

Hospital Care - Do Place and Race Matter?

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PM834 Planning and Regulating to Fix Health Care
31 October 2024

4 ideas

Quiz

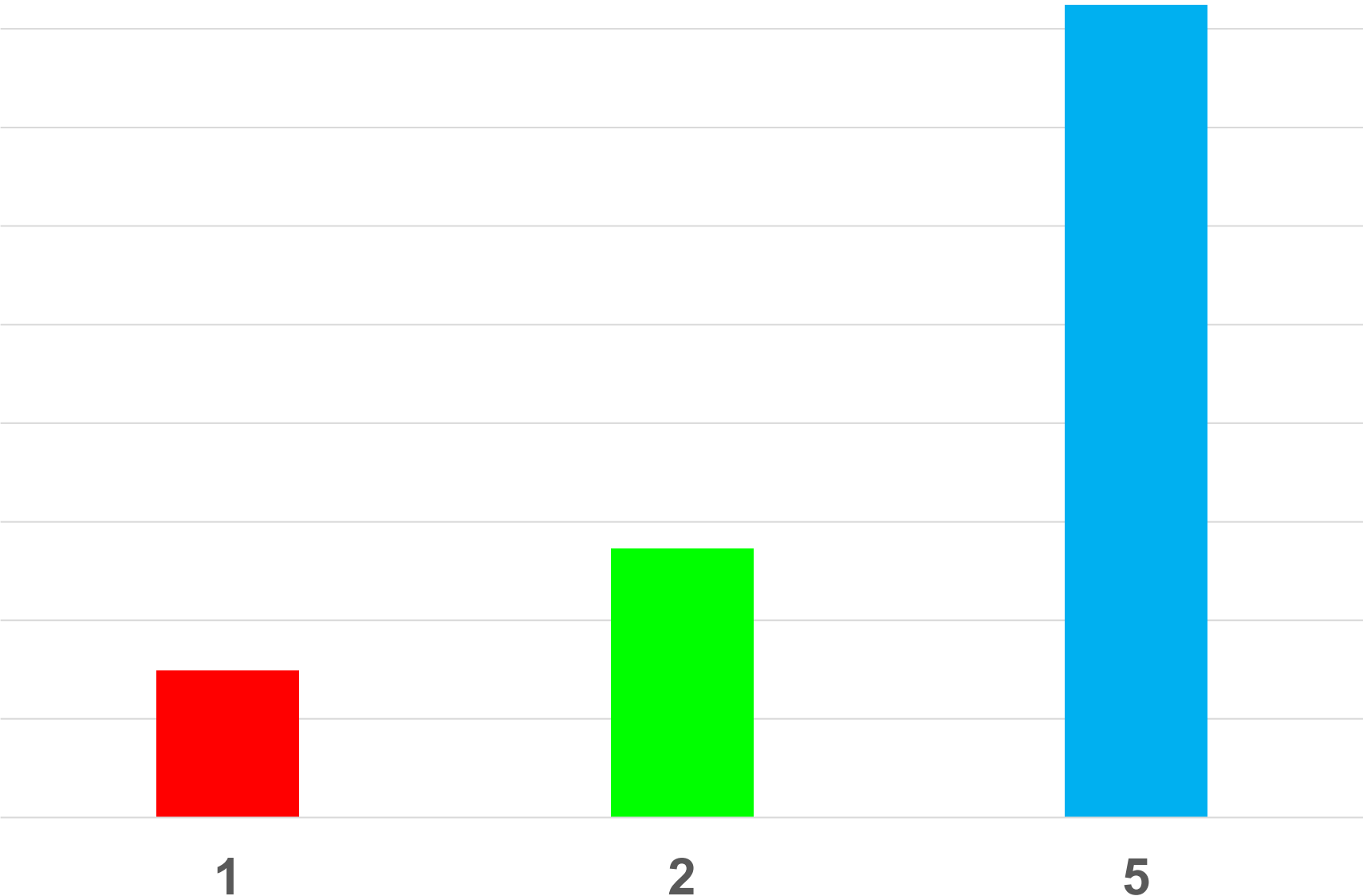
Contexts

- A. Overview
- B. Which hospitals close?
- C. Why do closings matter?
- D. How to stabilize needed hospitals?

Contexts

- Affordable medical security for all is the easiest problem to fix in the U.S.
 - Not easy – just easier than any of the others
 - Because we have enough money to give the care that works to all who need it
- What are we trying to accomplish?
 - Prevention despite 100 % failure rate
 - Medical security (despite 100 % failure rate)
 - SDLs matter
 - Does SDL talk let health care off the hook?
- If a crisis afflicts health care, it will be hard to respond without calmly thinking through what to do before crisis befalls us

Total Spending on Health, Education, and Defense, U.S., 2020



A. Overview

1. The care we get depends heavily on the caregivers we've got.
2. The configuration of urban hospital care—location, type, and number of beds—evolves constantly.
3. No one is accountable for any aspect of configuration.
4. Smaller and mid-size hospitals, and those in black areas, have been much likelier to close.
5. Hospitals and doctors are symbiotic, not alternatives.
6. Hospital efficiency confers no survival value.
7. Closings \rightarrow \downarrow access + \uparrow cost. Quality? Mixed effects.
8. Growing expanses of many cities are hospital deserts.
9. “Closing hospitals to save money” = 5-decade failure. Why?
10. Financial, legal, and policy tools are needed to identify and stabilize needed hospitals and ERs.

General policy context

- 1946 Hill-Burton law → aim for 4.5 beds/1,000
 - Poor and rural states had lower beds/1,000
 - Public works program to prevent return to pre-war depression
- As the U.S. approached 4.5/1,000 in 1975
- Political worry about health costs
 - Rising health costs 10 years after Medicare/Medicaid
 - Weaker economy - 2 oil shocks of 1973-4 and 1979-80 → stagflation
- Hospitals are where costly care happens

Specific policy context

- Hospitals are where costly care happens
- Diagnosis
 - Lots of beds → high volume (“bed built = bed filled”)
 - High volume → high U.S. hospital cost
- Almost no attention to which hospitals
 - Are costly
 - Are needed
- So find ways to cut beds/1,000
- Seek greatest savings by closing entire hospitals
 - Try public planning – resistance → slow pace + unfair
 - Unleash “market” on hospitals → accelerate pace
 - Hospitals close faster but costs don’t fall + unfair

We have too many beds → close hospitals

- Empty beds are costly! (Are they?)
- Occupancy rates are falling
- More care can be given outside hospital
 - Better anesthesia, imaging, surgical techniques
 - Ambulatory surgery – fewer admissions
 - Earlier discharge to NH, home
- Aren't hospitals dangerous places
 - Nosocomial infections
- Isn't prevention more effective than treatment?
- And isn't primary care better than inpatient care?

Wait! Hospitals can be valuable

- Needed havens in disasters
- Can guarantee access—sites with known addresses
- Vital foundation for doctors' care, not substitute
- Alternatives—urgent care and ASCs—usually built in wealthier areas
- Payers shift care from hospital to dodge paying their fair shares of fixed costs
- Fixed costs are fixed—right?
- How does shifting care to different site save money?
- Without functioning market or competent government, how do we know that any existing or changed types of care are good?

What about cost?

- What if the costlier hospitals are likelier to survive?
- What if closings (and mergers) allow surviving hospitals to boost their prices and revenue – even in the face of payer pressure?
- Who benefits when lots of urban hospitals close—especially the lower-cost community hospitals?

And what about doctors?

- If non-teaching community hospitals close, what will happen to the office-based local doctors who rely on those hospitals—for patient care and as source of income?
- And if office-based primaries and specialists who once admitted to community hospitals retire or relocate their practices, what happens to the hospitals (and ERs) serving those districts?

Which hospitals and doctors?

- Whose job is it to ensure that the numbers and types of hospitals and ERs needed to protect the health of the public remain open?
- Whose job is it to ensure that the numbers and types of doctors—primary and specialist—who are needed to protect the health of the public are available throughout U.S. cities?

Health policy context

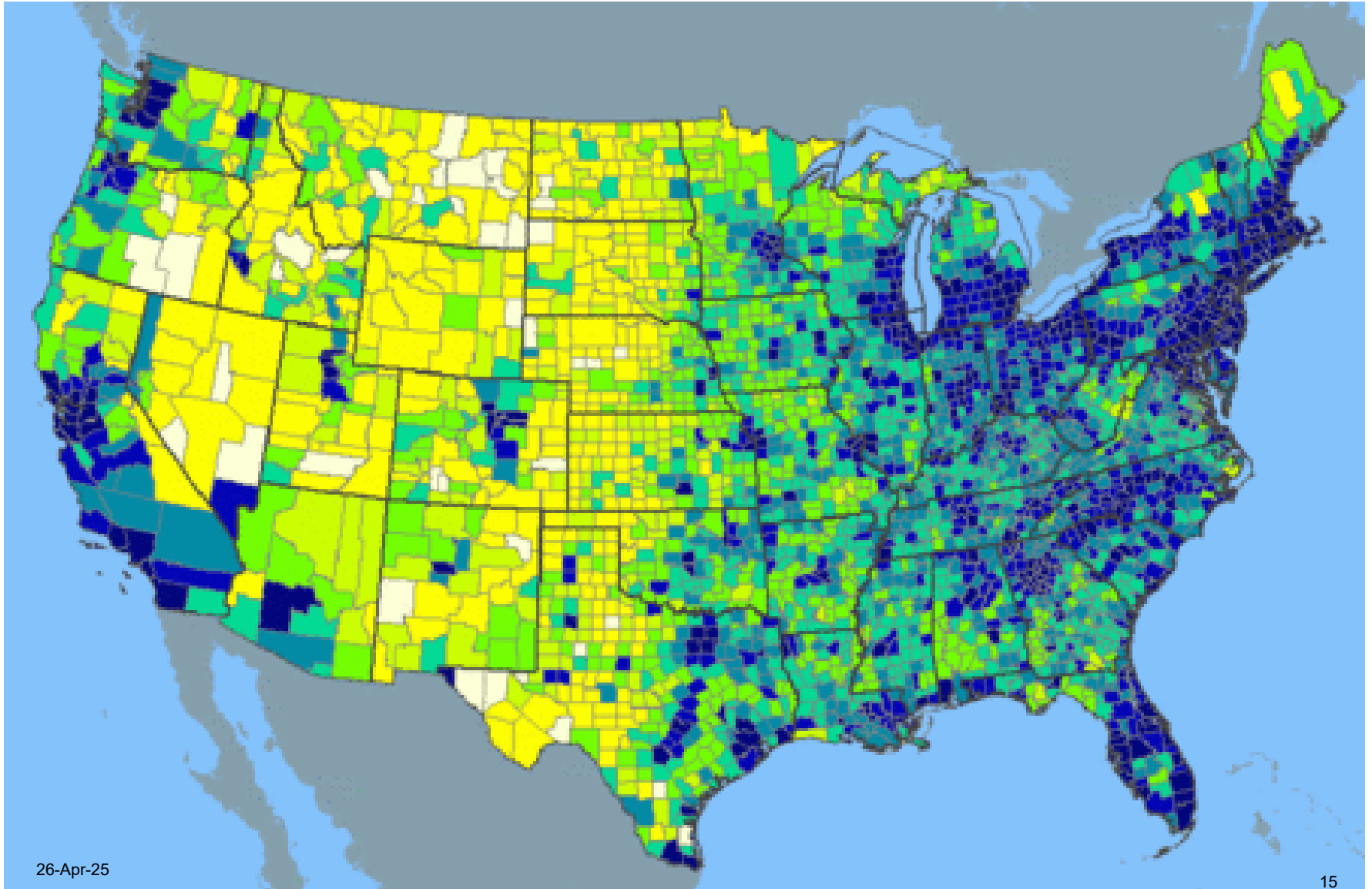
- Competitive free market fails in health care
 - Not one of 7 key requirements satisfied
- Government in U.S. fails to
 - Protect access
 - Contain cost
 - Safeguard quality
 - Advance appropriate configurations of caregivers
- Anarchy results
 - ***No one is accountable for anyone or anything in U.S. health care that happens outside the building where they work***
- So let's look behind the speculation to examine closings' practical causes/effects



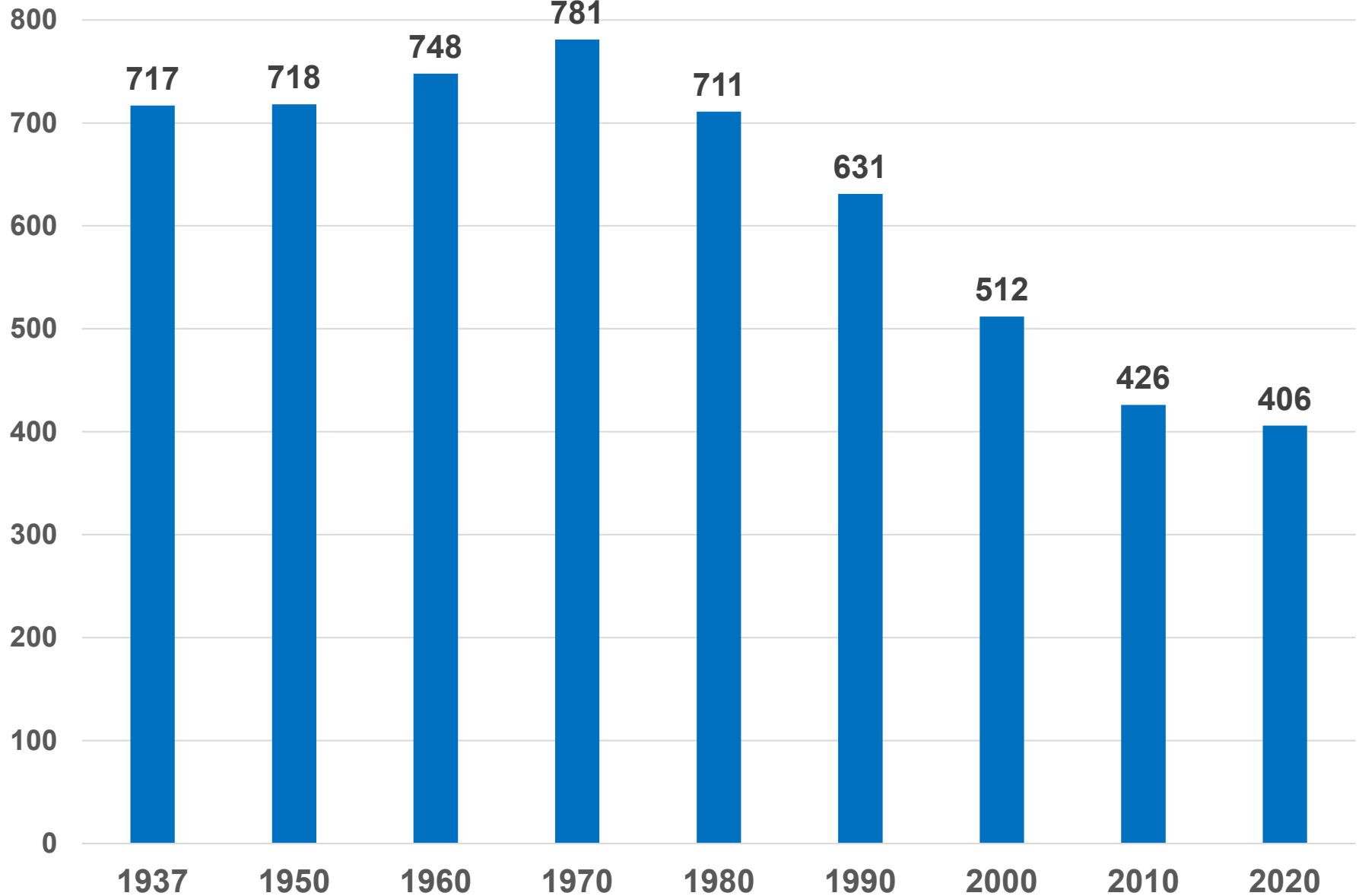
The 52 cities



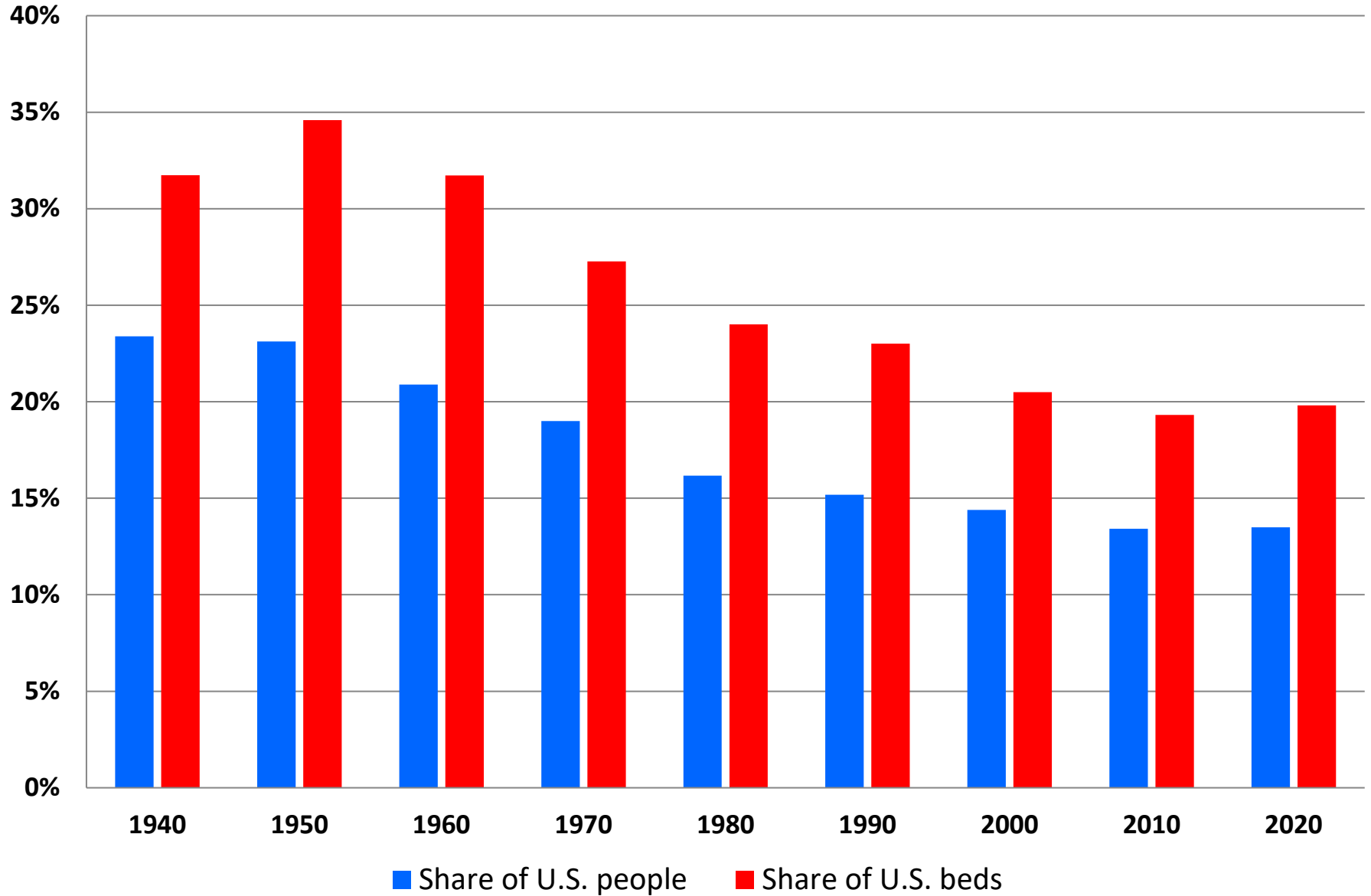
U.S. Population Density, 2010



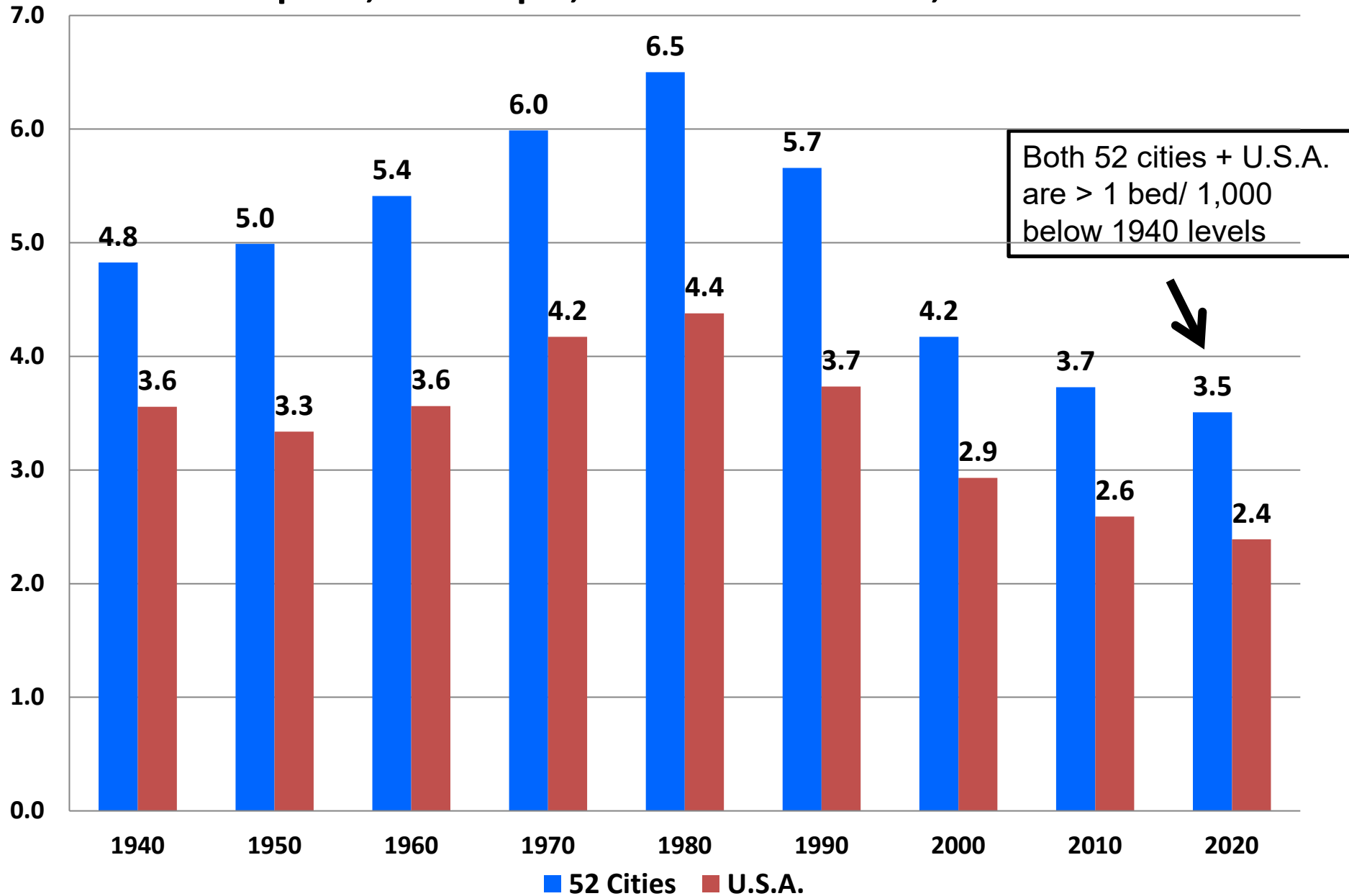
Number of Hospitals, 52 cities, 1936 - 2020



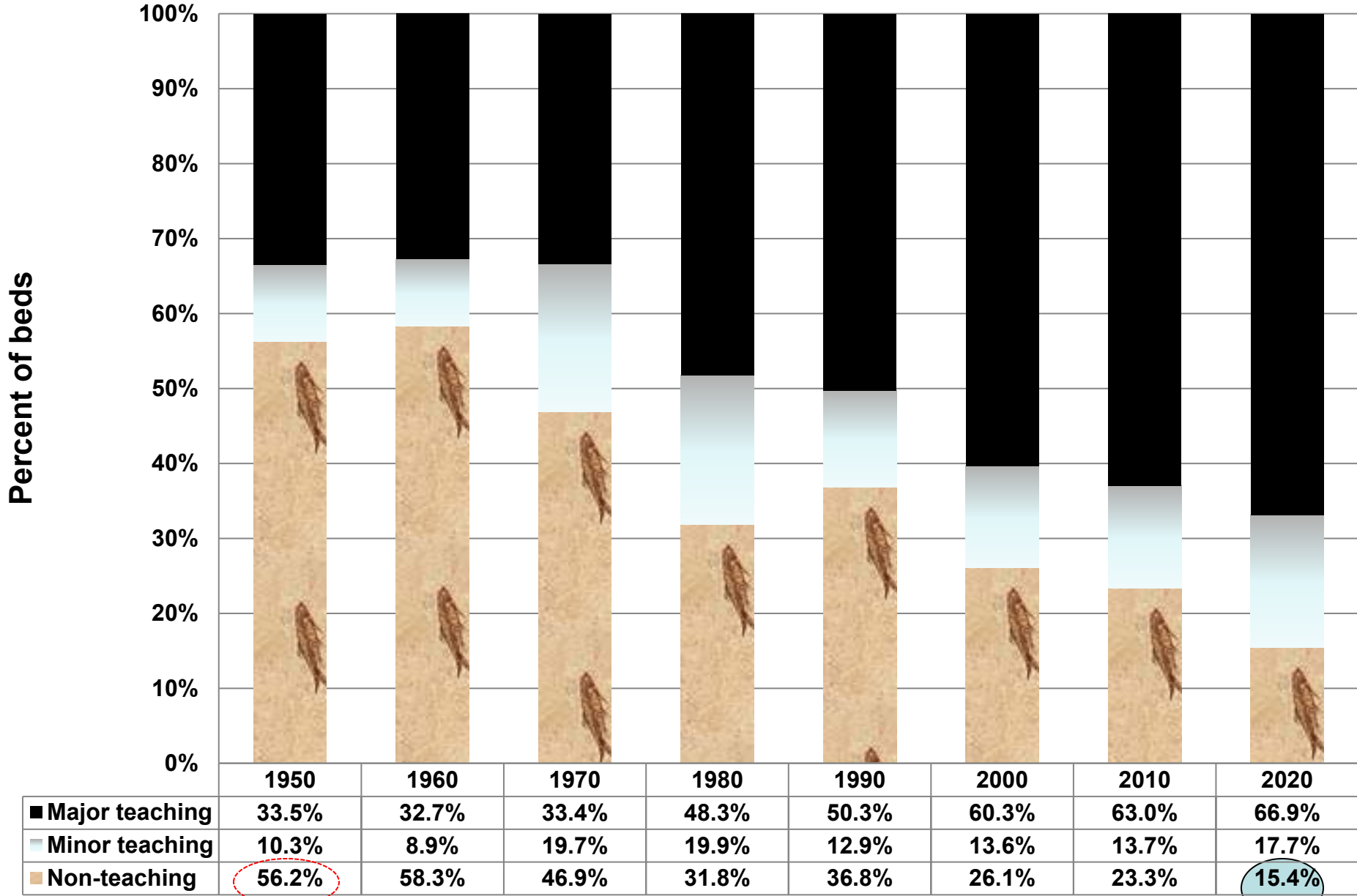
52 Cities' Shares of U.S. People and Beds, 1940 - 2020



Beds per 1,000 People, 52 Cities and U.S.A., 1940 - 2020



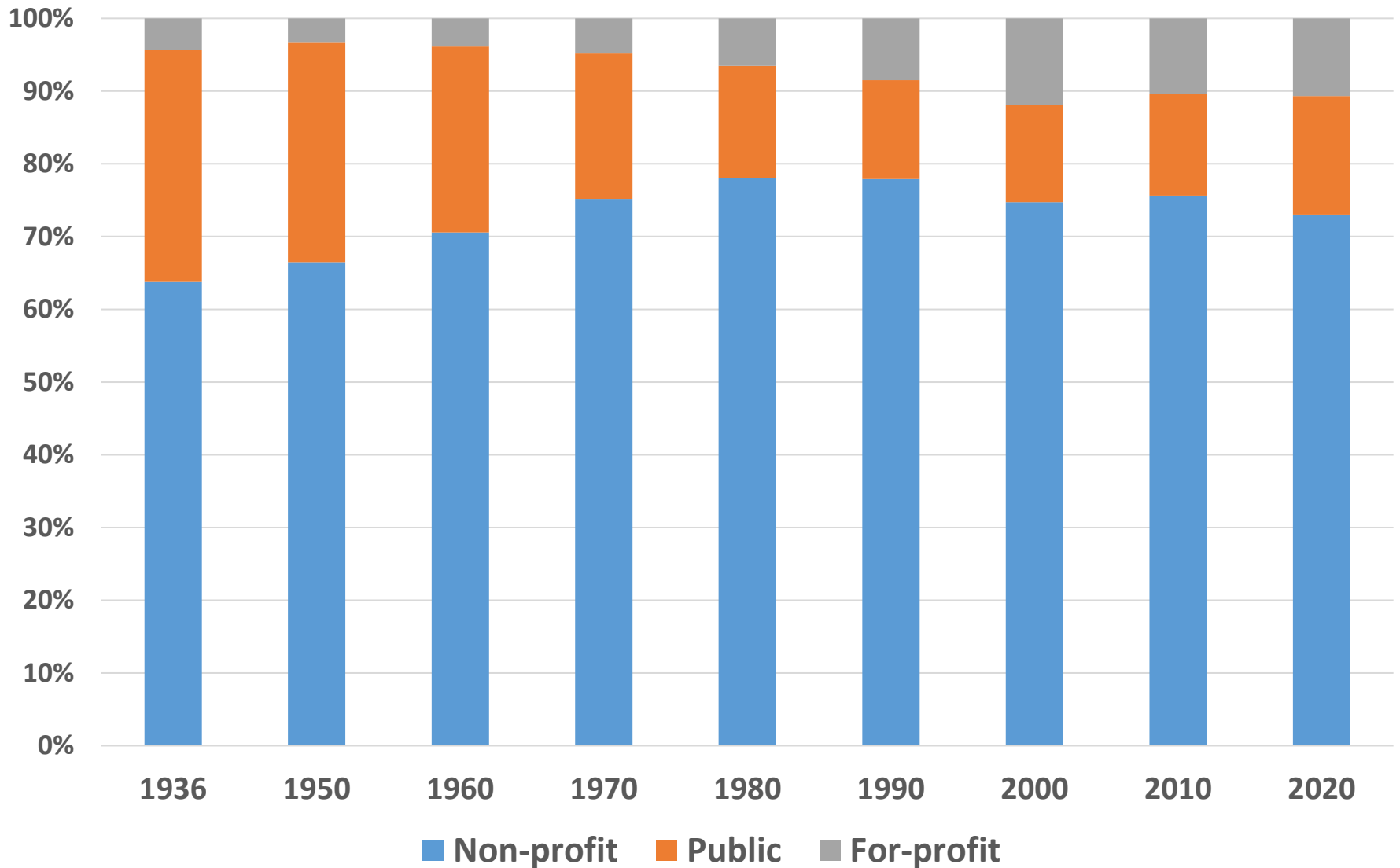
Percent of Beds by Medical School Affiliation, 1950 - 2020



Hospital Closings/Relocations and New Hospitals by Decade

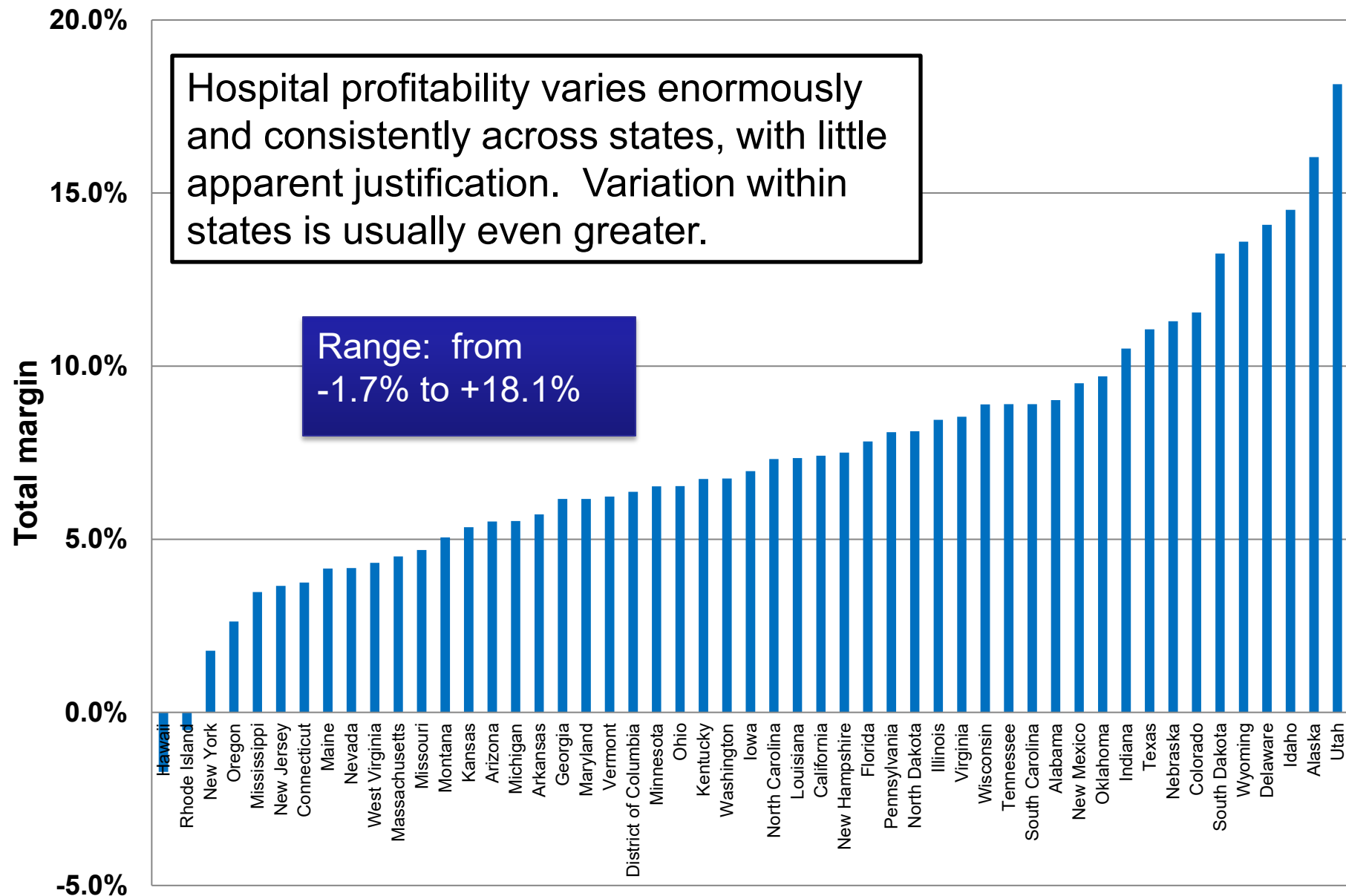
Period	Start	Closings	Survivors	New	End	Net Change	Net Change % Start	Closings % Start
1936-50	709	75	634	79	713	4	0.6%	10.6%
1950-60	713	81	632	110	742	29	4.1%	11.4%
1960-70	742	90	652	122	774	32	4.3%	12.1%
1970-80	774	153	621	90	711	-63	-8.1%	19.8%
1980-90	711	130	581	50	631	-80	-11.3%	18.3%
1990-2000	631	122	509	3	512	-119	-18.9%	19.3%
2000-10	512	87	425	1	426	-86	-16.8%	17.0%
2010-20	426	41	385	21	406	-20	-4.7%	9.6%
1936-2020	709	779	-70	476	406	-303	-42.7%	109.9%

Percentage of Hospital Beds by Ownership, 1936-2020

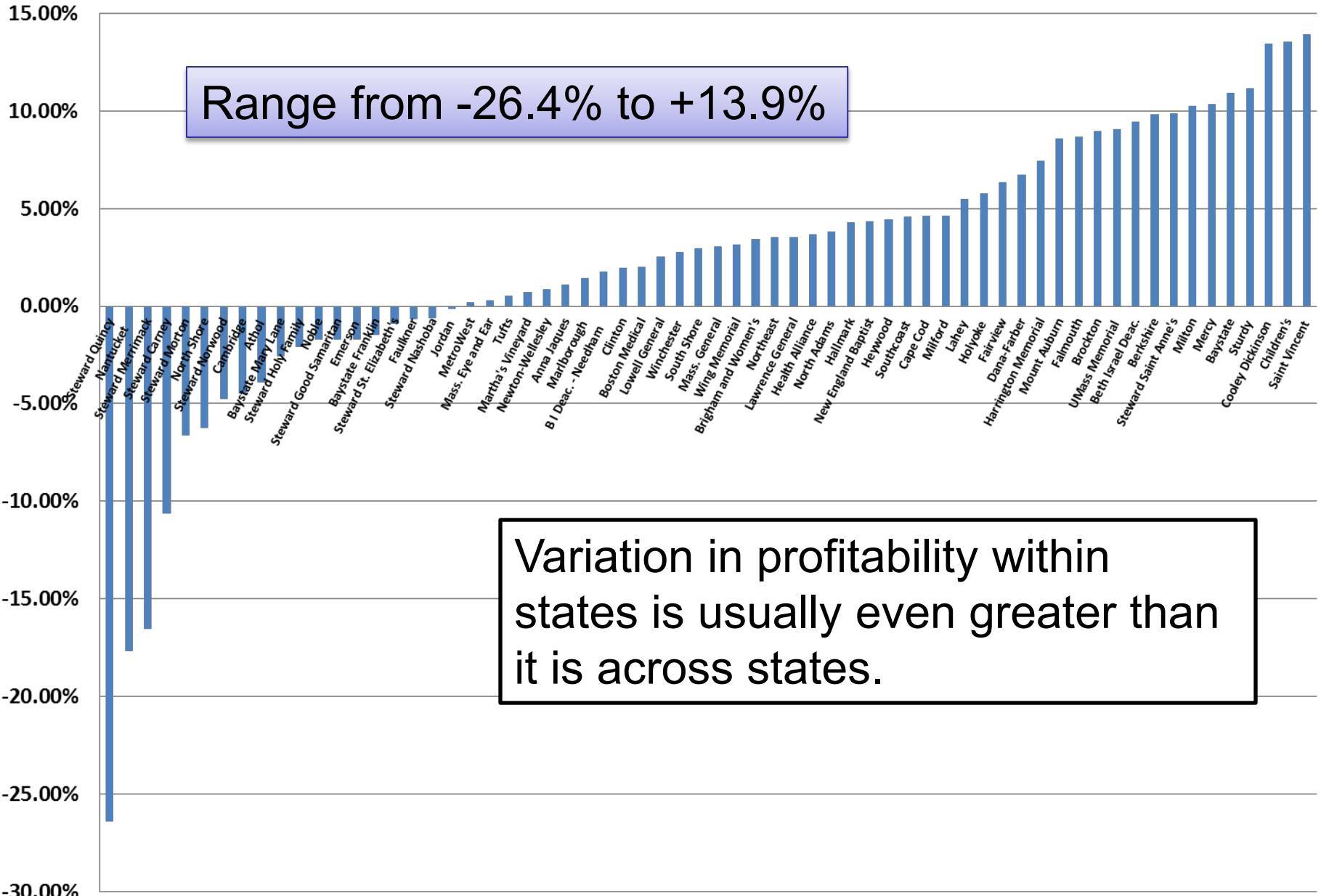


B. Which hospitals close?

Total Hospital Margins, U.S. States, HFY 2011



Massachusetts Hospitals' Total Margins, HFY 2013 Q2



Variation in profitability within states is usually even greater than it is across states.

How do rich and poor hospitals differ?

Are the differences justified?

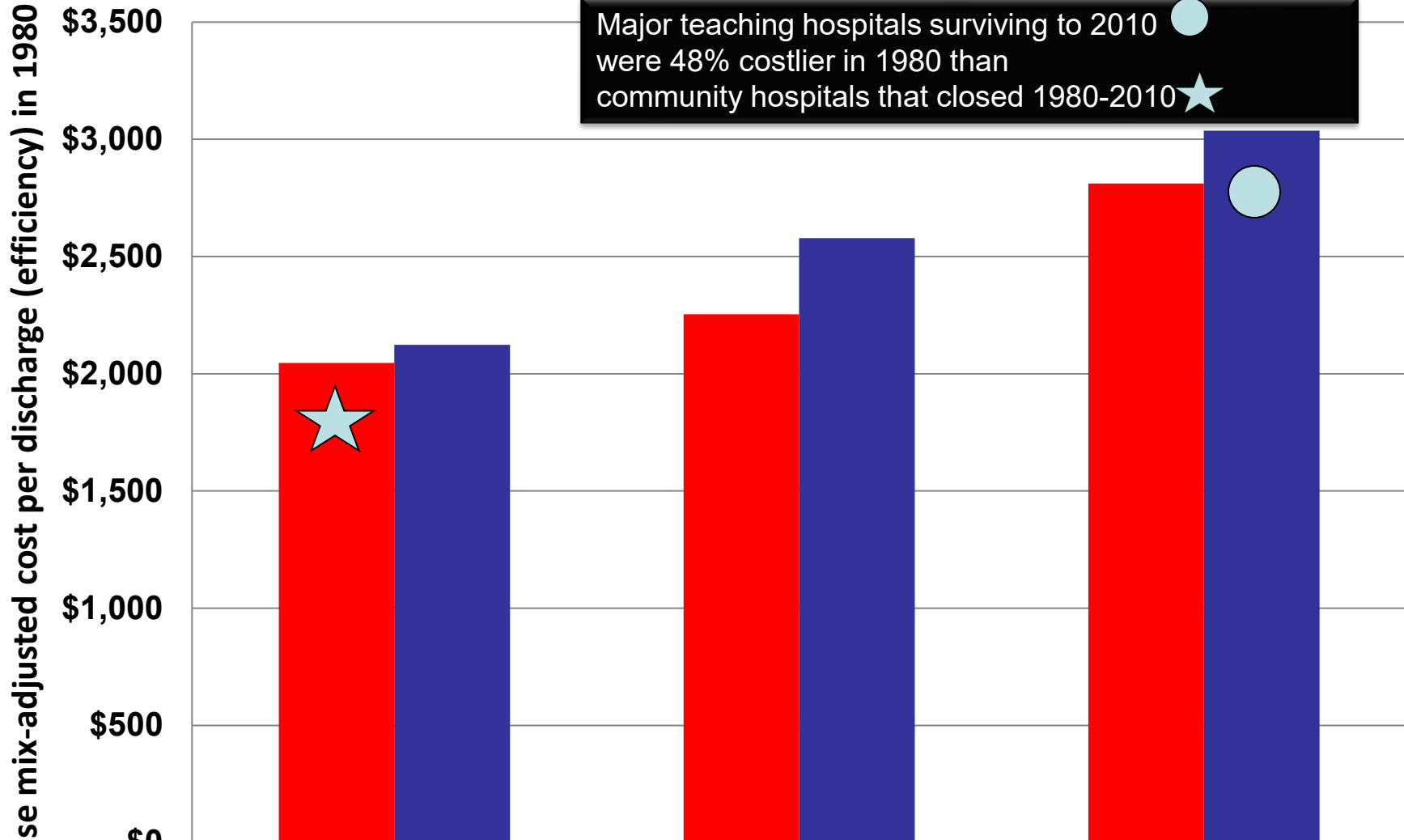
Rich hospitals

- Lots of privately insured pts.
- Located in high-income area
- Treat profitable diagnoses
- Lots of doctors, many salaried
- Efficient? (No evidence)
- Endowment, gifts
- Market power to boost prices
- Reputation? Attract patients
- More political power
- Fair reward by real market?
OR self-sanctification – profits
without honor?

Poor hospitals

- Lots of Medicaid, uninsured
- Located in Black area
- Many unprofitable diagnoses
- Vanishing private doctors
- Weak management?
- Lack money to renew capital
- More competitors/low prices
- Poor perceived quality
- Usually less power
- Game is rigged?
- Self-blame

Hospital Efficiency in 1980 by Teaching Status and Survival to 2010



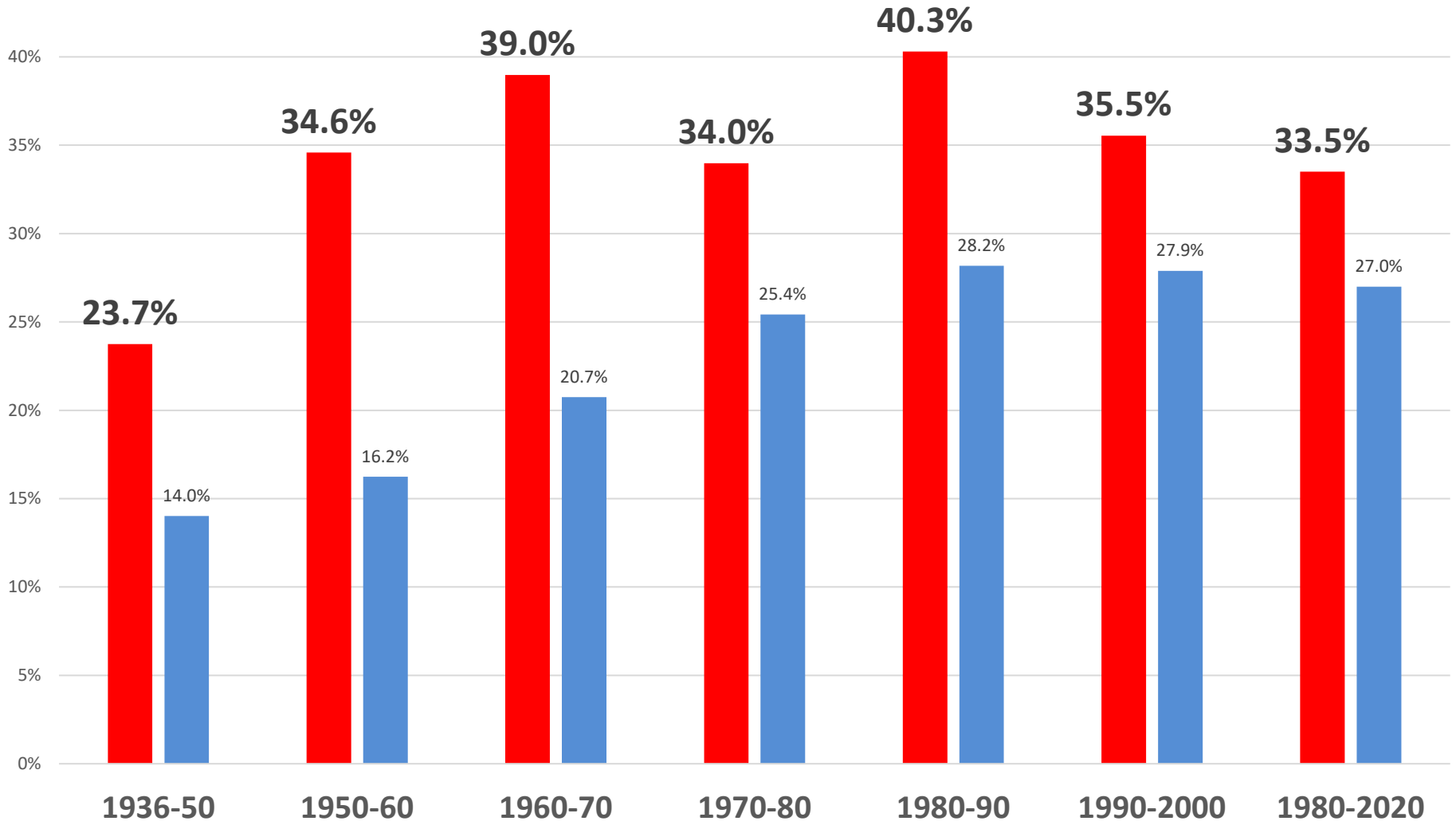
■ Closed 1980-2010	\$2,046	\$2,254	\$2,812
■ Still open 2010	\$2,124	\$2,578	\$3,037

Area Percent Black for Closed and Surviving Hospitals, 1936 - 2020

■ closed

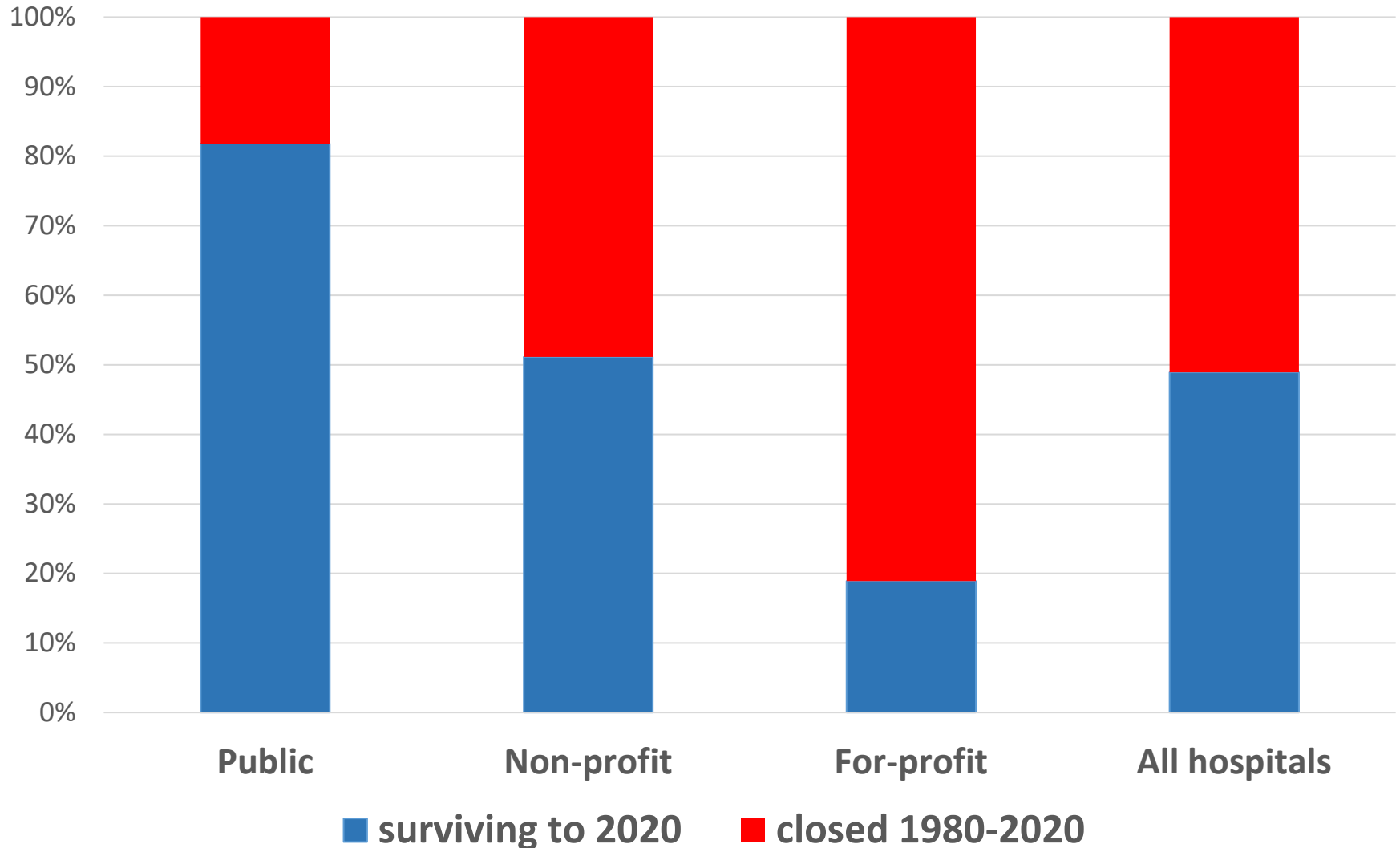
■ survivors

All periods significant at 0.0099 or better.

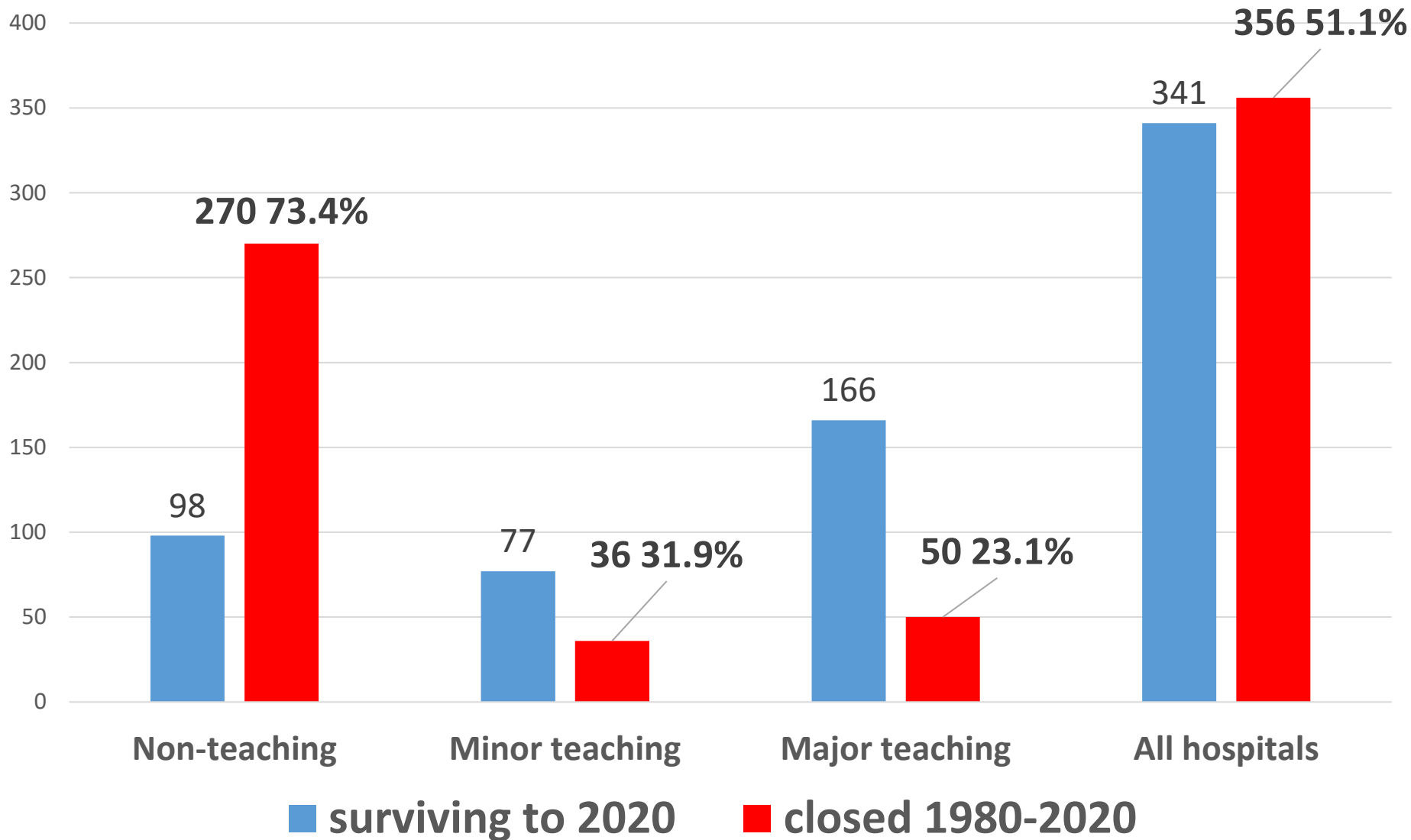


(c) 1973 - 2024 Alan Sager.

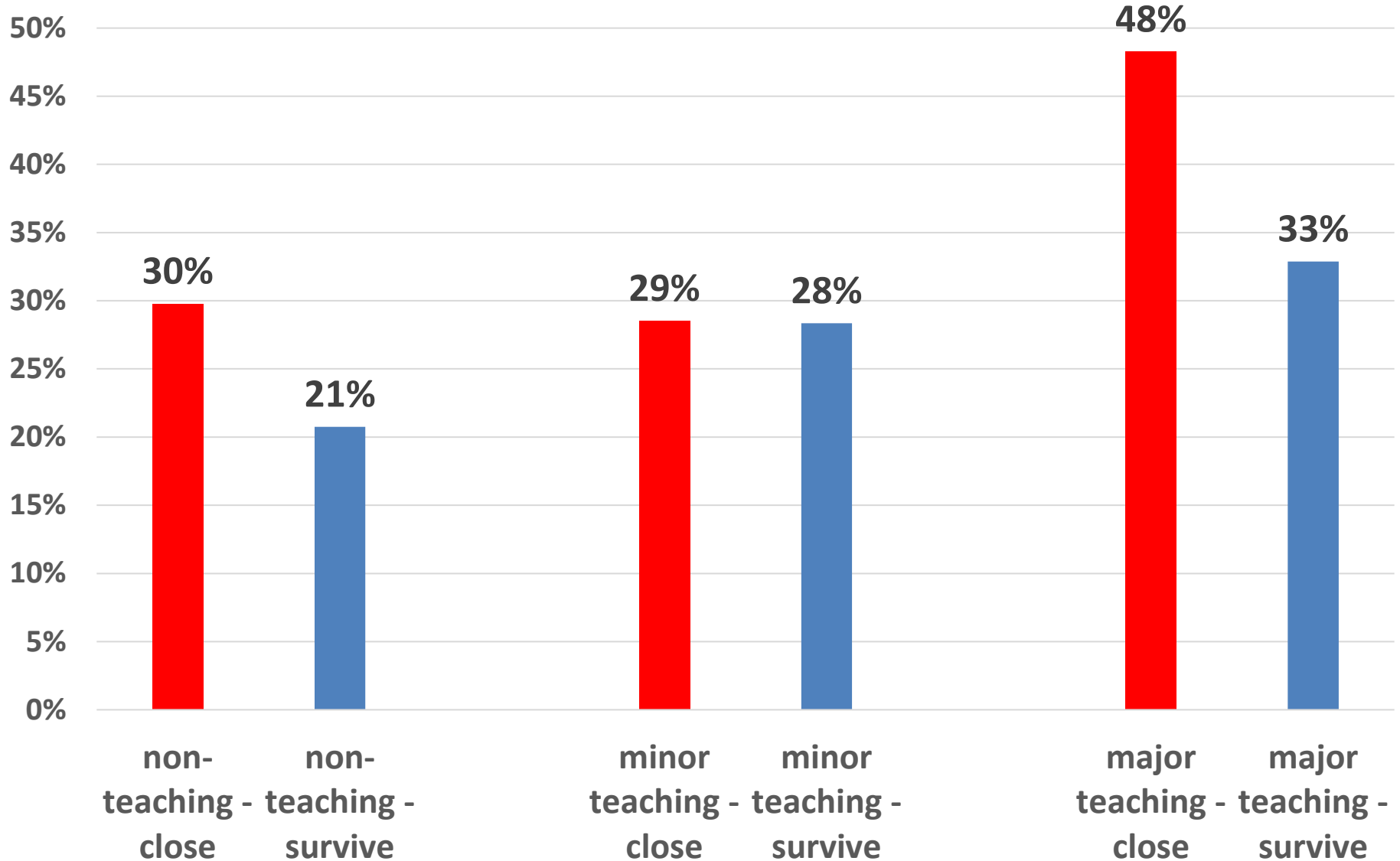
Percent of 1980 Hospitals Surviving to 2020, by Ownership



Hospital Closings from 1980 to 2020, by 1980 Teaching Status



Area Percent Black, 1990 by Survival to 2020 and by 1990 Teaching Status





ROBERT LIPSYTE

There Goes the Street, There Goes the Team

NEW YORK TIMES 11 JUNE 93

Racism has its franchises, too. For the first half of the 20th century, major league baseball teams stayed put. From 1950 to 1970, 10 of the 16 original clubs relocated, mostly to other cities, and the determining factor in the move seemed to have been the tilting of the neighborhood around the ball park from white to black.

The statistics that support this theory were presented yesterday to the fifth Cooperstown Symposium on Baseball and the American Culture by Professors Alan Sager and Arthur Culbert of the Boston University Schools of Public Health and Medicine. "We'd been studying urban hospitals," said Professor Sager, "and we found that race was the biggest predictor of hospital relocations and closings. People are remarkably sanguine about such wholesale hospital closings although they are personal catastrophes. Baseball teams moving may not be so catastrophic, but they certainly offer dramatic episodes of this important phenomenon."

In a season when Marge Schott's face still hangs like a nutter's moon over the Cincinnati Reds' dugout, when black baseball stars are too cunning or craven to protest the discriminatory patterns of their front offices, and when African-Americans fill only about 5 percent of the stadium seats sold.

• • •
"There are different kinds of racism," said Sager. "What the sociologists call 'institutional racism' is not necessarily venomously motivated, like Marge Schott's remarks, for example, but may be linked to deeper feelings about race in which causes and effects are hard to separate.

"Did night baseball make fans more afraid of coming into black

away from the world."

But aren't those the ones who have the power to move ball clubs? People like Marge Schott?

Sager sighs. "People like her have become unstuck from their moorings. She has trouble thinking of many of us as people. But if taxpayers are expending large sums to keep ball clubs in their cities through tax abatements and other subsidies, shouldn't we have some assurance they won't move? Shouldn't we have equity in the teams? Should the cities themselves own the teams?"

Sager and Culbert, in their study, analyzed several other variables besides neighborhood racial composition about the 10 teams that moved. They factored in the age of the stadium, the won-lost standing of the club (by games ahead or behind) and by income (through annual attendance). Of the four factors, it was race that most accurately predicted whether a team would stay or go.

Of those who stayed, the average percentage of blacks in the surrounding neighborhood was 17.6. Of those who left, the percentage was 44.1. That figure would have been far higher without the Boston Braves, the first team to move away, in 1952, and the Pittsburgh Pirates, who moved across town in 1970 because the University wanted the land. Both the

The size of the
park counts less
than the faces
beyond the fence.



WHAT PREDICTS MAJOR LEAGUE BASEBALL TEAM RELOCATIONS, 1950 – 1970?

- Race of residents living nearby
- Not attendance
- Not place in standings
- Not age of stadium

Predicted Chance of Hospital Closing, 1990 – 2010

(**Mean hospital** – as function of mean 1990 characteristics)

Independent Variable	β Estimate (coefficient)	Values for mean hospital	Prediction for mean hospital
Intercept	-2.190	1.000	-2.190
Beds	0.005	328.7	1.772
Area percent black	-0.010	28.7	-0.298
Occupancy rate	1.948	66.1	1.288
Hospitals in 1 mile	-0.168	1.2	-0.202
Fund balance/adjusted census	0.004	\$134,183	0.573
Case mix-adjusted cost/discharge	0.000	\$6,462	0.090
Sum			1.033
Exponential value of sum			2.810
Predicted probability of survival			73.8%
Predicted probability of closing mean hospital			26.2%

Efficiency
doesn't
predict
survival

Model C-statistic = 0.819

Predicted Chance of Closing between 1990 and 2010 Rises as Beds Fall and as Area Percent Black Rises

		Beds, 1990				
			Higher quartile	Mean	Lower quartile	
Area Percent Black, 1990		600	433	329	176	100
Lower quartile	5%	6.1%	11.8%	21.9%	38.9%	49.0%
Mean	29%	7.7%	14.6%	26.4%	44.9%	55.1%
Higher quartile	45%	9.0%	16.9%	29.9%	49.2%	59.4%
	75%	11.8%	21.7%	36.7%	56.9%	66.5%
	99%	14.7%	26.2%	42.7%	62.9%	71.8%

Of the 548 non-public hospitals with 50 or more beds that were open in 1990, 193 (35%) closed by 2010. Chance of closing was calculated from mean 1990 values of all significant variables—except Beds and Area Percent Black, which changed with the cell being calculated.

C. Why do hospital closings matter?

Access

Cost

Quality

So what?

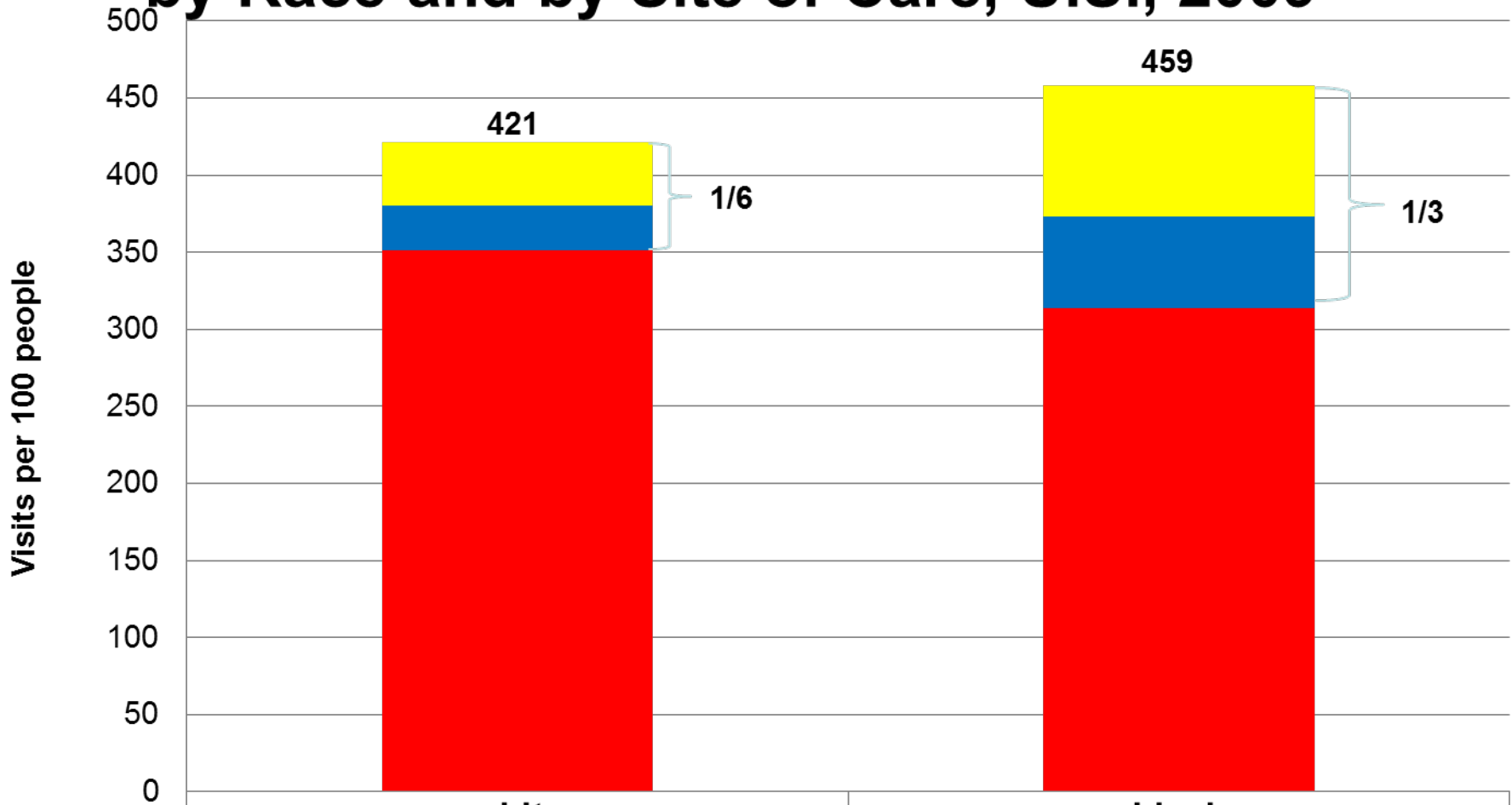
- Don't patients just vote with their feet, avoiding low-quality or unresponsive hospitals?
- How can a hospital be needed if it's losing \$
- Do we really need many hospitals?
 - Wouldn't more community health centers be an adequate substitute?
 - More supermarkets?

To help address these questions

First, let's remind ourselves that no one has the job of assuring access to care and containing cost of care in the U.S.

Second, let's look at the evidence on hospital closings' apparent effects on access – cost – quality → →

Physician Visits per 100 People, by Race and by Site of Care, U.S., 2009



■ ER
■ OPD
■ MD office

	white
ER	41
OPD	29
MD office	351

	black
ER	85
OPD	59
MD office	314

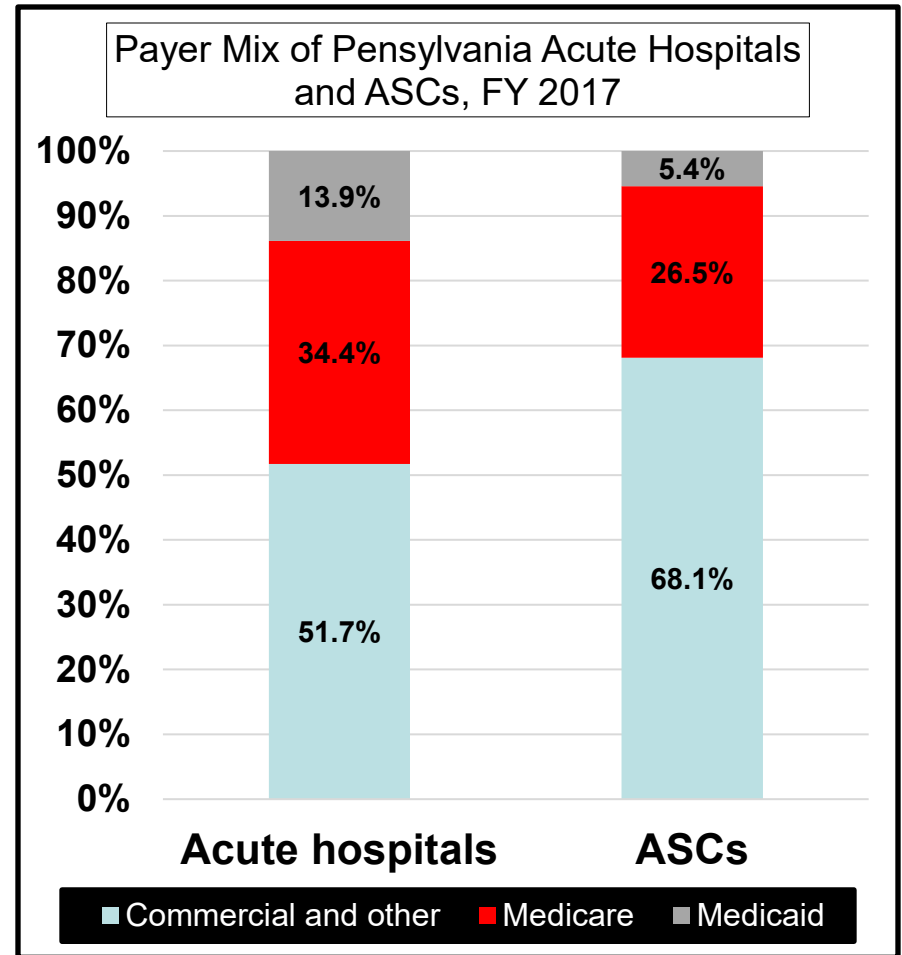
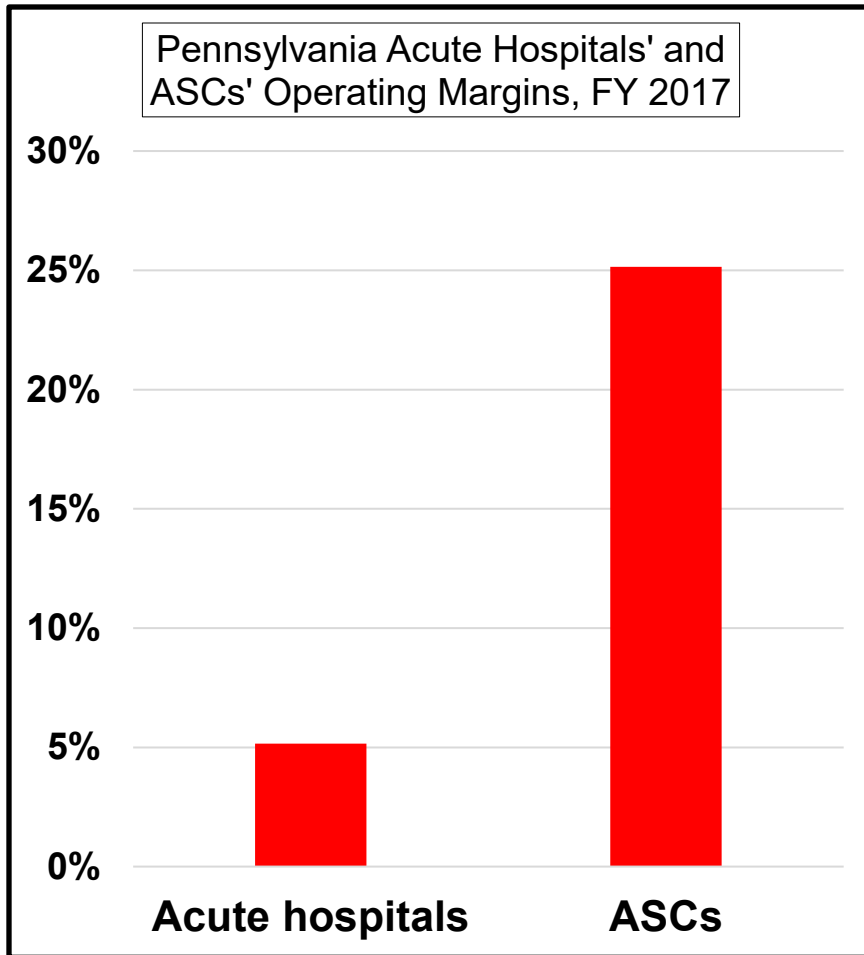
Source: *Health United States, 2011, Table 96, age-adjusted.*

ACCESS - Ambulatory

- So hospital closings disproportionately displace ambulatory care for blacks.
- Loss of a hospital undermines remaining physicians in private practice in an area.
- CHCs alone are inadequate substitute for hospitals, especially in arranging specialty MD care or care for very sick or badly injured humans.
- Despite Canada's and UK's coverage for all people, their lower-income and minority urban citizens are much likelier to lack a PC and rely instead on the ER.

Substitutes for Hospitals

Inadequate and in Wrong Places



Hospitals + doctors = symbiotic, not substitutes

- If neighborhood changes, ordinary non-teaching community hospitals often/usually want to provide care to new residents
- But if doctors in private practice follow former residents to suburbs, lack of physicians means no care for patients and no revenue for hospital
 - Much easier for doctors to relocate than hospitals
- Loss of hospital can undercut remaining docs

ACCESS – inpatient

- Cumulative loss of access grows over time, as large expanses of many U.S. cities lose their hospitals → “medical wastelands, deserts”
 - 45% of 774 open in 1970 had closed by 2010
 - 3/5 closed in areas >60% black in 1990
- Wrong to put too many beds in too few baskets
 - Katrina/NOLA, Sandy/Manhattan
- Closing → $\approx 30\%$ of inpatient volume is lost initially, and only gradually reappears
- Consider changes in St. Louis, Detroit, D.C.

St. Louis, Missouri

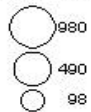
★ Hospitals Closing, 1936 - 2003

● Hospitals Open, 2003

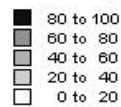
Closed Hospitals: Final Year Beds



Open Hospitals: 2001 Beds



Tract Percent Black & Hispanic, 1990



★ Closed 2003 - 2010

Sportsman's Park, St. Louis



17014 Homer G. Phillips, St. Louis, 1933 - 1980





De Paul



Evangelical Deaconess

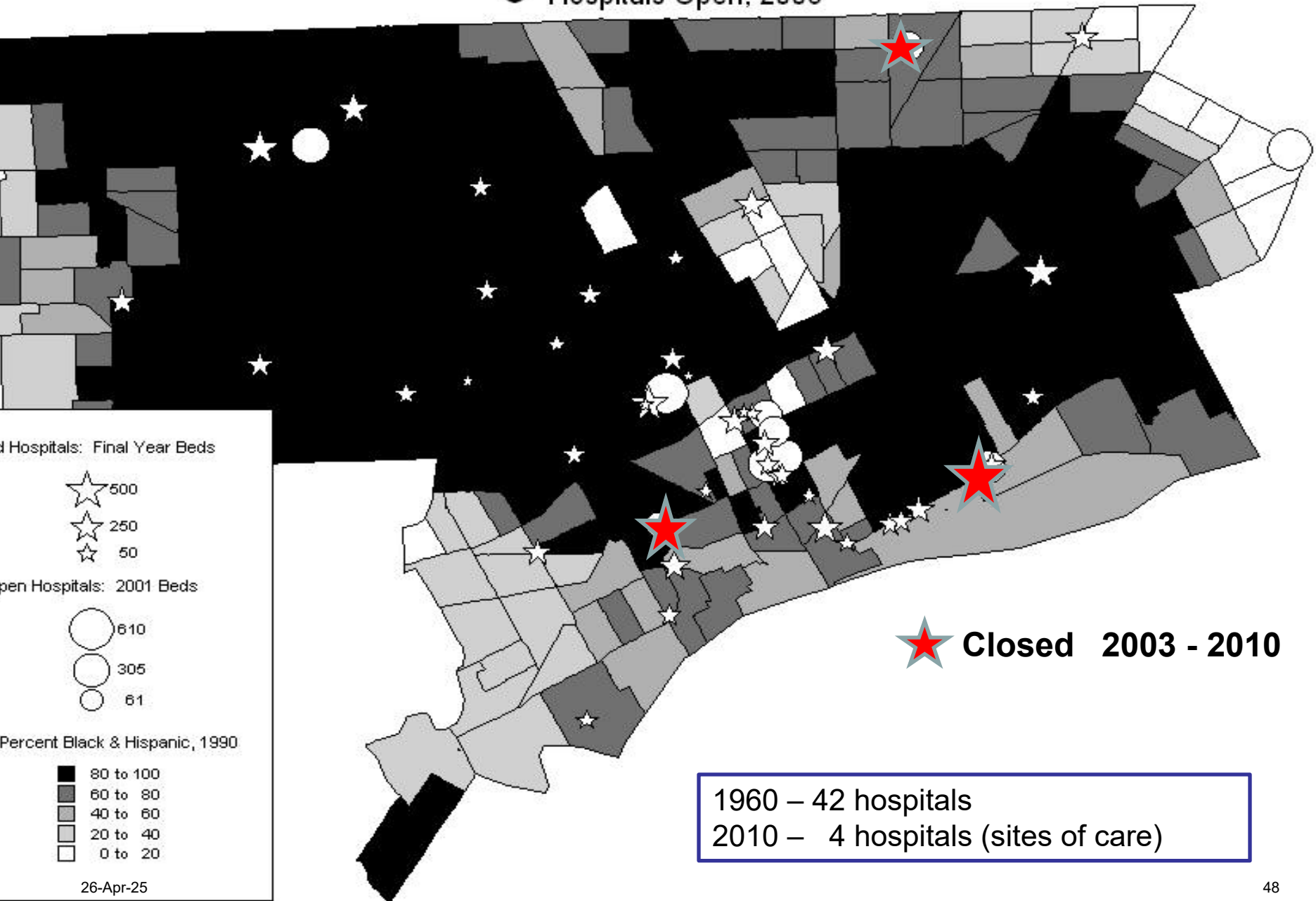


Missouri Baptist

Detroit, Michigan

★ Hospitals Closing, 1936 - 2003

● Hospitals Open, 2003



Detroit Riverview, - 2008



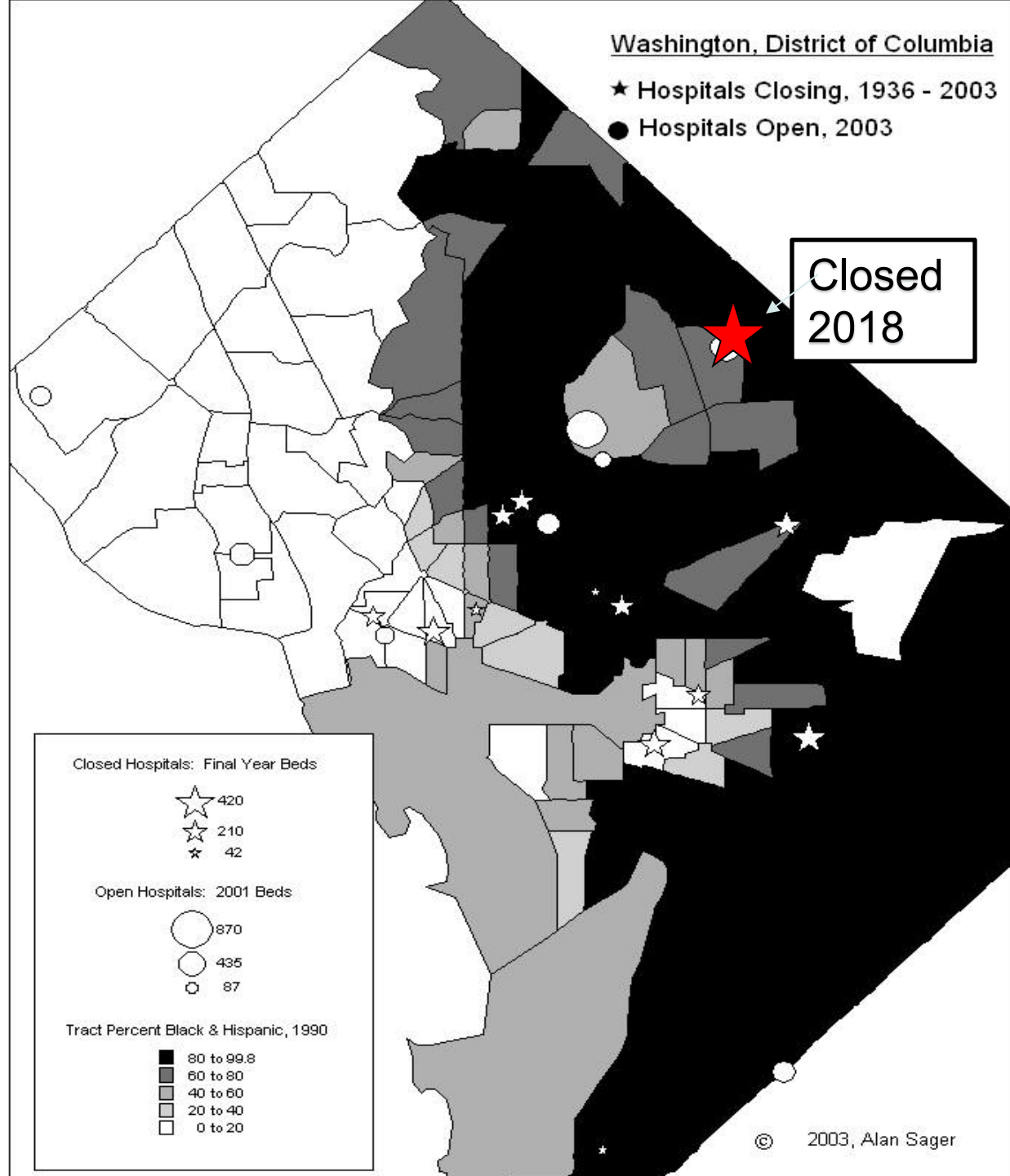
Southwest Detroit Hospital, 1974 - 1991



Washington, District of Columbia

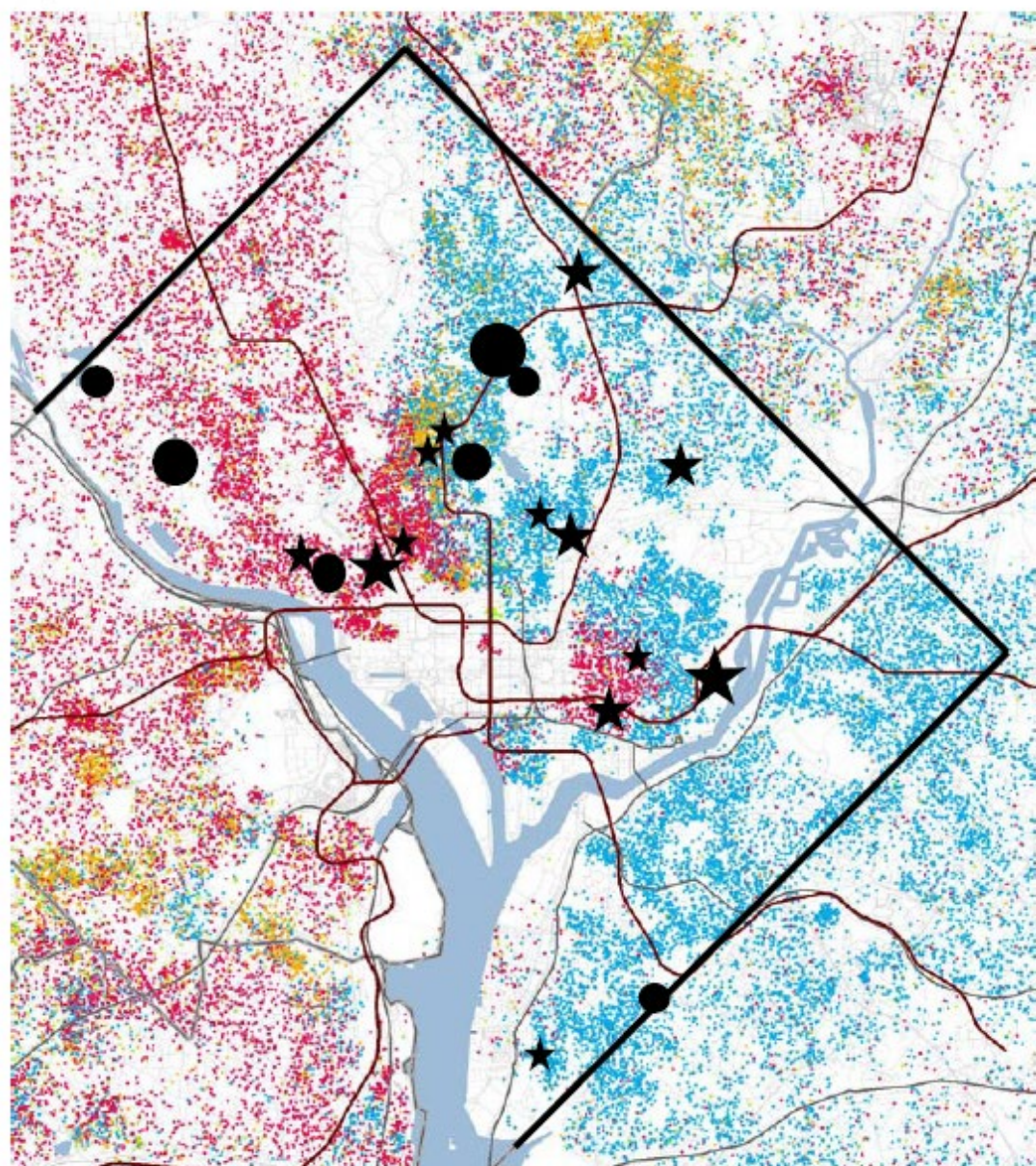
★ Hospitals Closing, 1936 - 2003

● Hospitals Open, 2003



Washington, D.C. 2000 Demography and Hospitals Closing 1936-2018 or Open in 2018

- Open in 2018 Size of circle or star is roughly proportional to 2010 or final-year beds
- ★ Closed 1936 – 2018



Each dot represents 25 people. Red = white, blue = black, green = Asian, orange = Hispanic. Map by Eric Fischer, posted by Matt Johnson, <http://greatergreaterwashington.org/post/7220/maps-show-racial-divides-in-greater-washington/>.

Griffith Stadium, Washington, D.C.



Eastern Dispensary

18007 D. C. General, 1846 - 2001



COST

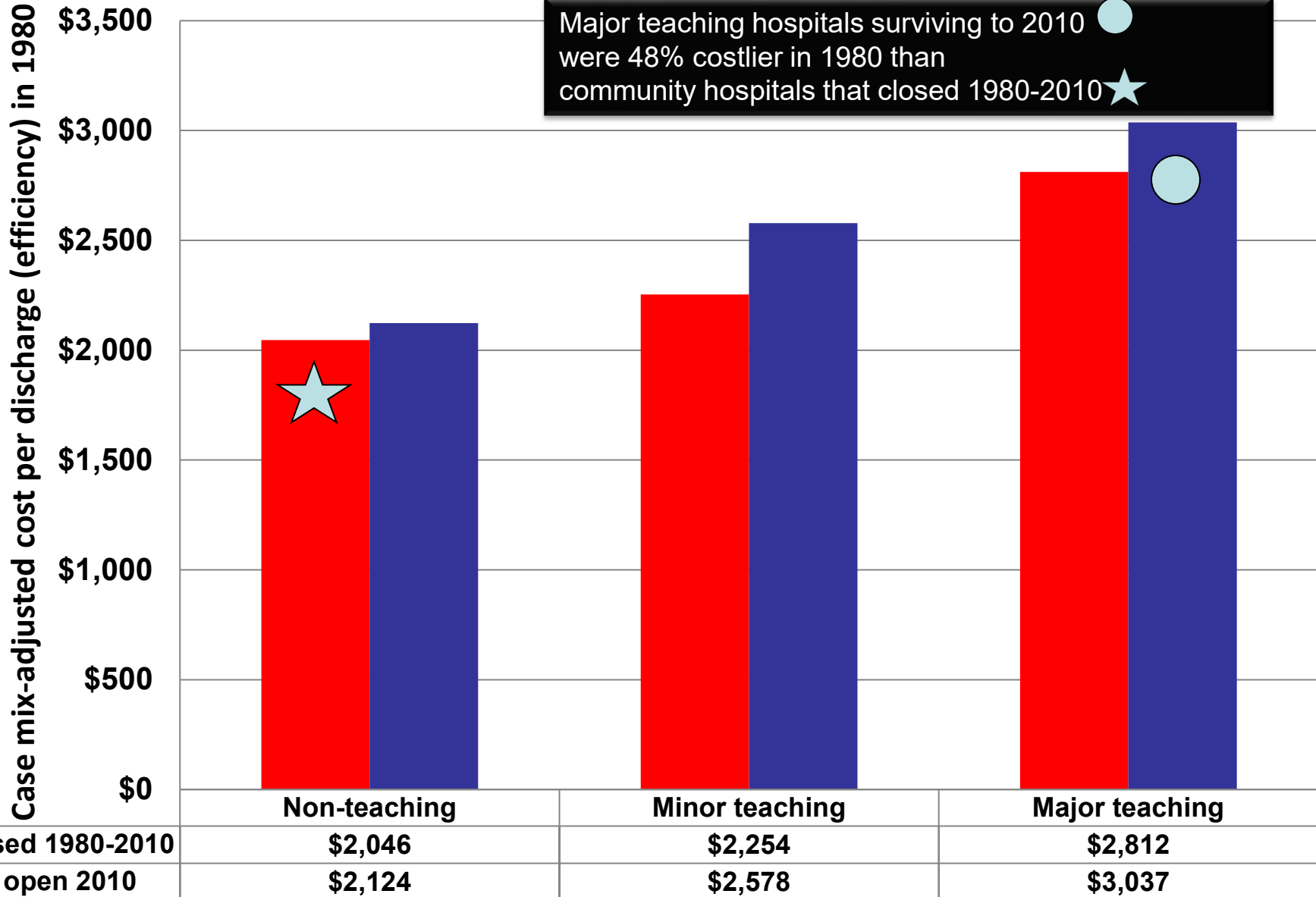
- a. Fewer hospitals → fewer competitors → less price competition → higher prices → higher revenue for surviving hospitals → they can incur higher costs
- b. Slight/moderate tendency in each decade for the more efficient (less costly) to close
- c. Teaching hospitals' growing share of most cities' hospital beds

- 44% in 1950
- 85% in 2020

WHY?

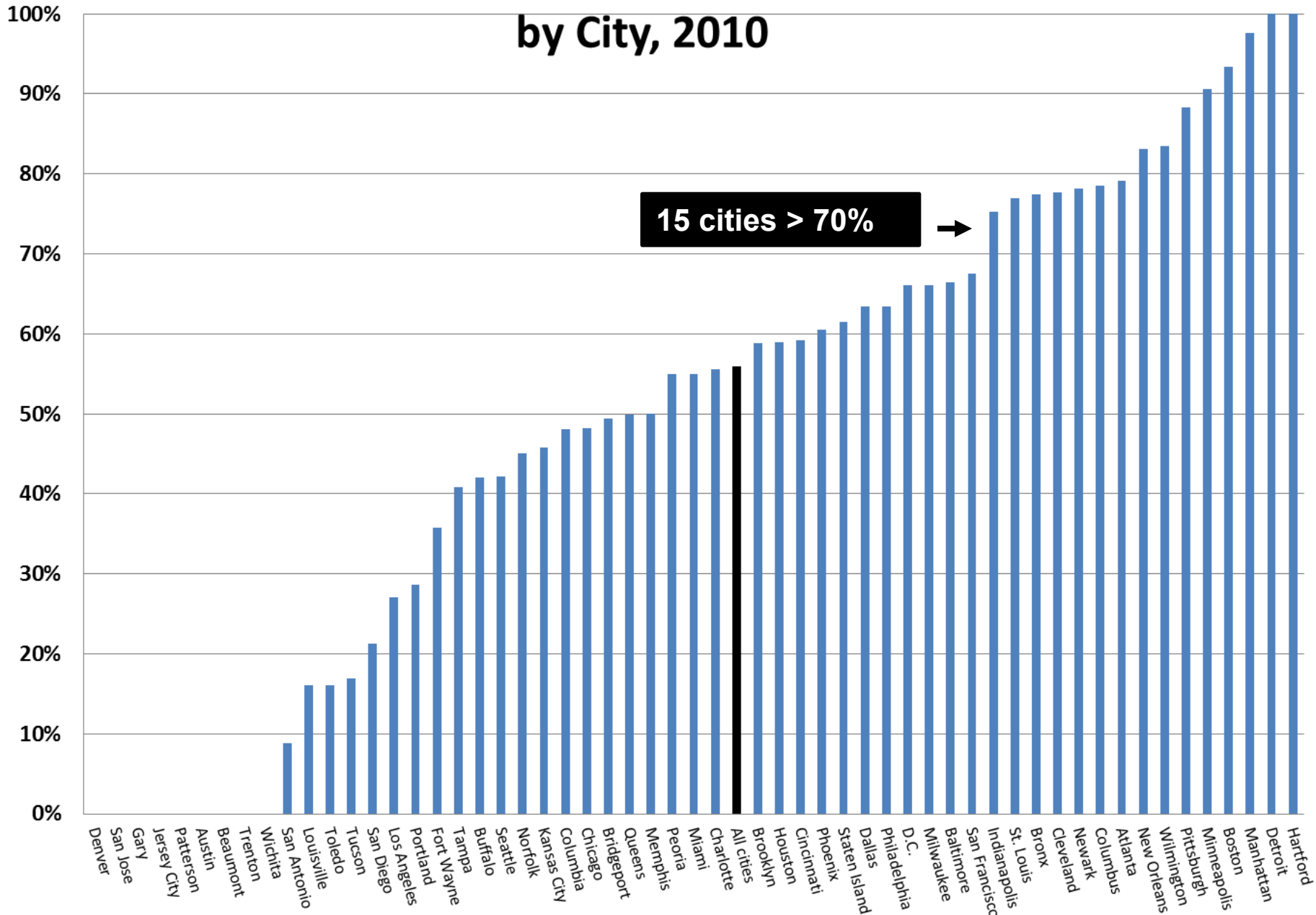
- Some non-teaching hospitals switch to teaching
- Teaching hospitals much likelier to survive or grow
- Fewer urban docs seek to admit to non-teaching

Hospital Efficiency in 1980 by Teaching Status and Survival to 2010



COTH Major Teaching Hospitals' Shares of Beds, by City, 2010

Council of Teaching Hospitals Members' Shares of Beds, 2010



15 cities > 70%



COST

- If our lower-income urban patients get care, it's increasingly given in the world's costliest teaching hospitals
 - Boosts Medicaid's cost
 - Hard for these hospitals to give care cheaply, even for uncomplicated problems

COST

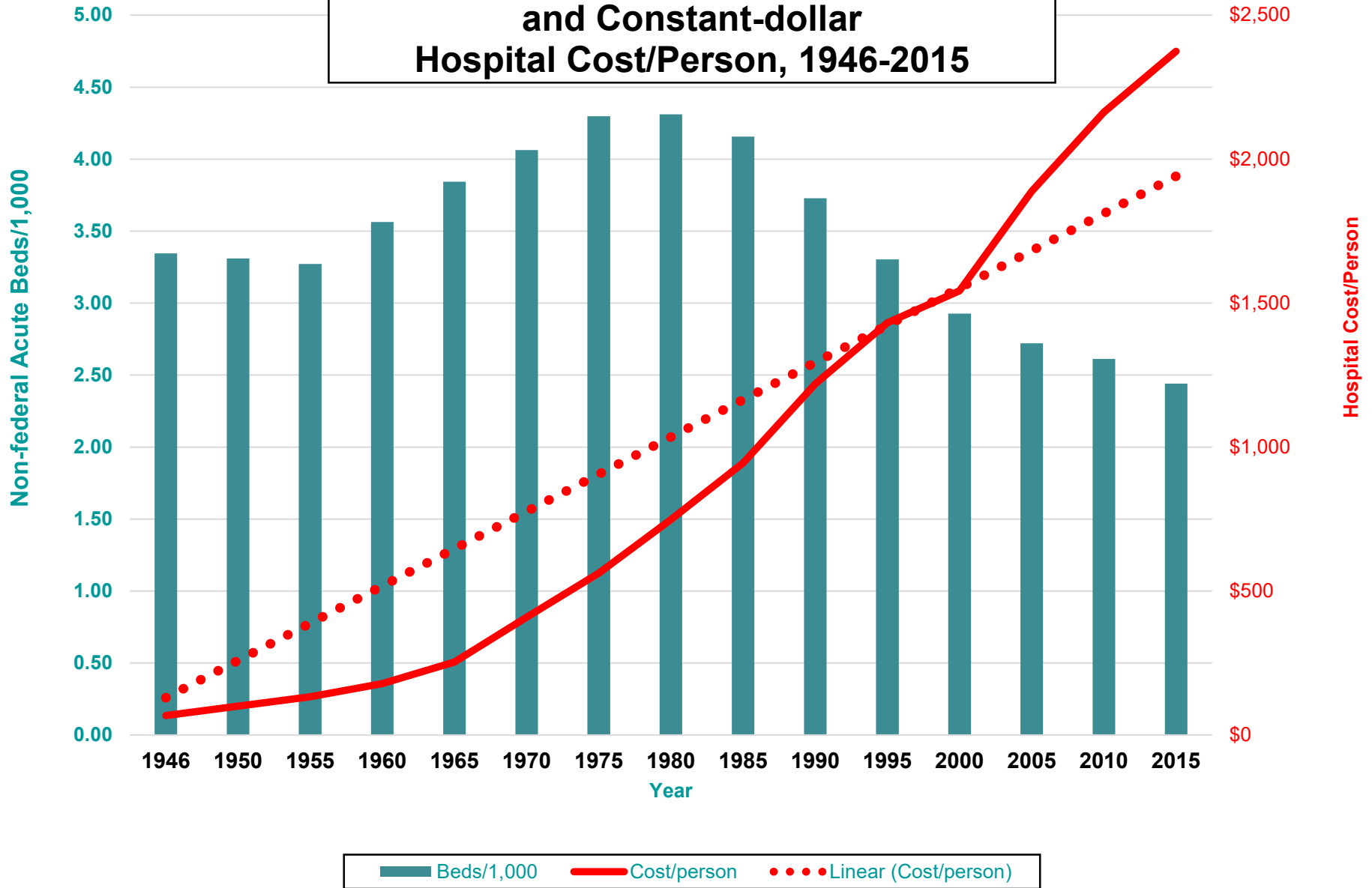
- A combination of
 - Closing of more efficient hospitals in each group
 - non-teaching, minor teaching, major teaching
 - And, especially, shift of patients toward major teaching hospitals
 - Closing of non-teaching hospitals
 - Expansion of teaching hospitals
 - Conversion of some hospitals to major teaching
- **Boosted 2010 costs in the 52 cities by about 20 percent (\$12B)**

Cost-access paradox

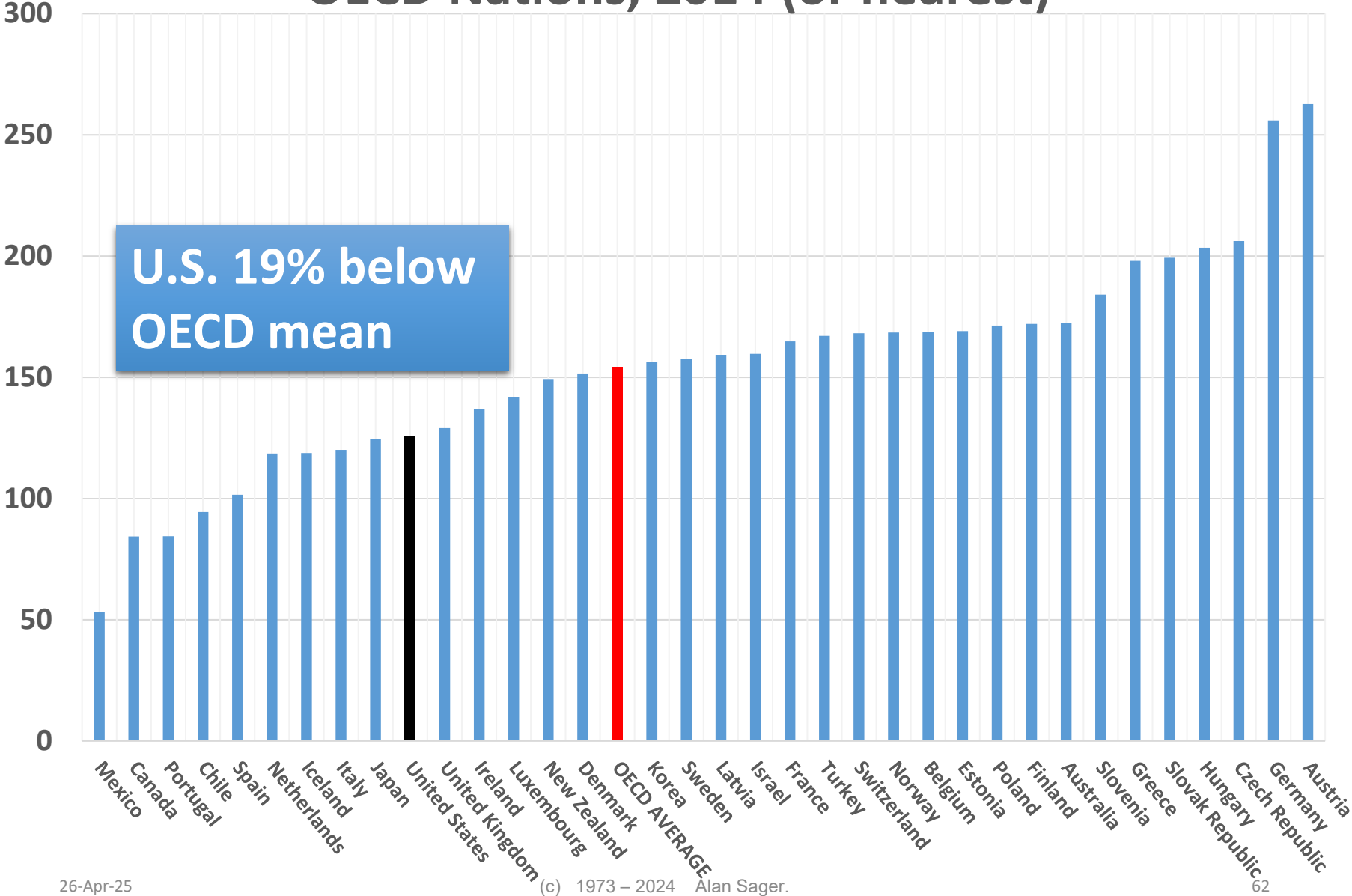
Surviving major teaching hospitals are increasingly essential to protecting access for urban patients but also increasingly unaffordable for payers—especially Medicaid

- **Almost all have survived until now**
 - **Few alternatives survive in many cities**
 - **Often merge to win leverage over payers**
 - **Often have strong political backing**
- **But will they have to change to survive?**
- **If so, will they be willing and able to change?**

U.S. Non-federal Acute Beds/1,000 People and Constant-dollar Hospital Cost/Person, 1946-2015



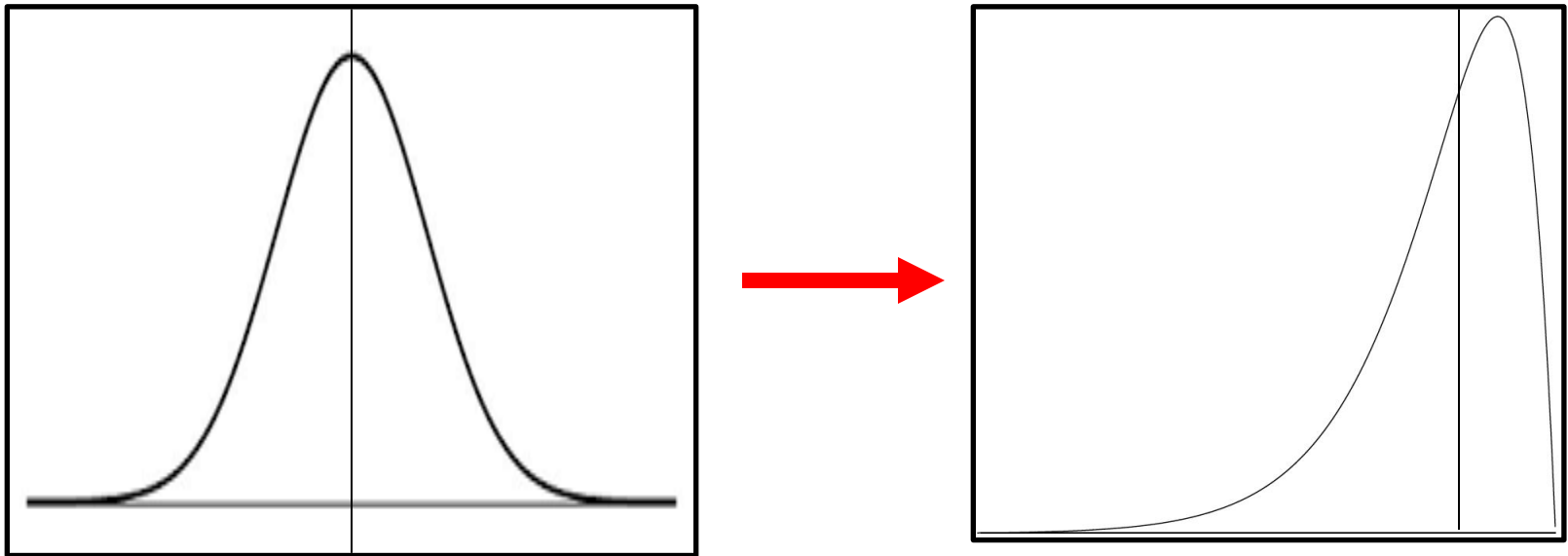
Acute Hospital Discharges/1,000 People, OECD Nations, 2014 (or nearest)



QUALITY

- Were many closed hospitals effectively segregated racially and low in quality?
- If so, closing of non-teaching hospitals in heavily black neighborhoods and relocation of their patients to large teaching hospitals might → more integrated, mainstream care, boosting quality
- But
 - Is care at integrated teaching hospitals racially neutral?
 - Do patients with routine problems get good care in teaching hospitals that focus on complex problems?
- Most nations care much more about raising health care's ceiling—the best it can do—than about raising the floor—the worst it can do

Confront low-quality hospitals – demand and finance substantial improvements— those that raise the floor, not only those that raise the ceiling



Raise the ceiling or the floor?



Raise ceiling



Raise floor

How?

- Public scorecard for “safety net hospitals”?
 - Elements?
 - ER waiting times
 - Time to specialist referral
 - See same PC each time
 - Infection rates, wrong meds, falls, other metrics?
- Which are the safety net hospitals?
- 0/1 or interval scale 0 – 10?
- Each needed hospital?

Hospital closings = Longest-running policy failure in U.S. health care

Who sustains it? Who benefits?

- a. People unserious about containing costs
- b. Those unwilling to disturb prestigious but costly teaching hospitals
- c. Those untroubled by visible gap in closings by race
- d. Those who imagine a competent free market justly chooses winners and losers
- e. Those who care about ceiling, not floor

No one's serious about cost control

- Political support mile-wide + inch-deep
- But no one can look like they don't care
- So close hospitals
- Primary care is all you need
- Or greater attention to SDLs
 - Prevention is what really matters!
 - And you'll live forever
 - Besides, focusing on SDOHs lets health care itself off the hook

Why are we spending \$5 T on U.S. health care in 2024?

To win medical security

1. Confidence that, when ill, injured, or disabled, we will all get care that is
 - Competent
 - Appropriate and effective
 - Kind
 - Coordinated and continuous
 - Quick
2. Without worrying about the deductible or the bill or medical debt or bankruptcy

D. Stabilizing needed hospitals

CASE FOR INTERVENTION - 1

1. We lack a free market that could weed out the inefficient hospitals.
2. Even if we had a free market, it could only ratify purchasing power and doctor location—both maldistributed today.
3. Racial link with closings is very troubling.
4. Bed shortages may loom in many areas.
 - Average hospital census nationally now about 530,000—might rise in coming decades.
 - Alberta just found it may be short 3,000 beds
 - Surge capacity is vital when needed

CASE FOR INTERVENTION - 2

5. Cost of replacing closed beds has surpassed ~ \$1M → \$2-3-4-5!M
 - Mass. Soldiers' Home - \$1.7 M/bed
 - \$1-2-3-4-5 billion / 1,000 beds
6. Keeping a hospital open in an under-served area is worth more than promises tomorrow
7. Especially when its survival depends on organizing needed care—primary care, ER
8. Ambulatory surgery centers, urgent care centers, and others locate in wealthier areas

CASE FOR INTERVENTION - 3

9. With so many hospitals closed, burden of proof should shift
- No hospitals should be allowed to close without proof that they are no longer needed to protect the health of the public
 - Only 1 state has list of needed hospitals + ERs

10. Configuration matters

- Right number of hospitals
- Of right types
 - Teaching - community
- In right places
 - Don't put too many beds in too few baskets



5 ACTION STEPS

1. Identify needed hospitals likely to close
 - Which hospitals (and ERs) are needed to protect the health of the public?
 - ✓ And to attract needed doctors to each locality?
 - What types of hospitals?
 - ✓ Located where?
 - ✓ Again, only one state has such a list.
 - Identify potential closers in time to intervene
 - ✓ Track financial ratios annually
 - ✓ Use long-term predictive model

2. Raise public awareness of the risk to a needed hospital

- Trustees and CEOs deny problems until it's too late
- They claim that going public would only undermine the hospital prematurely
- They often act as if they thought, “If we can't save this hospital, we would be embarrassed if someone else did so.”
- They often believe that hospitals that can't compete in the market deserve to close

3. For temporary protection

- a. Enact state hospital receivership laws, allowing officials or citizens to petition a court to take control of a hospital and stabilize its finances
- b. Governors could declare that closing Hospital X constitutes a “public health emergency,” allowing state to seize control of needed hospital and stabilize it
- c. Underpin a+b with short-term financial relief from state trust fund financed by 0.25% of yearly hospital revenue → about \$3 billion in 2019
 - $(0.25\% * \$1,250 \text{ billion} \approx \$3 \text{ billion})$
- d. Consider mothballing beds instead of delicensing

4. To guarantee enough money to give efficient and high-quality care to all in need, establish all-payer rate-setting or hospital budgets

- Absent a free market, only a public regulatory structure can protect each needed hospital, regardless of its teaching status, neighborhood demographics, or endowment
- Hospital budgets must contain enough money to attract and retain the doctors to provide needed care

5. Confront low-quality care, and demand and finance substantial improvements that raise the floor

Current ceiling

New floor



Current floor—what forces  push it upward?