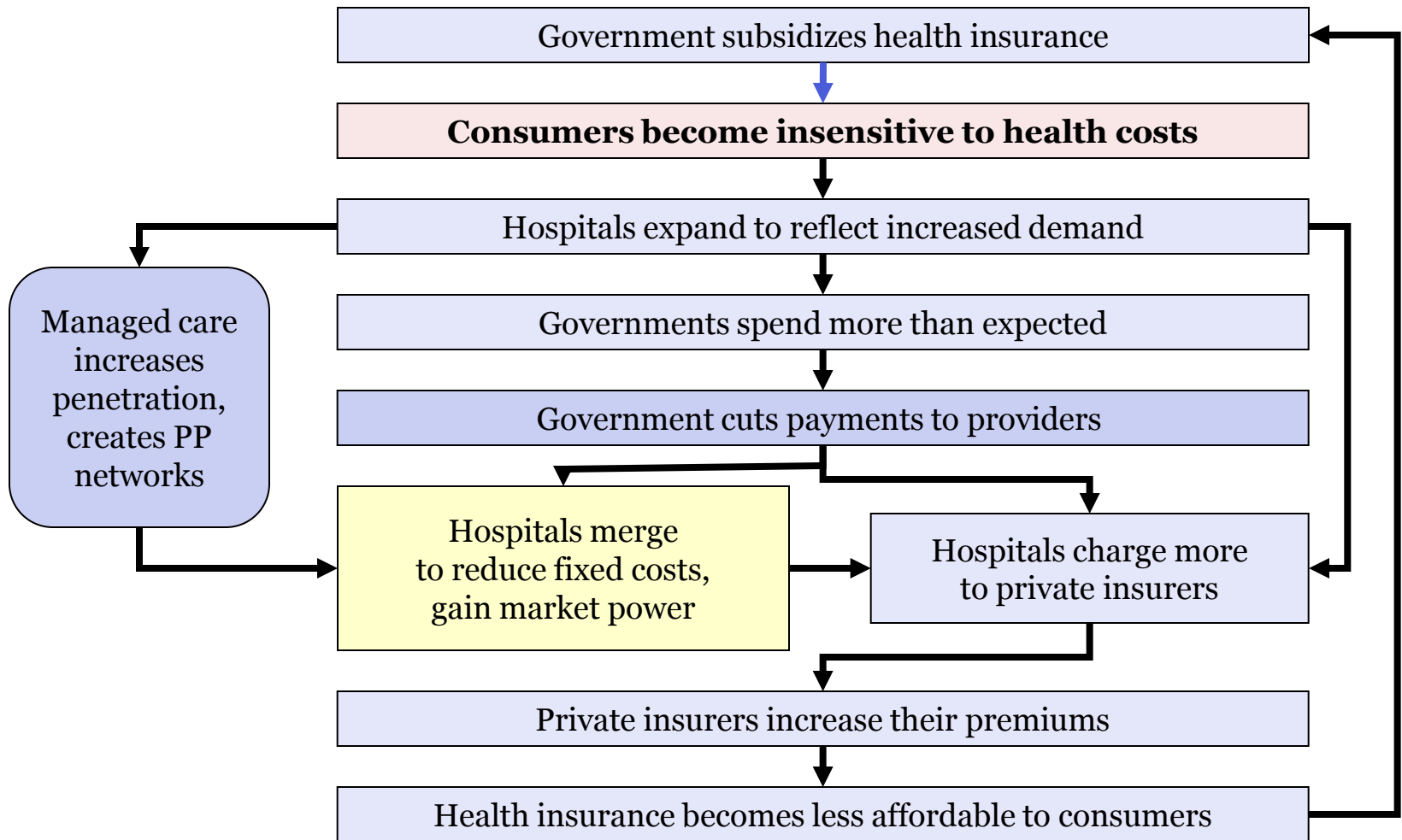
So:

What to Do About Hospital Consolidation?

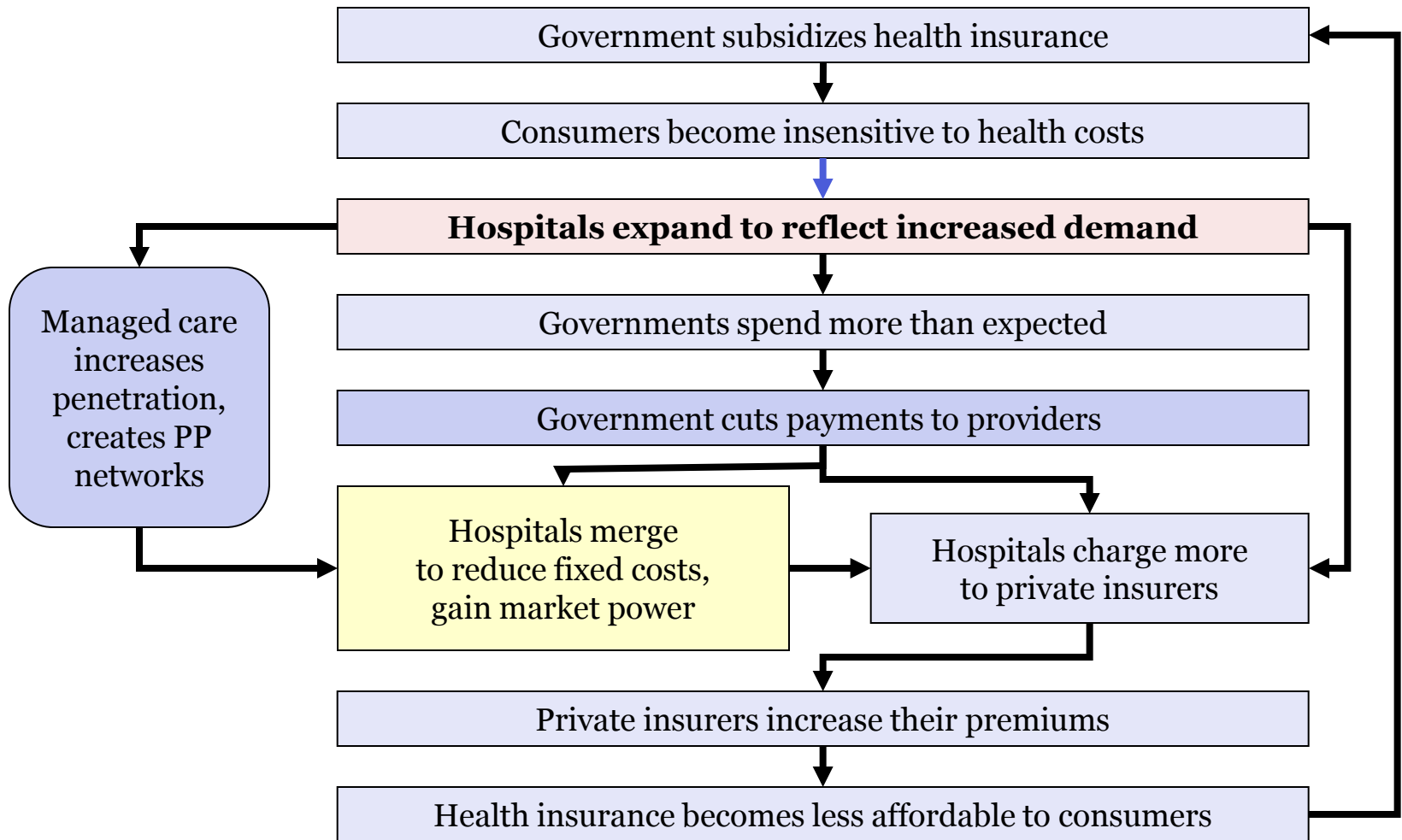
The Flow of Increased Health Costs



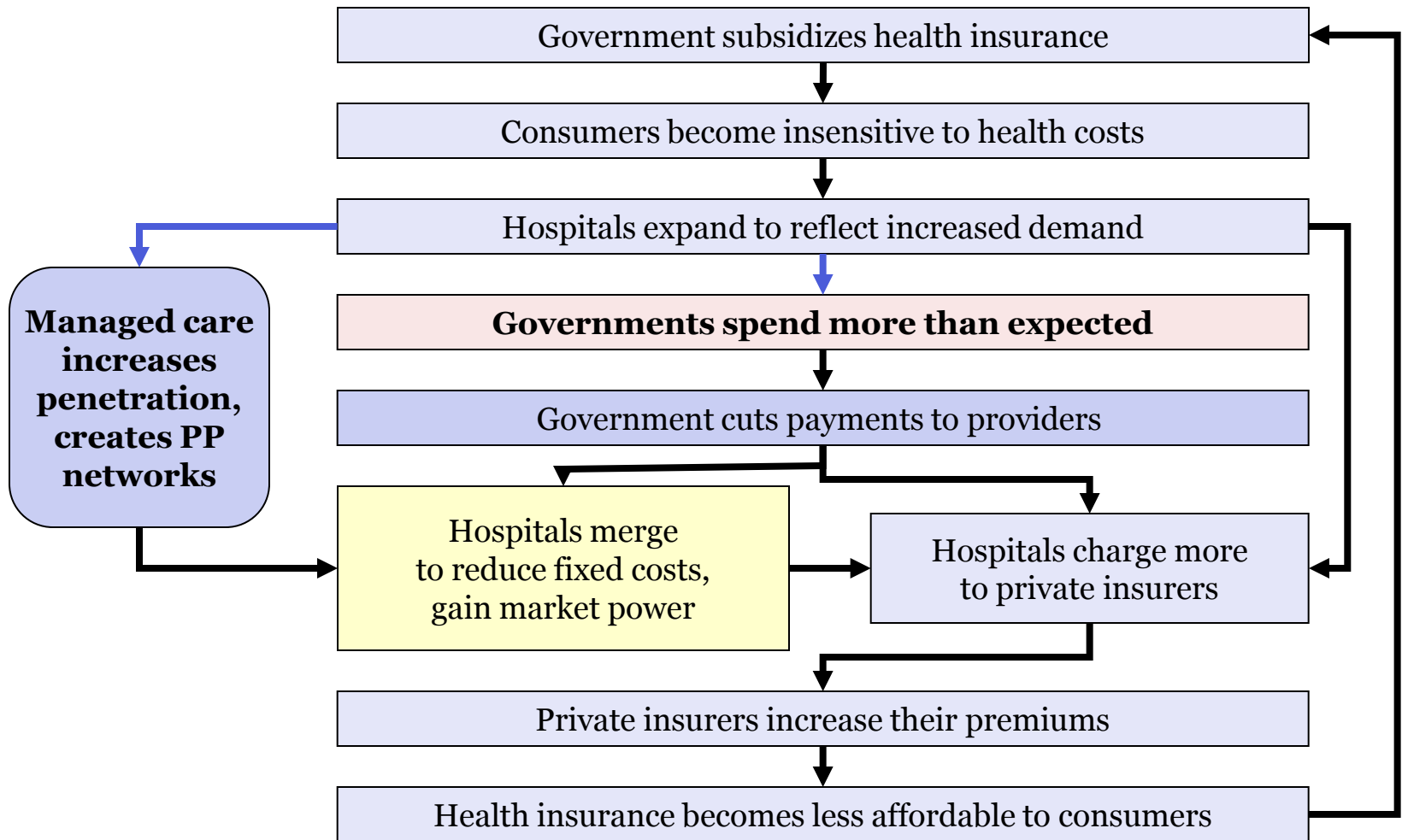
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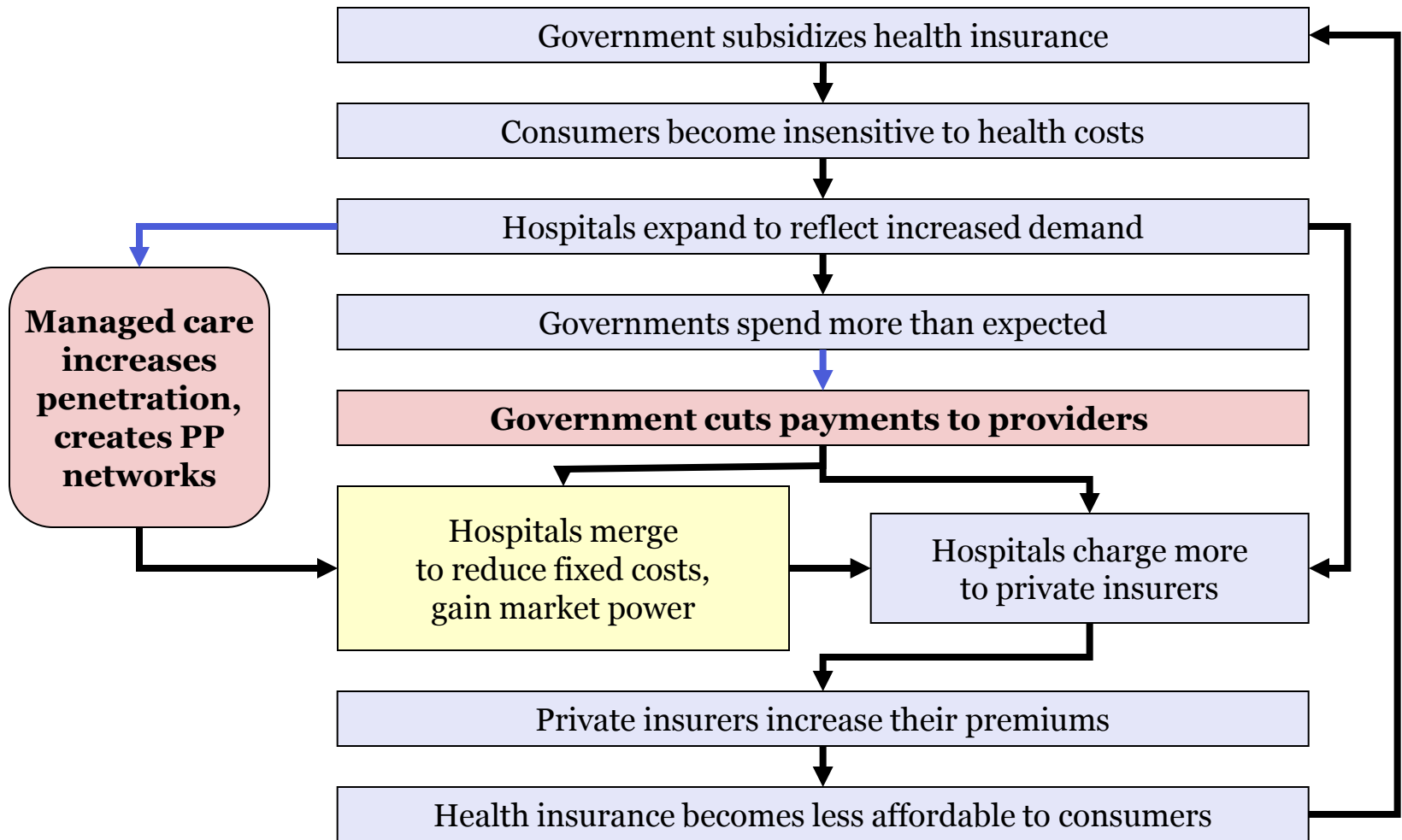
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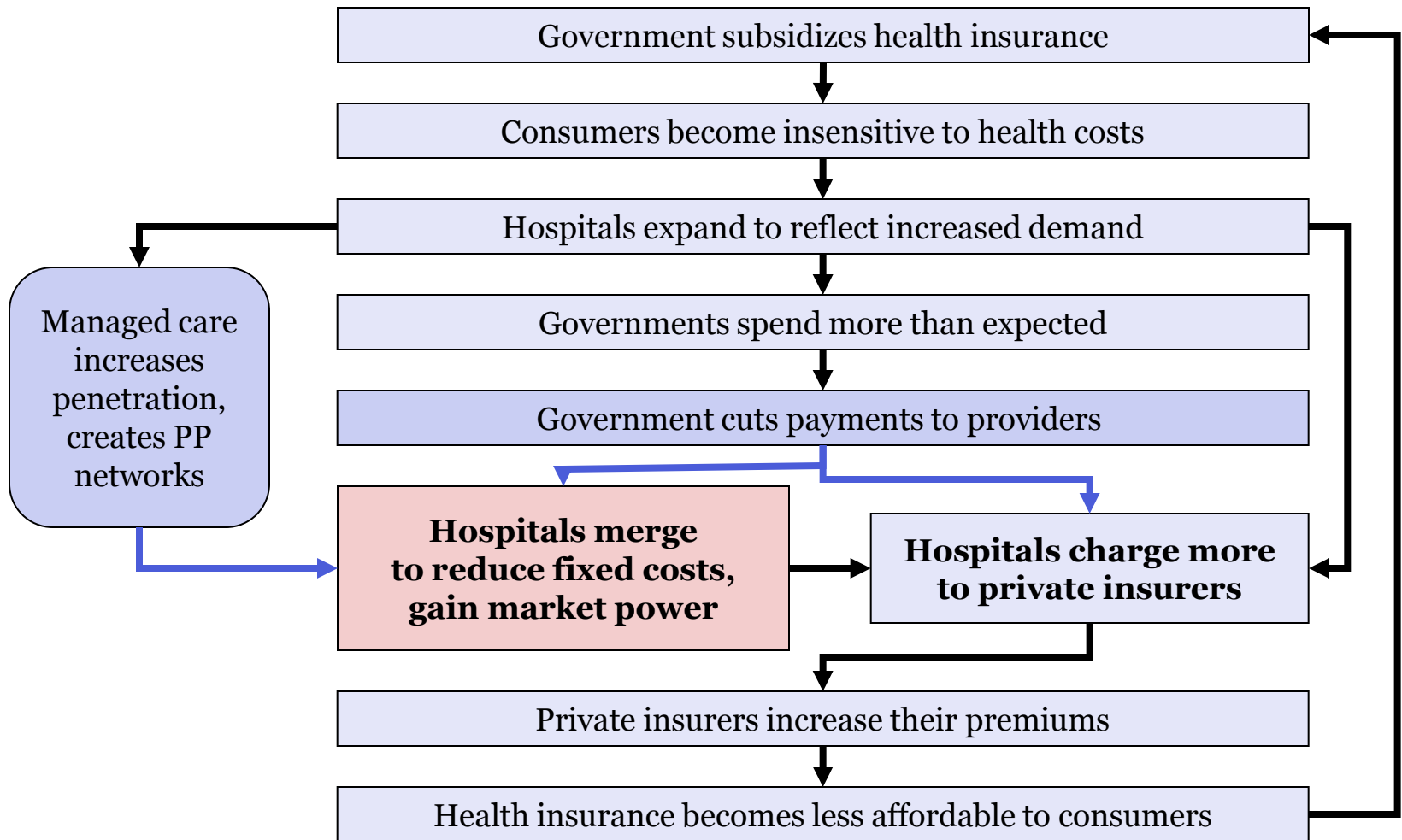
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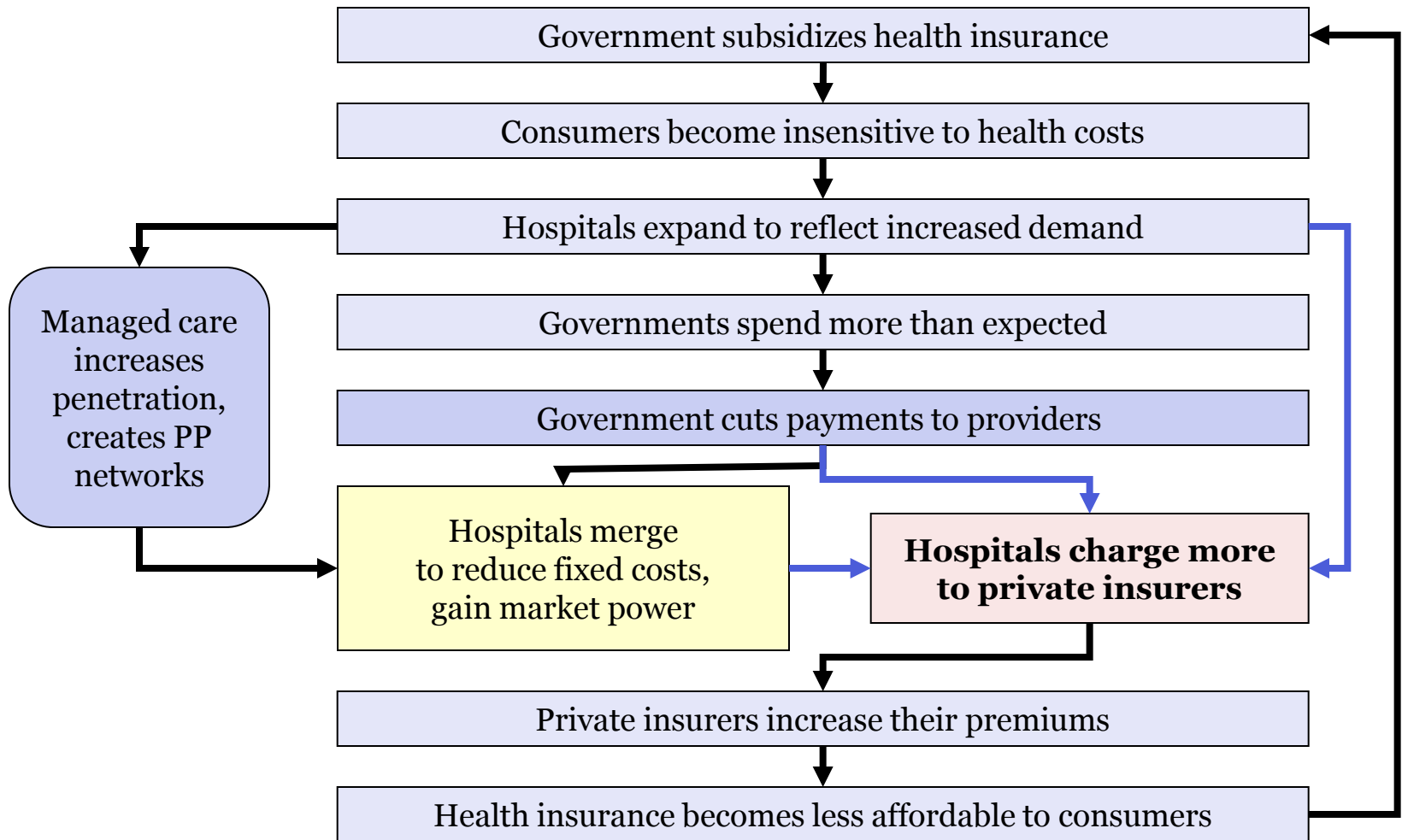
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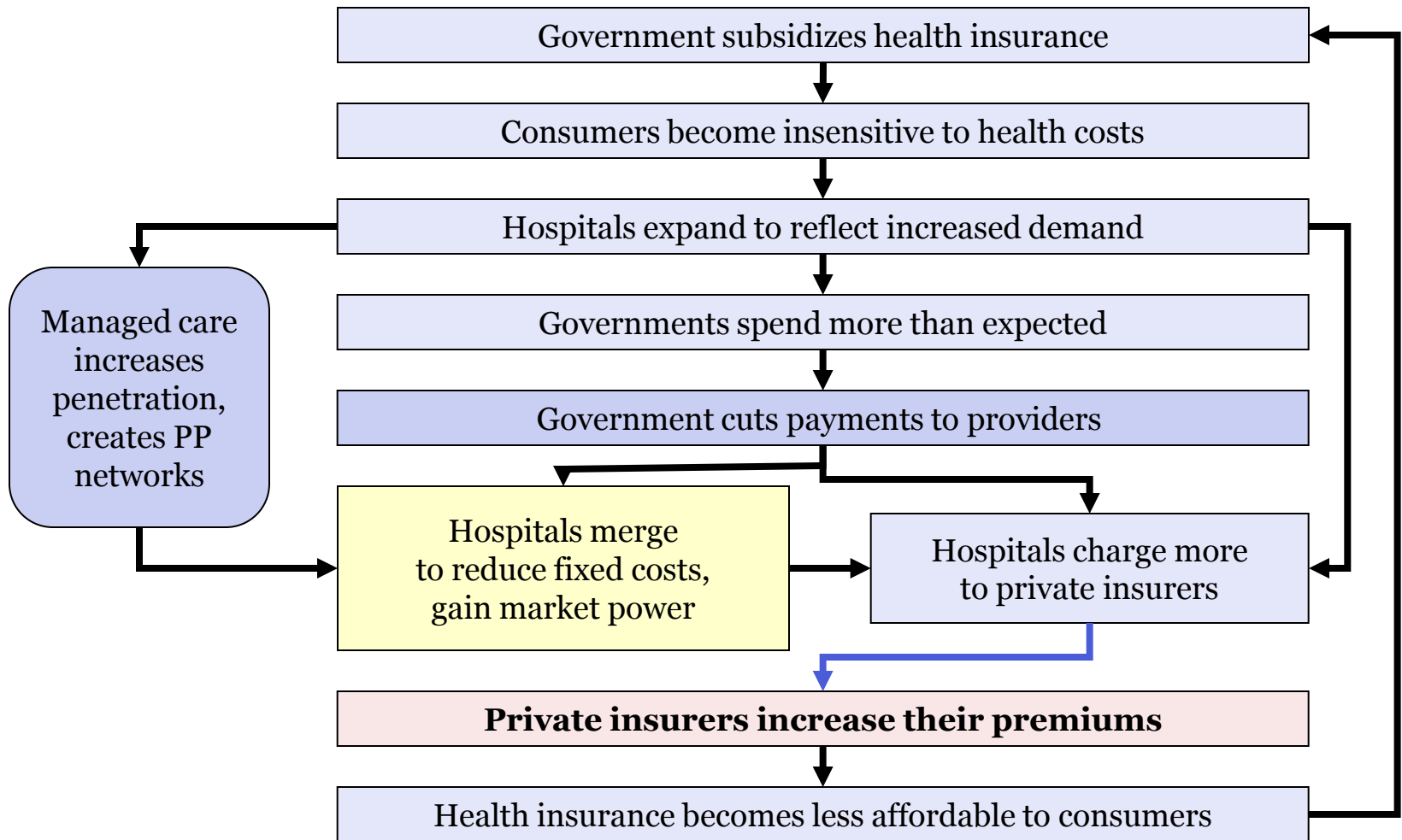
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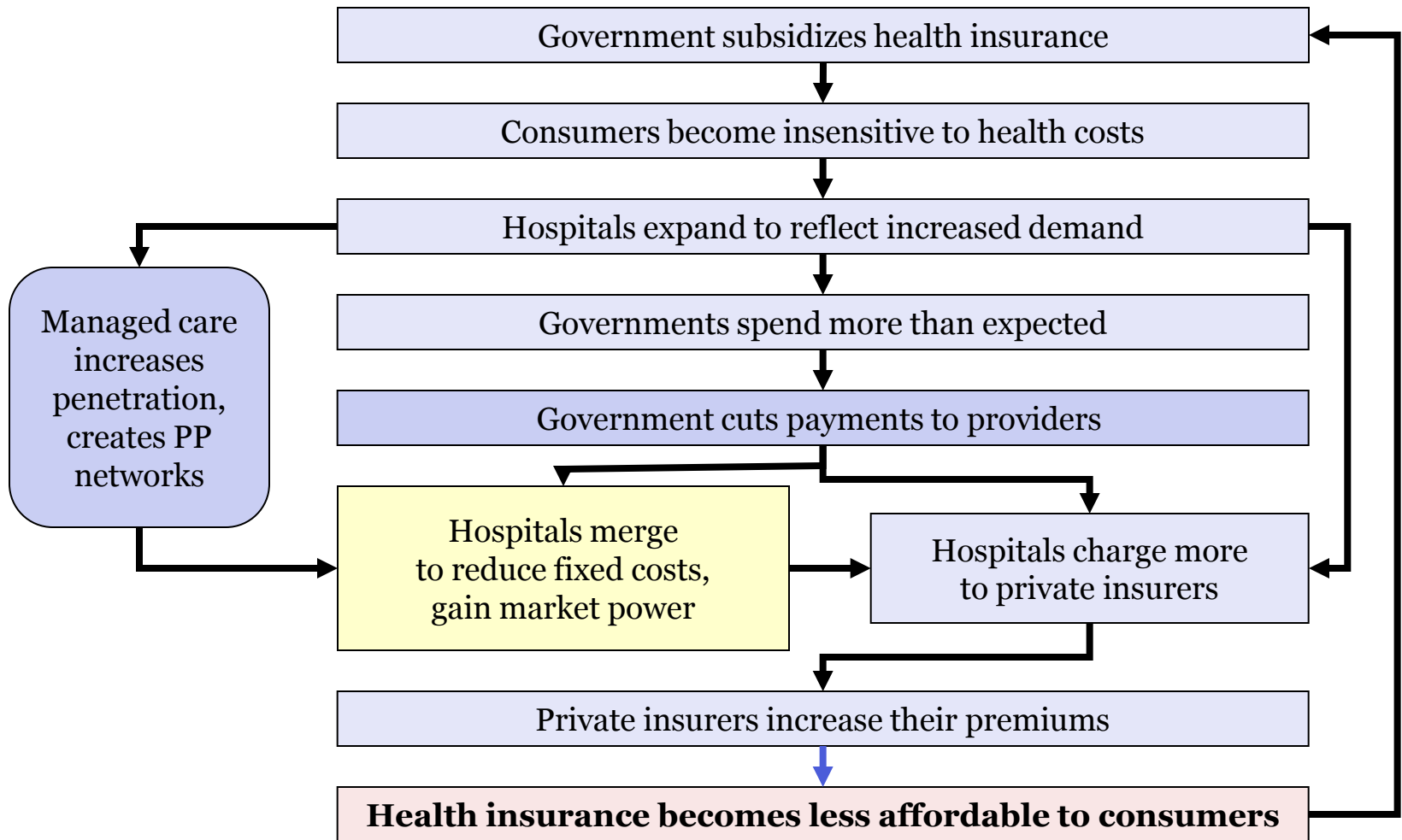
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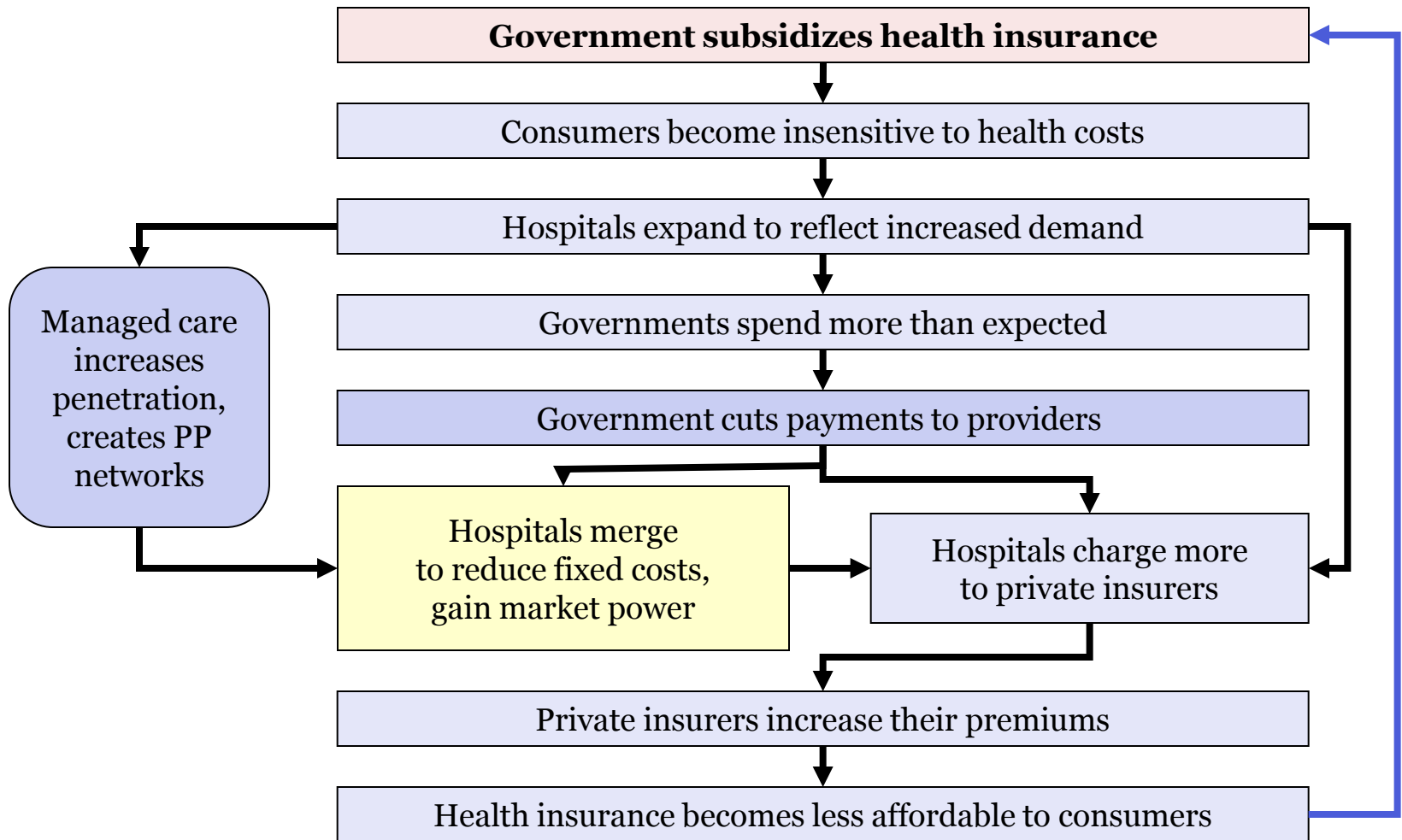
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The Flow of Increased Health Costs



The Flow of Increased Health Costs



The Flow of Increased Health Costs

- The point of the cost flowchart:
 - Hospital executives are people, too
 - The incentives for hospital consolidation are complex and long-standing
 - Many of them reflect structural problems with our health-care system
 - We will not be able to solve those problems this afternoon
 - What are some practical, incremental, feasible avenues for improvement?

Remedies for Hospital Consolidation

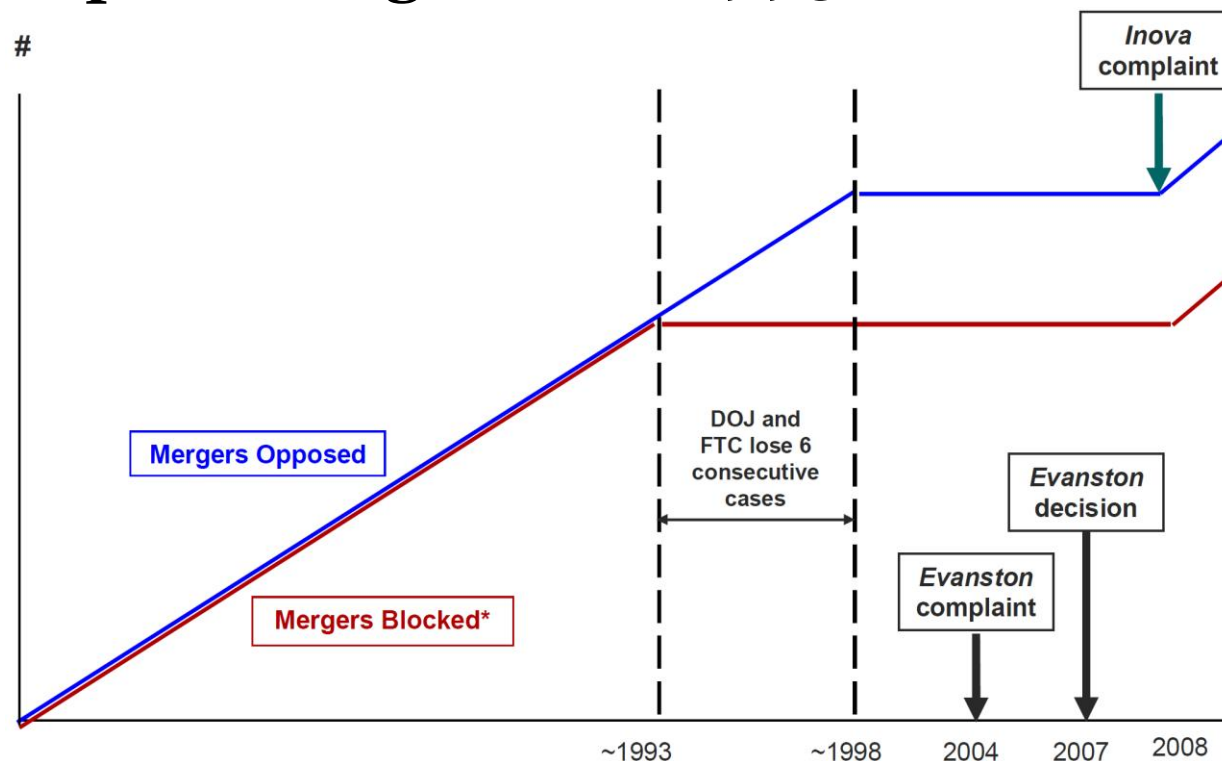
- Increase market power of payors
 - Single-payer health care
 - Private insurance monopsonies
- Decrease market power of providers
 - Stronger and more effective antitrust action
 - Increase construction of new hospitals
 - Facilitate medical tourism & telemedicine
- From both a political and policy perspective, *decreasing* provider market power is more attractive than *increasing* payor market power
- Price controls retard innovation and create shortages

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Courts Have Sided with Hospitals

- The DOJ and FTC failed to block a single hospital merger from 1993 to 2008



Source: Capps 2009

FTC Had Better Luck in 2008

- Evanston Northwestern Healthcare Corporation & Highland Park Hospital
 - On appeal, FTC did not break up merger due to concerns about the ability of Highland Park to main its new cardiac surgery program (which was implemented post-merger)
 - However, FTC required the hospitals to negotiate independently with private payors
- Inova Health System & Prince William Hospital
 - Inova abandoned deal soon after FTC challenged it
 - “The anti-competitive effect was real...The evidence we presented in federal court tipped the parties’ decision”
 - Would have given Inova control of 73% of licensed hospital beds in northern Virginia

More Recent FTC Cases

- Scott & White Healthcare & King's Daughters, 2009
 - Temple, Texas
 - Investigation closed after King's almost failed
- ProMedica Health System & St. Luke's Hospital, 2011
 - Lucas County, Ohio
 - Court proceedings underway (preliminary injunction granted)
- Phoebe Putney Health System & Palmyra Park Hospital, 2011
 - Albany, Georgia
 - District Court dismissed FTC complaint with prejudice
 - FTC has appealed to the Eleventh Circuit
- **Hundreds of mergers over that time-frame that FTC has not challenged**

Federal Judges Have Been Permissive

- More (and better) economic research is needed to help judges understand the anti-competitive effects of hospital mergers
- Modernize DOJ/FTC guidance for hospital mergers
- Better regulation at the state level can compensate for federal judiciary permissiveness
 - 1993 merger of MGH and Brigham & Women's
 - Then-Mass. HHS Secretary Charlie Baker okayed the deal
 - Baker in 2003 to FTC: Merger was like “having a grenade that you throw on one end of the boat roll back down and blow up on you when the boat shifts.”
 - Mass. AG Martha Coakley investigating anti-competitive practices

Will ACOs Worsen Provider Consolidation?

- FTC has released a *Proposed Statement of Antitrust Enforcement Policy Regarding ACOs Participating in the Medicare Shared Savings Program*
- AHIP's Joe Miller thinks it is inadequate:
 - “There is reason to worry that the Statement tilts too much toward allowing consolidation...the screens laid out in the Statement do not address the potential market power of ACOs formed through mergers and acquisitions [or] the danger of anticompetitive effects from participation in the Shared Savings Program by providers who already have substantial market power.” (*Health Affairs* Blog, 2011)

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PPACA Restricts New Hospital Construction

- New hospital construction is heavily regulated
 - Federal and state certificate-of-need laws aid incumbents
 - CON supporters argue that unused capacity increases prices
- Incumbent hospitals are politically powerful
 - Typically the largest employers in their area
- PPACA blocks construction of new physician-owned hospitals as of August 1, 2010
 - Critics argue that physician-owned hospitals “cherry-pick” the most economically attractive specialties, leaving general hospitals holding the bag
 - An alternative approach would be to allow competition in those specialties to drive down costs, and better fund less attractive specialties at general hospitals

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Medical Tourism & Telemedicine

- Major barrier is state regulation
 - FTC (2004) recommends that states “consider uniform licensing standards or reciprocity compacts to reduce barriers to telemedicine and competition from out-of-state providers who wish to move in-state”

Q & A

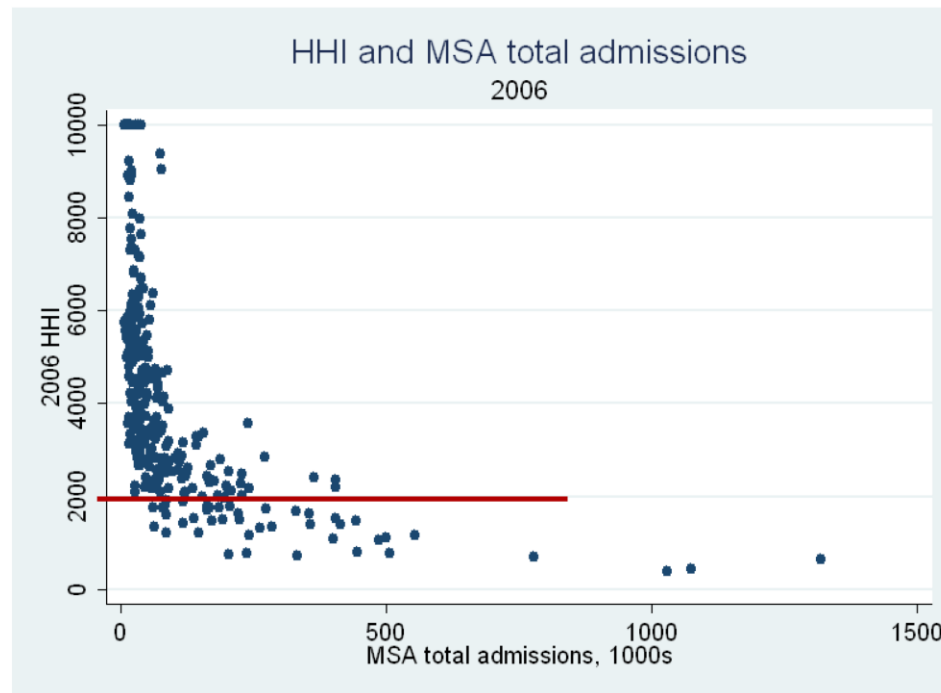
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Backup Slides

Hospital Concentration in Rural Areas

- Opportunity for hospitals to gain market power is highest in already-concentrated rural areas



Source: Adapted from Capps, 2009. HHI = Herfindahl-Hirschman Index; MSA = Metropolitan Statistical Area