

# **Causes and Consequences of Urban Hospital Closings and Reconfigurations, 1936 - 2010**

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# OVERVIEW

- A. The terrain
- B. Identifying the hospitals that are likelier to close
- C. Why do hospital closings matter?  
Access, Cost, Quality
- D. Stabilizing needed hospitals



# A. The terrain

# Overview

- The care we get depends heavily on the caregivers we've got.
- The configuration of urban hospital care—location, hospital type, and number of beds—evolves constantly.
- Over the decades, smaller and mid-size hospitals, and those located in black neighborhoods, have been much likelier to close. Efficiency confers no survival value.
- Patterns differ across cities but consequences for access and cost appear undesirable, on balance. Consequences for quality appear mixed.
- Financial, legal, and policy tools can and should be employed to identify and stabilize needed hospitals and ERs.

# Why? When? Which?

- Why?

- 1972 - Duncan Neuhauser assigned “Urban Community Hospital in Transition” – hospital adaptations to neighborhood changes
- Boeing 707
- “The care we get depends heavily on the caregivers we’ve got.”

- When?

- 1937 Guide to U.S. and Canadian Hospitals available in Countway
- 1940 U.S. Census first compiled tract data for all cities > 50,000

- Which?

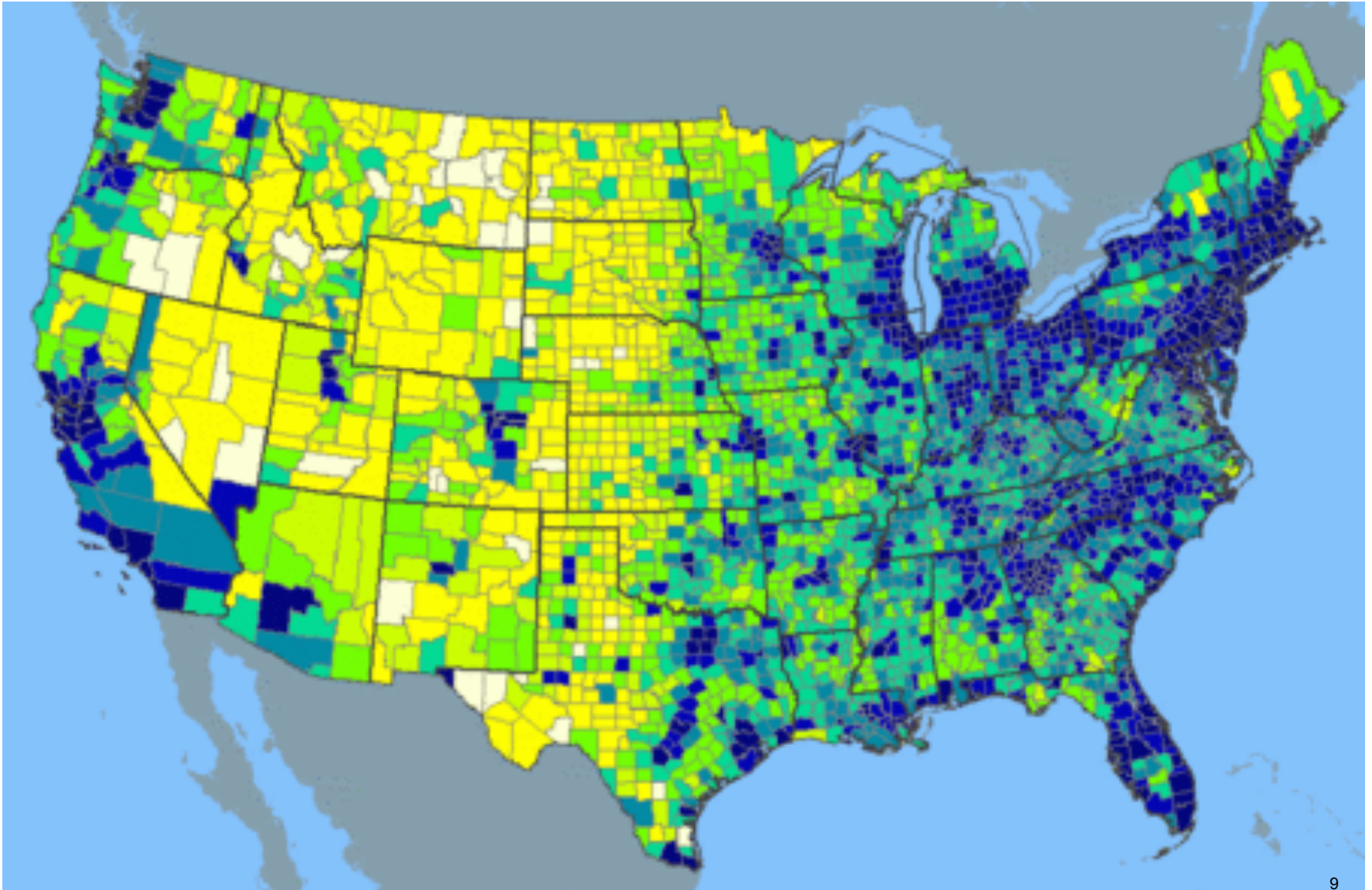
- All central cities of metropolitan areas with 1,000,000 or more in 1970
- Stratified samples of central cities of smaller metro areas (250-500K + 500K-1M)



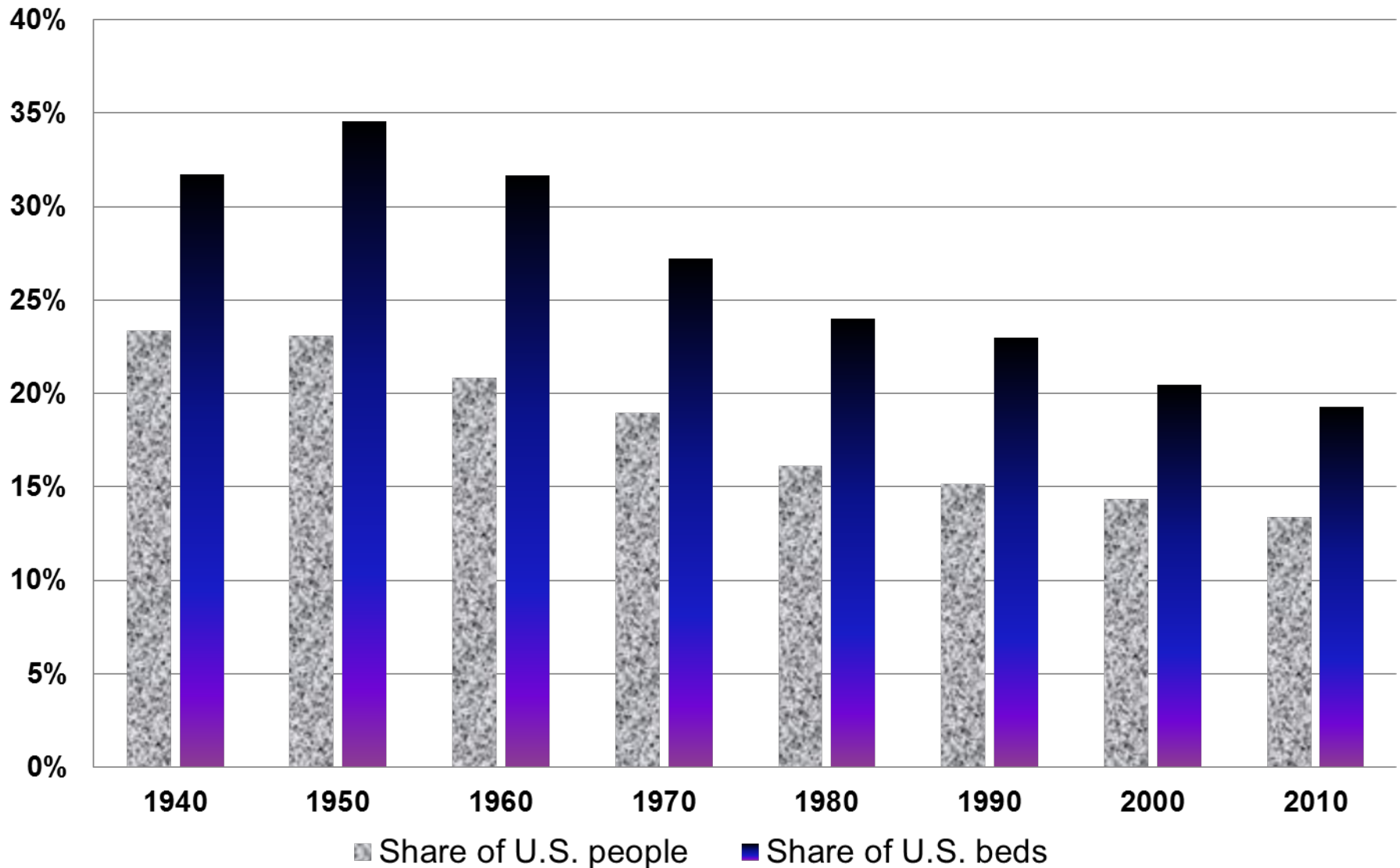
# The 52 cities



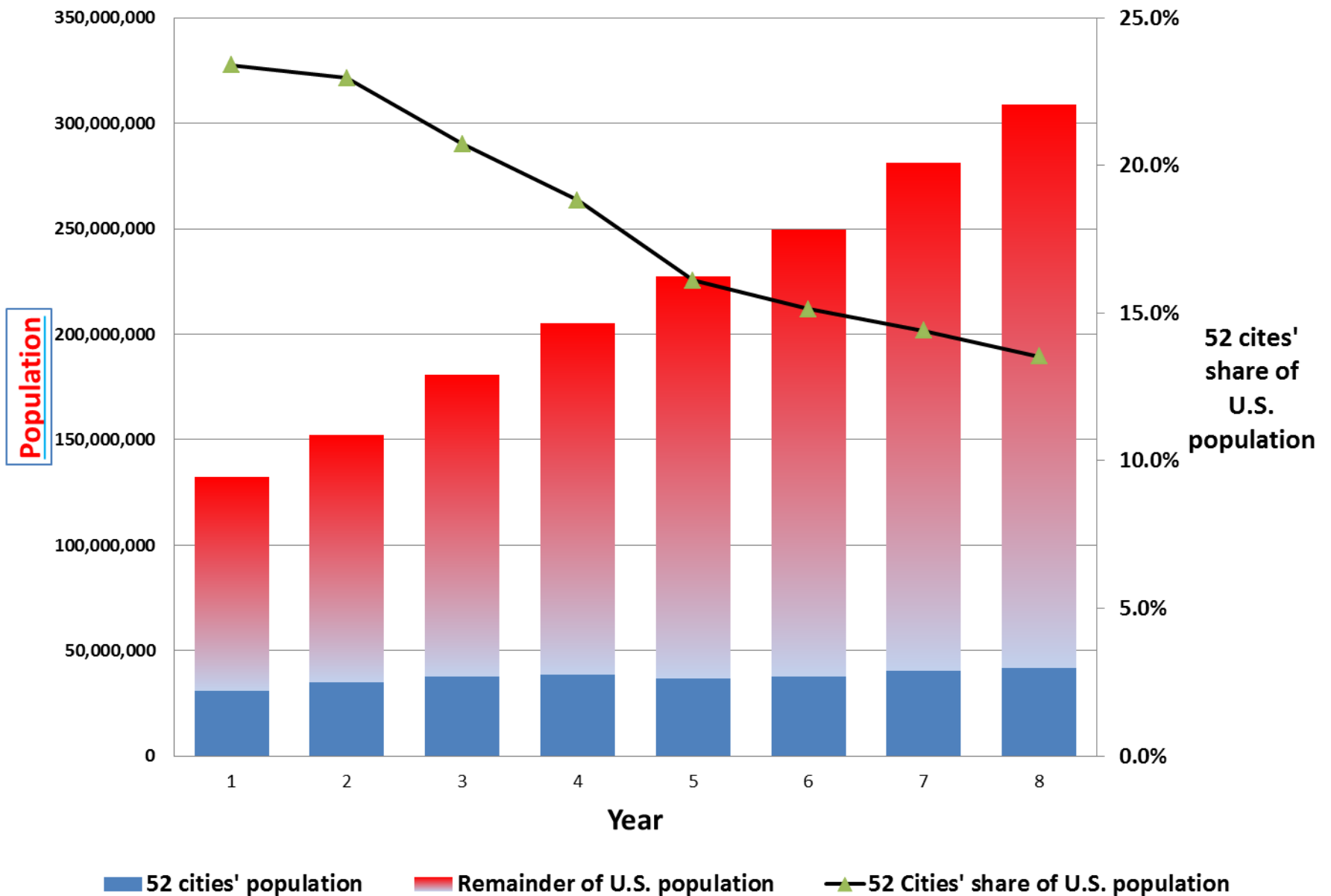
# U.S. Population Density, 2010



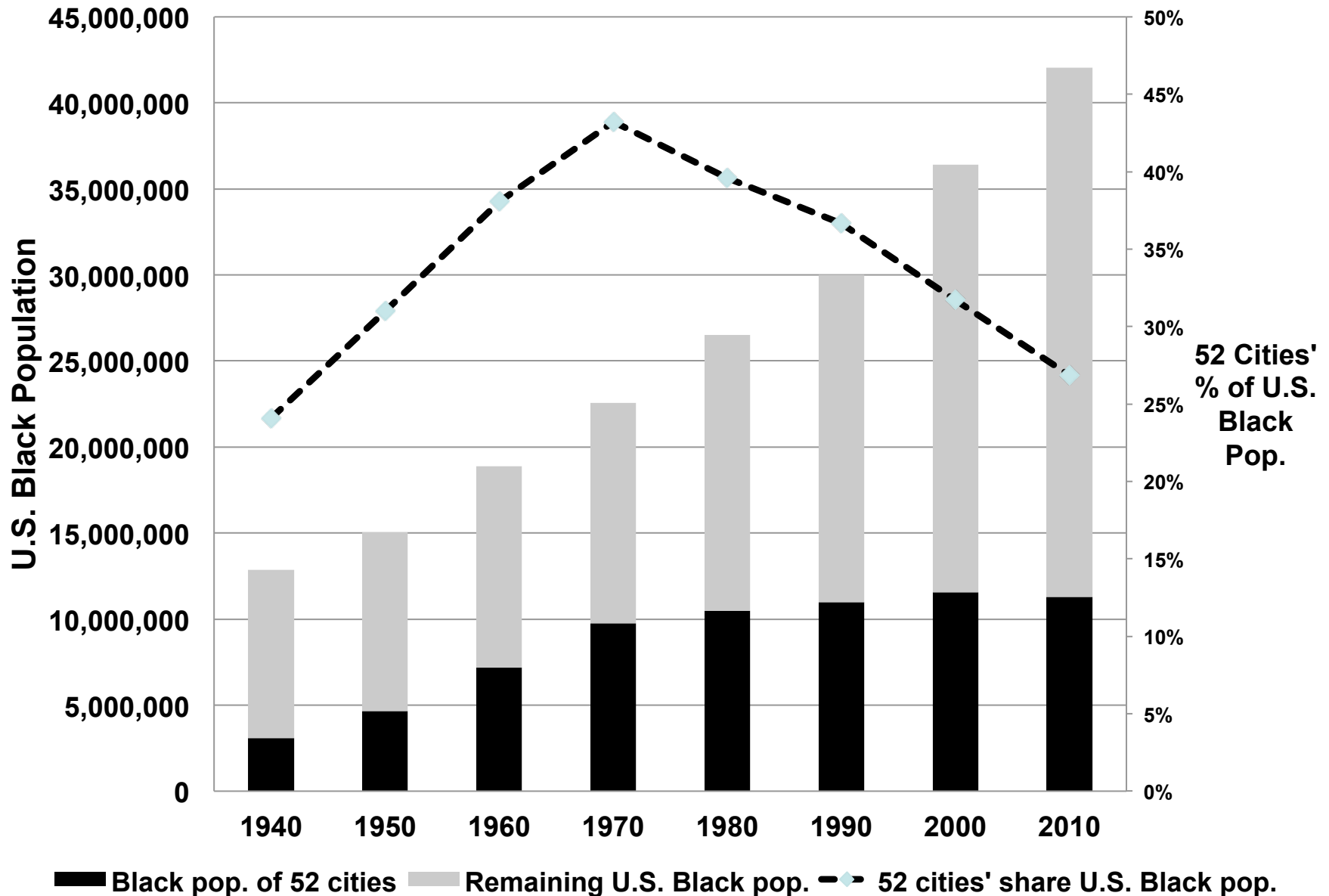
# 52 Cities' Shares of U.S. People and Beds, 1940 - 2010



## 52 Study Cities' Share of U.S. Population, 1940 - 2010



## 52 Cities' Share of U.S. Black Population, 1940 - 2010

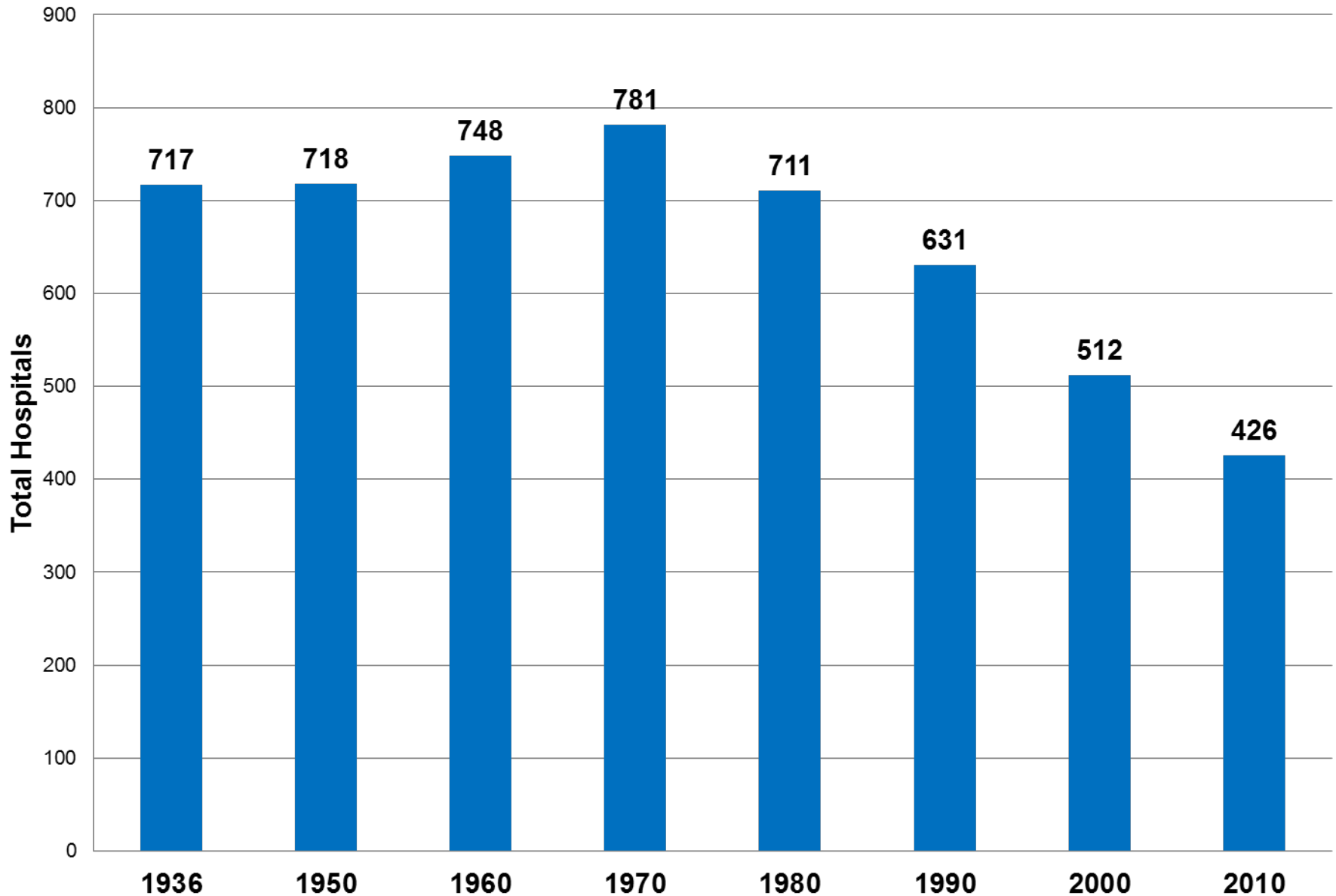




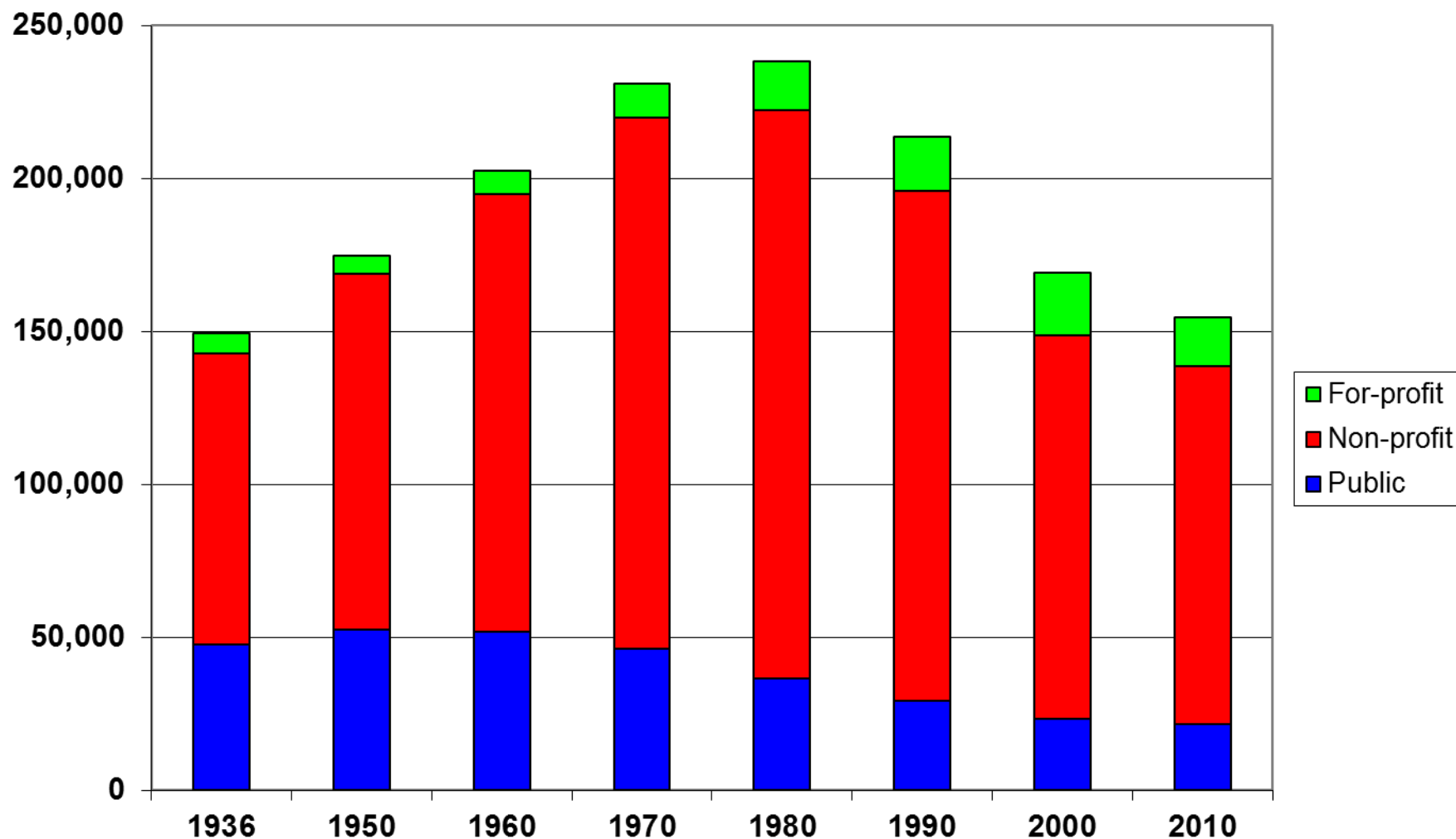
# Study Hospitals

- Follow beds, site of care, not corporate entity
- Closing = cessation of acute inpatient care
- Non-federal, short-term, acute “general and other special”
  - Med-surg and other services
  - Pediatric only
  - Obstetrical only (now largely obsolete)
  - Cancer only (now largely obsolete)
  - Excluding psychiatric-only, rehab-only

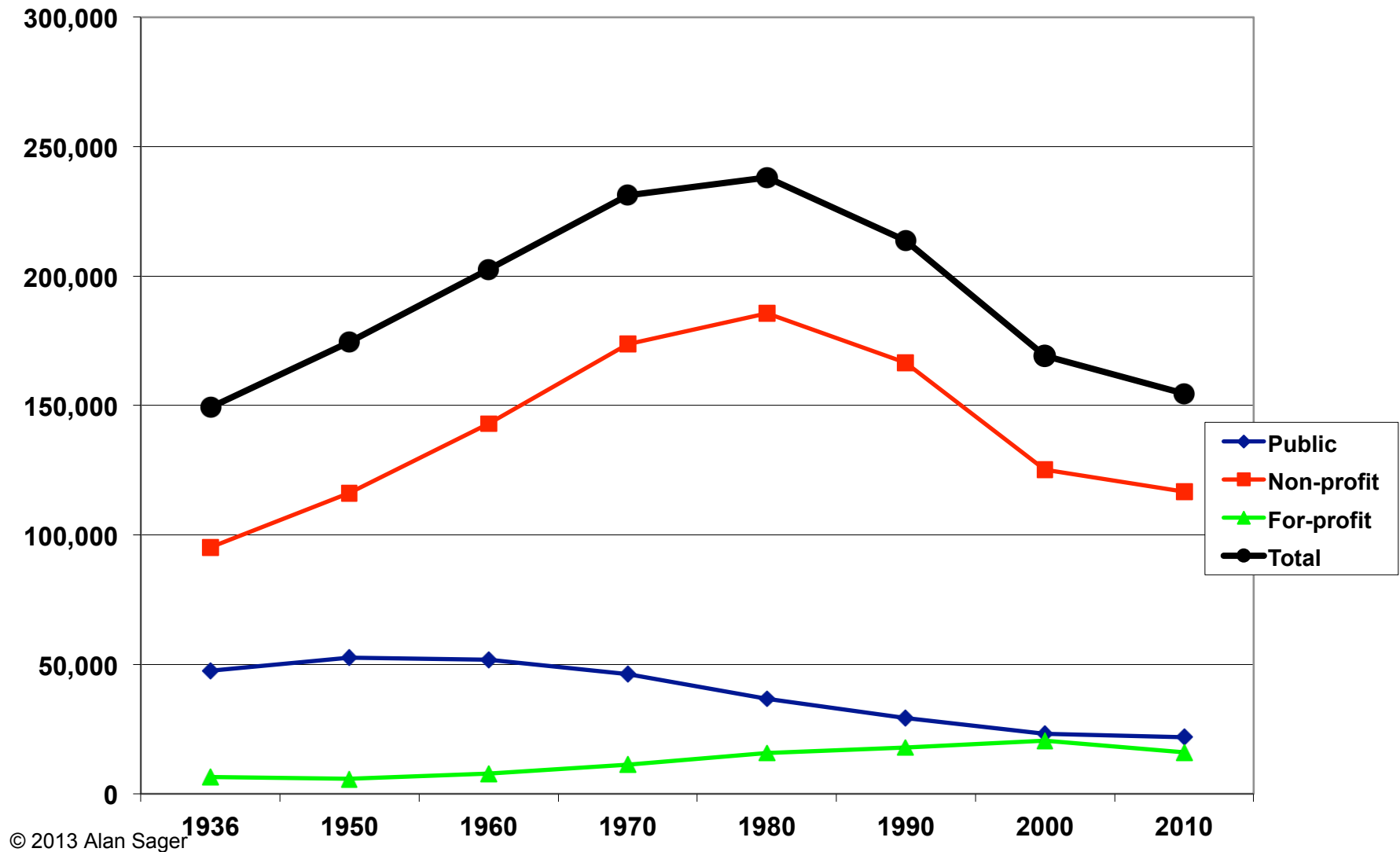
# Total Study Hospitals, 52 Cities, 1936 - 2010



## Number of Hospital Beds by Ownership, 52 U.S. Cities, 1936 - 2010

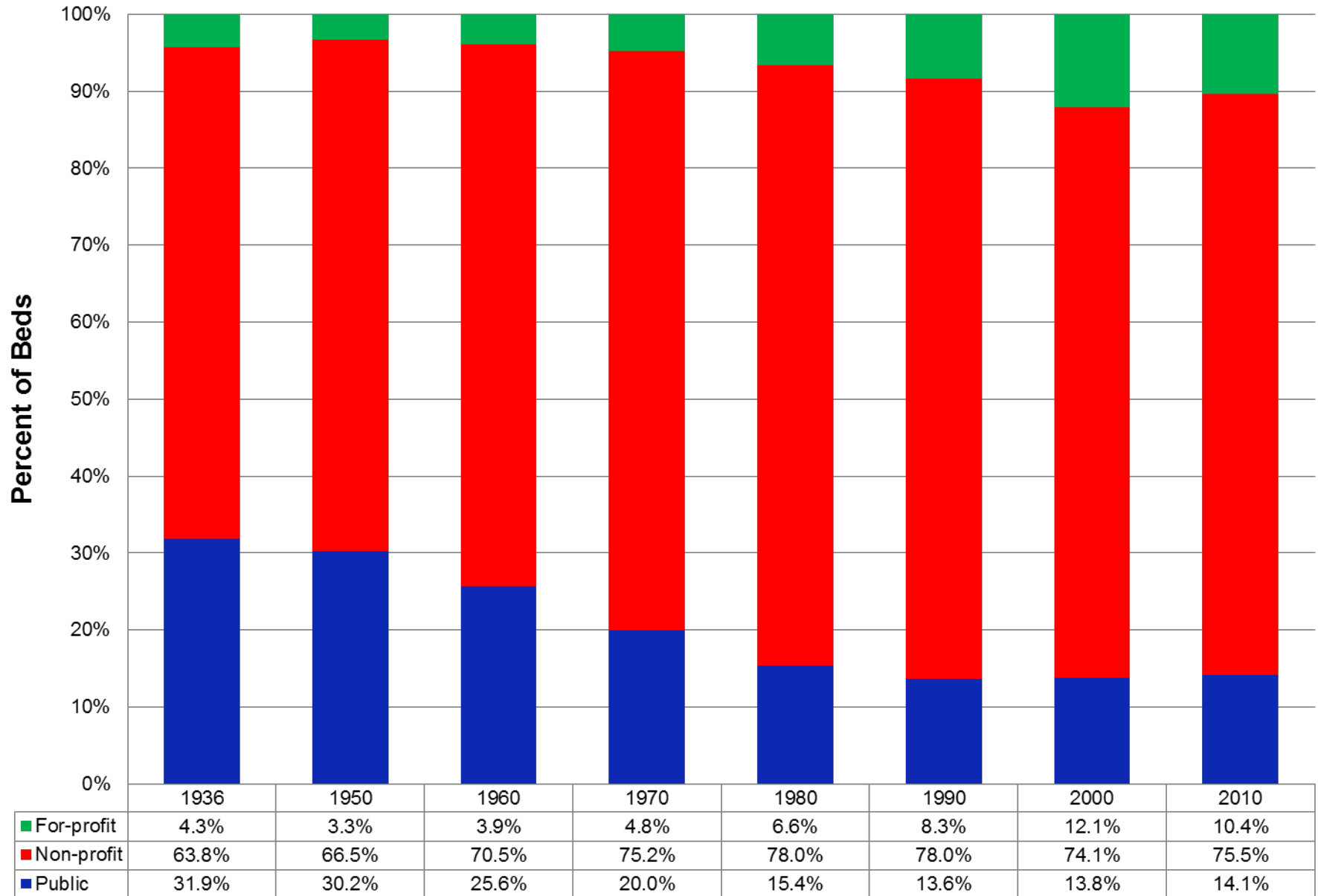


# Hospital Beds by Ownership, 52 U.S. Cities, 1936 - 2010

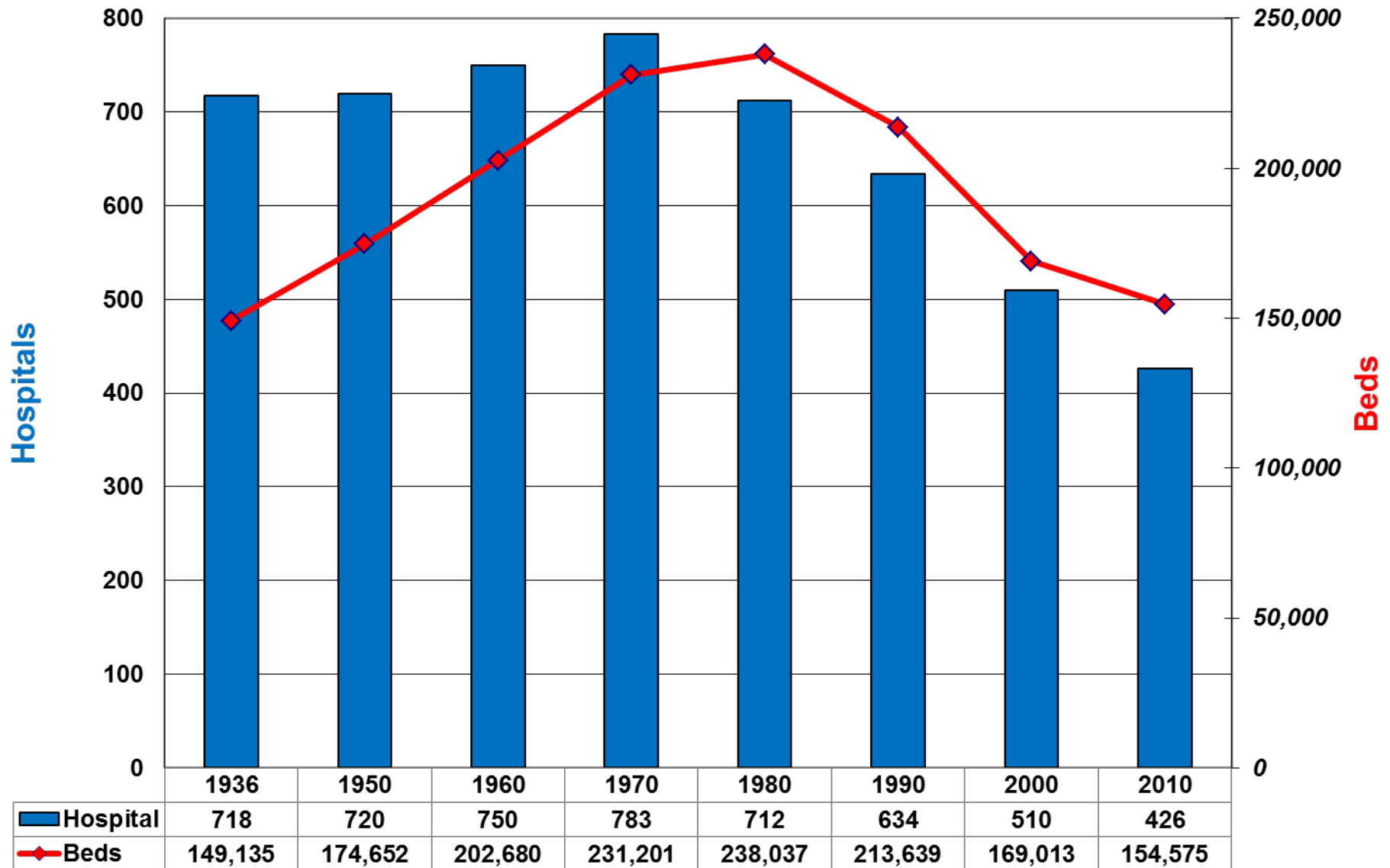


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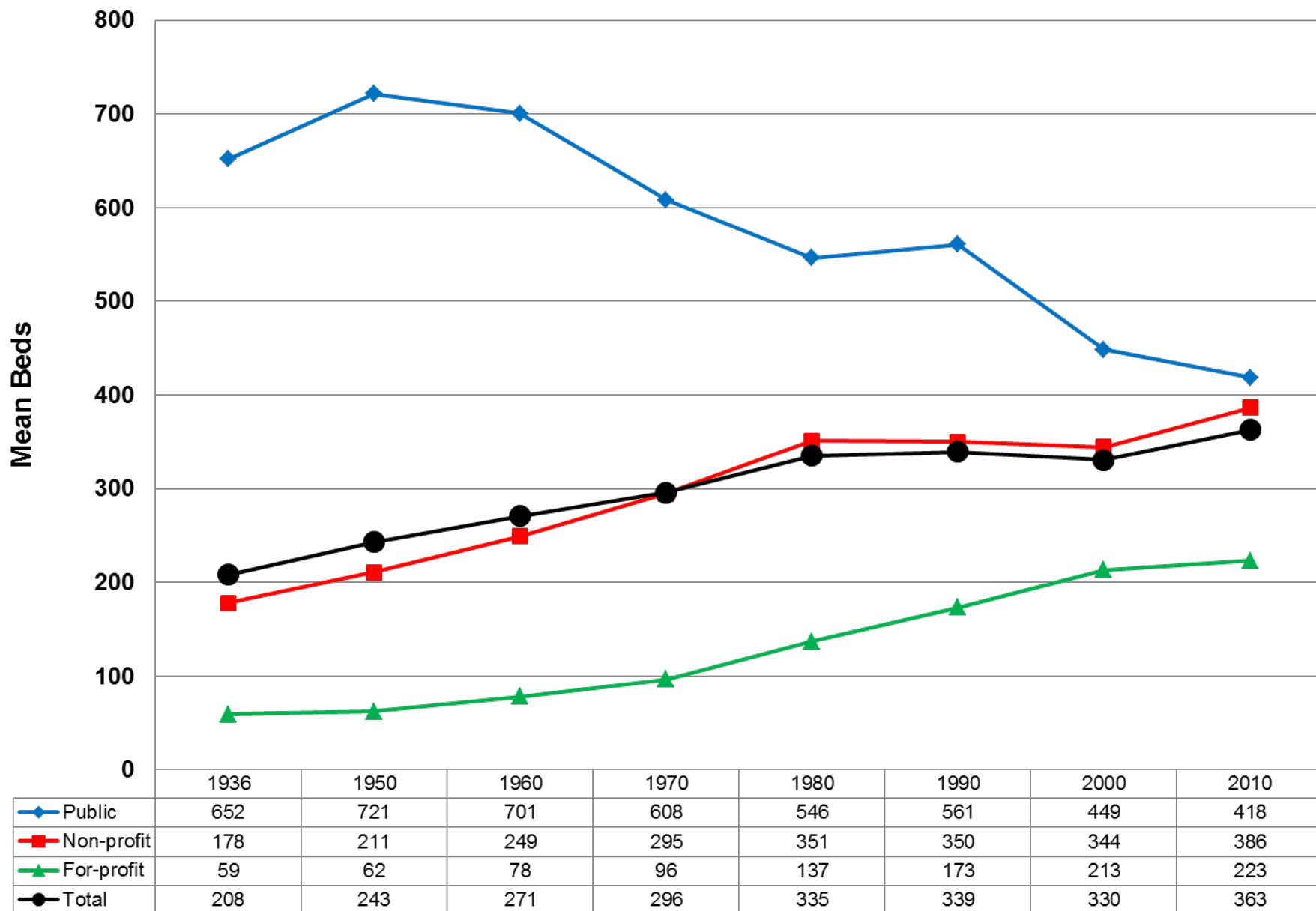
# Percent of Beds by Ownership, 1936 - 2010



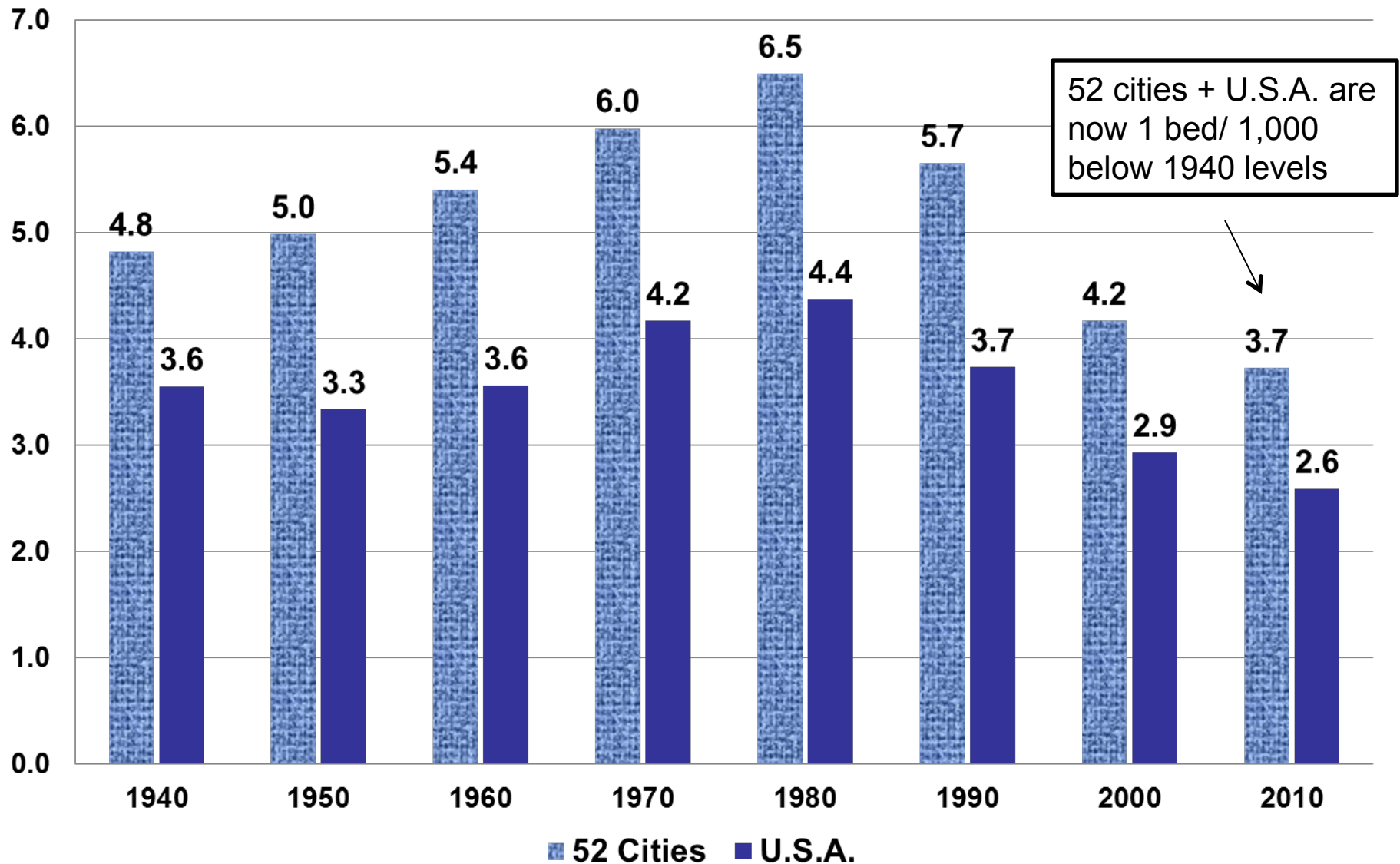
# Acute Care Hospitals and Beds, 52 U.S. Cities, 1936 - 2010



# Mean Beds by Ownership, 1937 - 2010

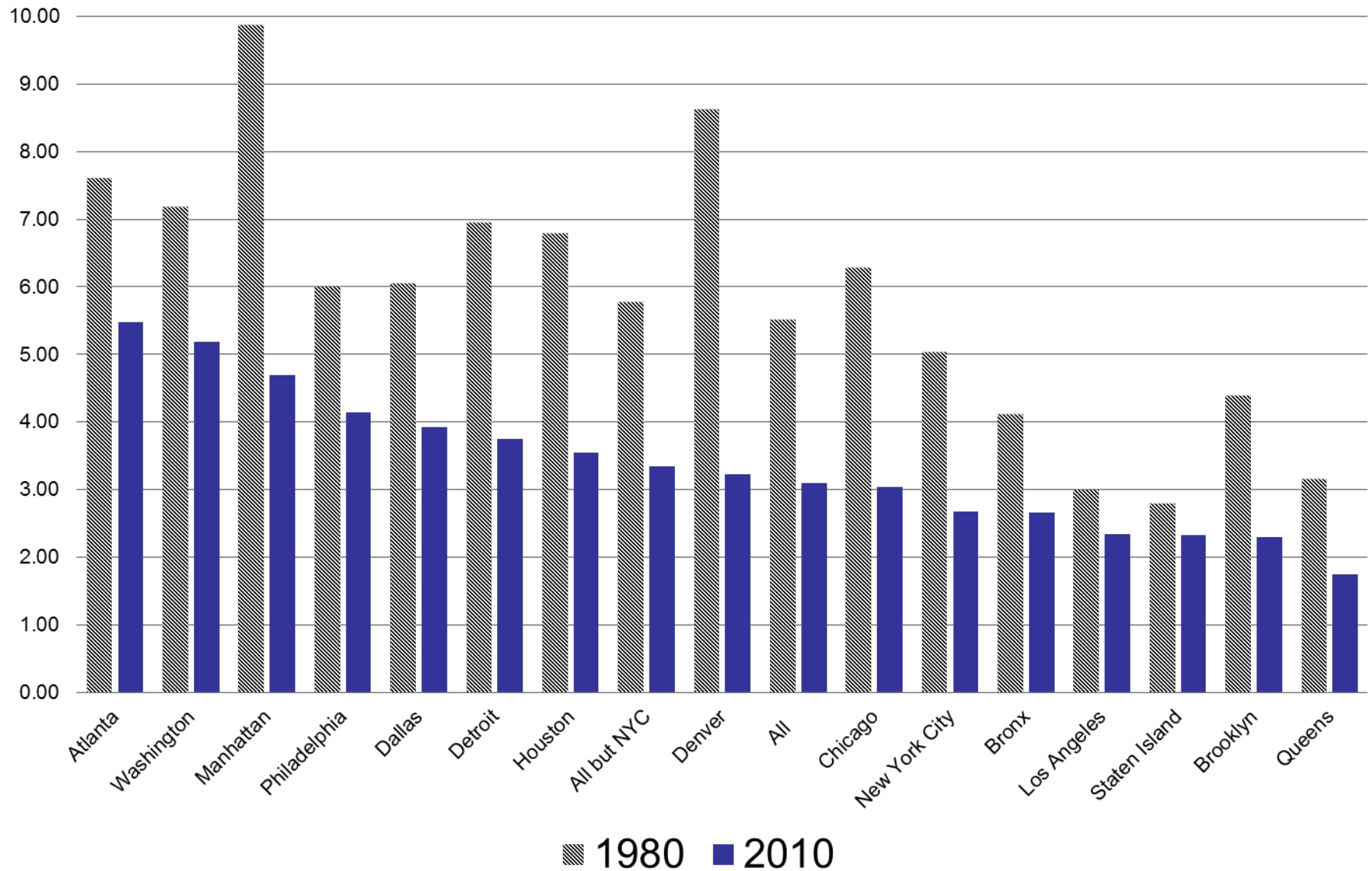


## Beds per 1,000 People, 52 Cities and U.S.A., 1940 - 2010

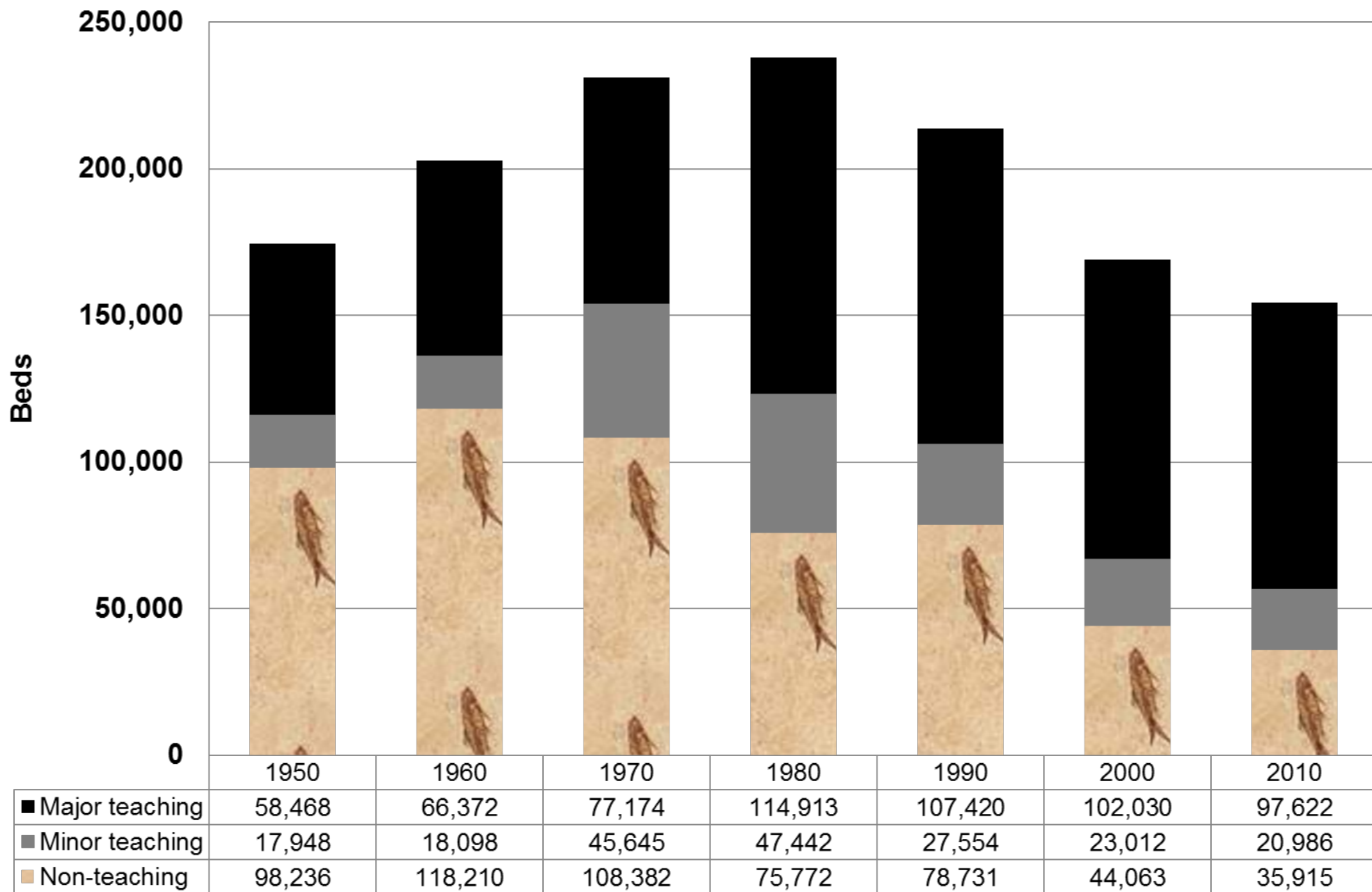




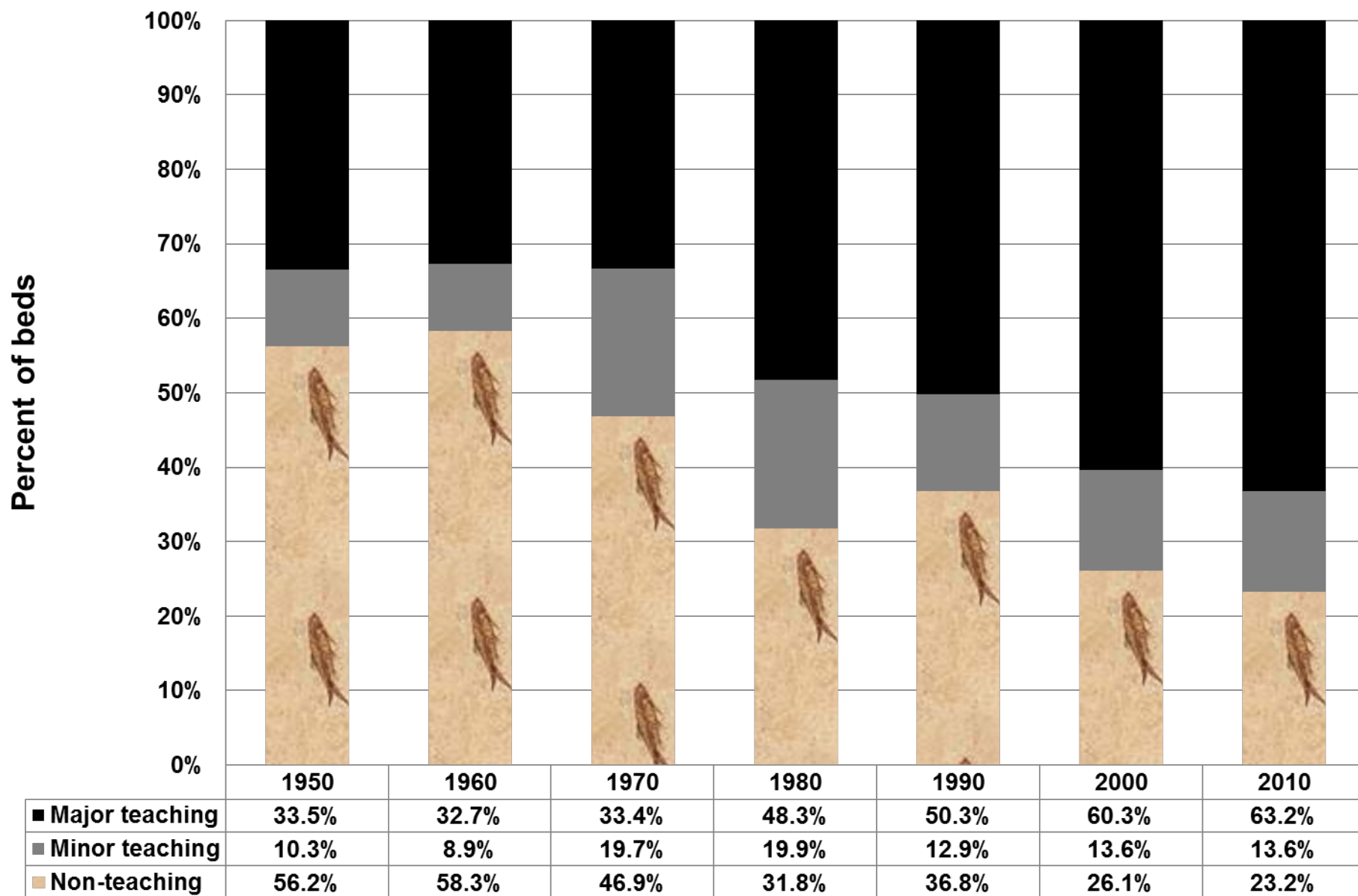
## Acute Hospital Beds per 1,000 People, Ten Cities and Five N.Y. City Boroughs, 1980 and 2010



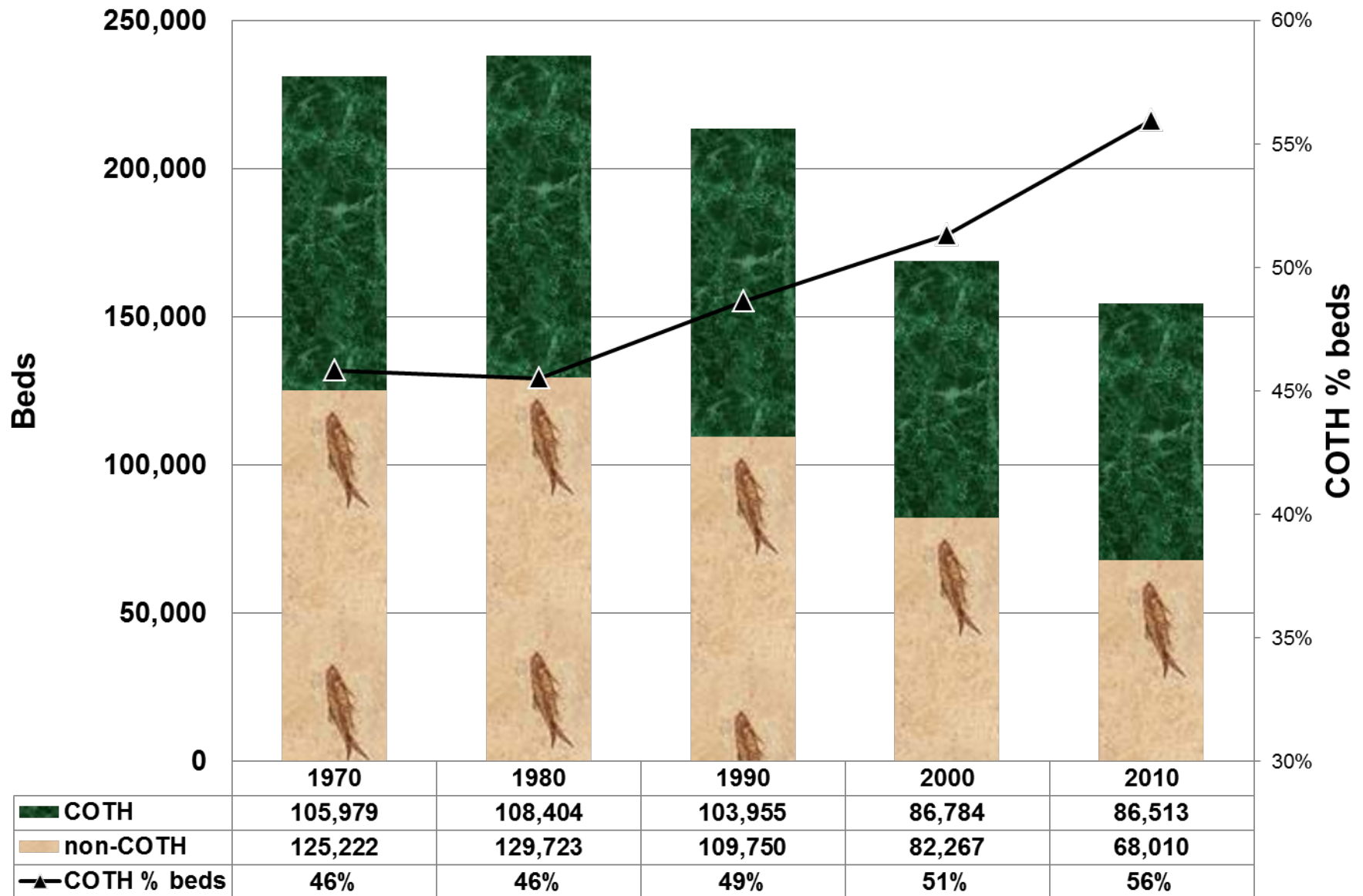
# Beds by Medical School Affiliation, 52 cities, 1950 - 2010



## Percent of Beds by Medical School Affiliation, 1950 - 2010



# Beds by Council of Teaching Hospitals (COTH) Membership, 1970 - 2010



# Hospital Closings/relocations and New Hospitals by Decade

<u>Period</u>	<u>Start</u>	<u>Closing</u>	<u>% Closing</u>	<u>Survivors</u>	<u>New</u>	<u>End</u>	<u>Change</u>	<u>% Change</u>
1937-50	709	75	11%	634	79	713	4	1%
1950-60	713	81	11%	632	110	742	29	4%
1960-70	742	90	12%	652	122	774	32	4%
1970-80	774	153	20%	621	90	711	-63	-8%
1980-90	711	130	18%	581	50	631	-80	-11%
1990-2000	631	122	19%	509	3	512	-119	-19%
2000-2010	512	87	17%	425	1	426	-86	-17%

**B. Identifying the hospitals  
that are likelier to close**

# Do rich hospitals deserve to be rich? (Sometimes)

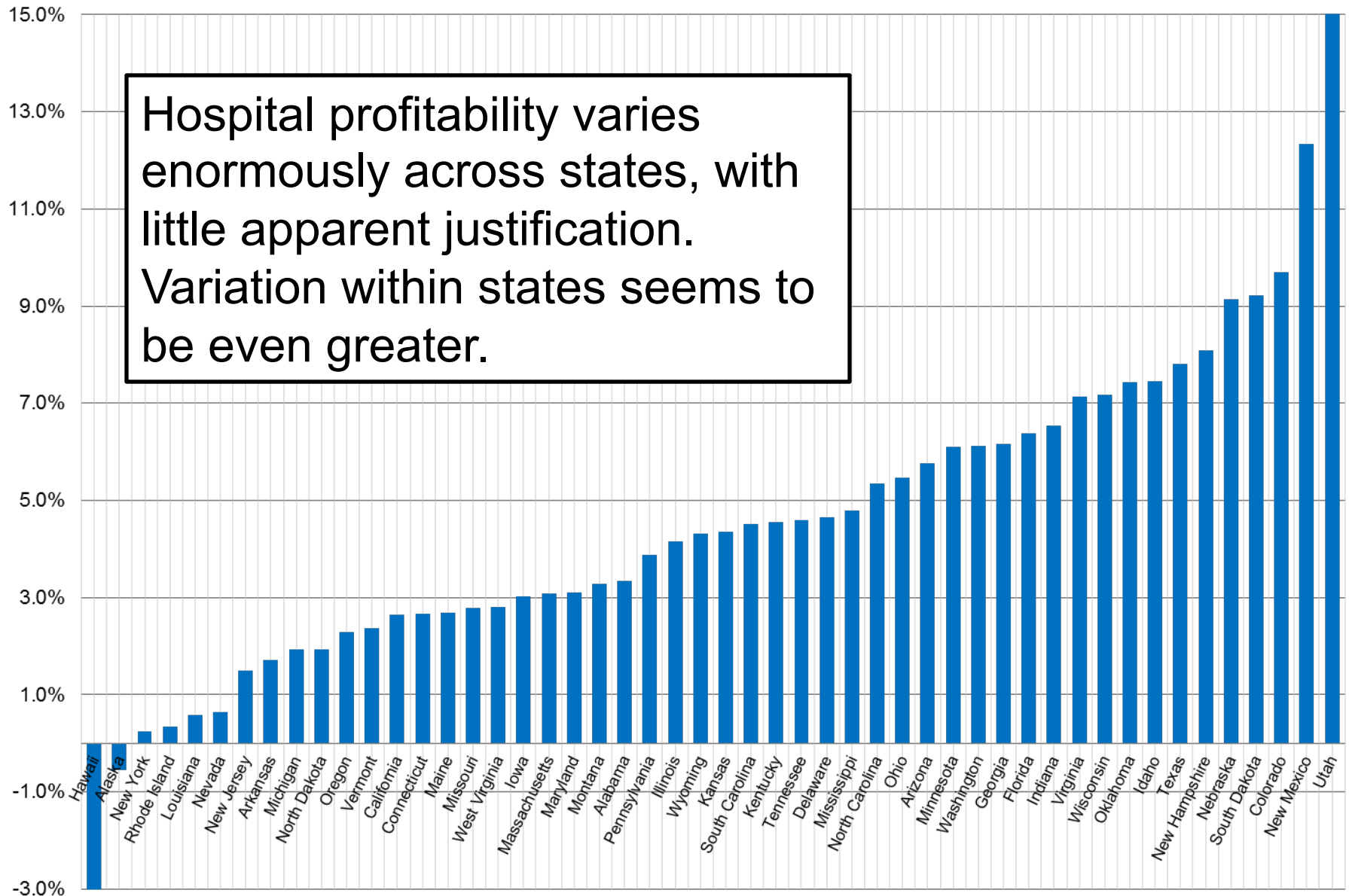
## Rich hospitals

- 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

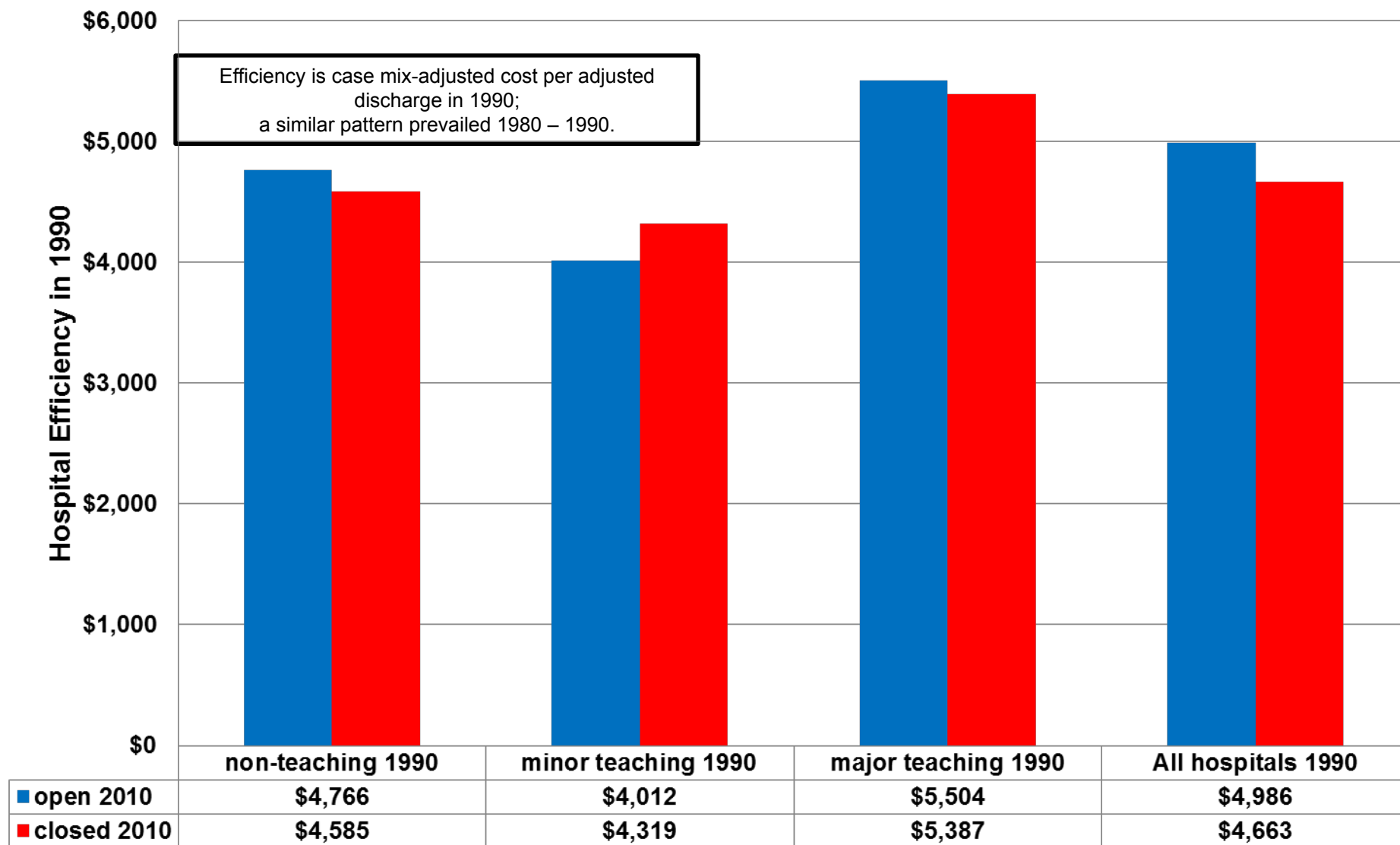
- Lots of Medicaid, uninsured
- Located in Black area
- Many unprofitable diagnoses
- Vanishing private doctors
- Weak management?
- Lack money to renew capital
- More competitors/low prices
- Poor perceived quality
- Usually less power
- Game is rigged?
- Self-blame

# Statewide Hospital Operating Margins, 2009

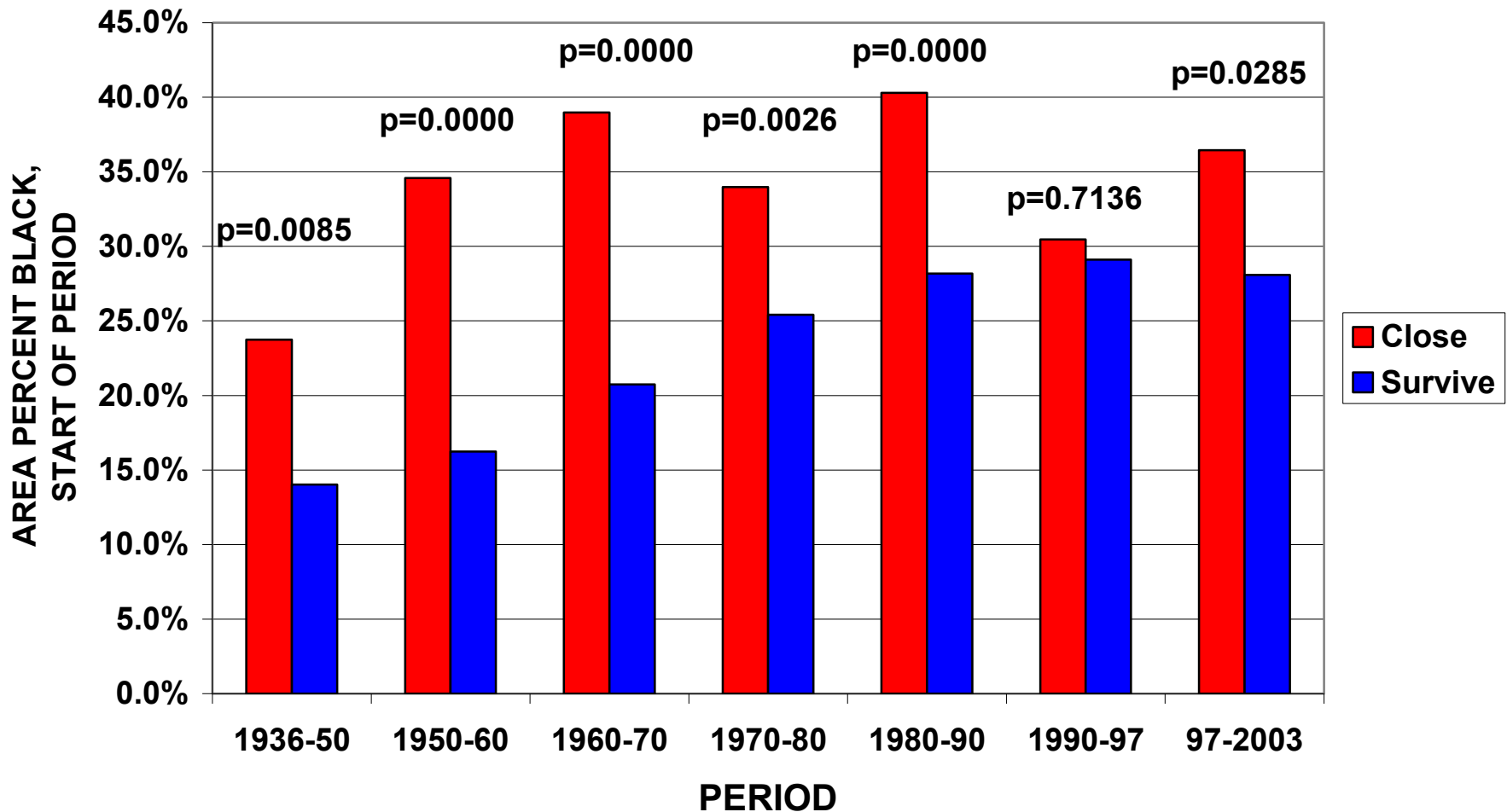




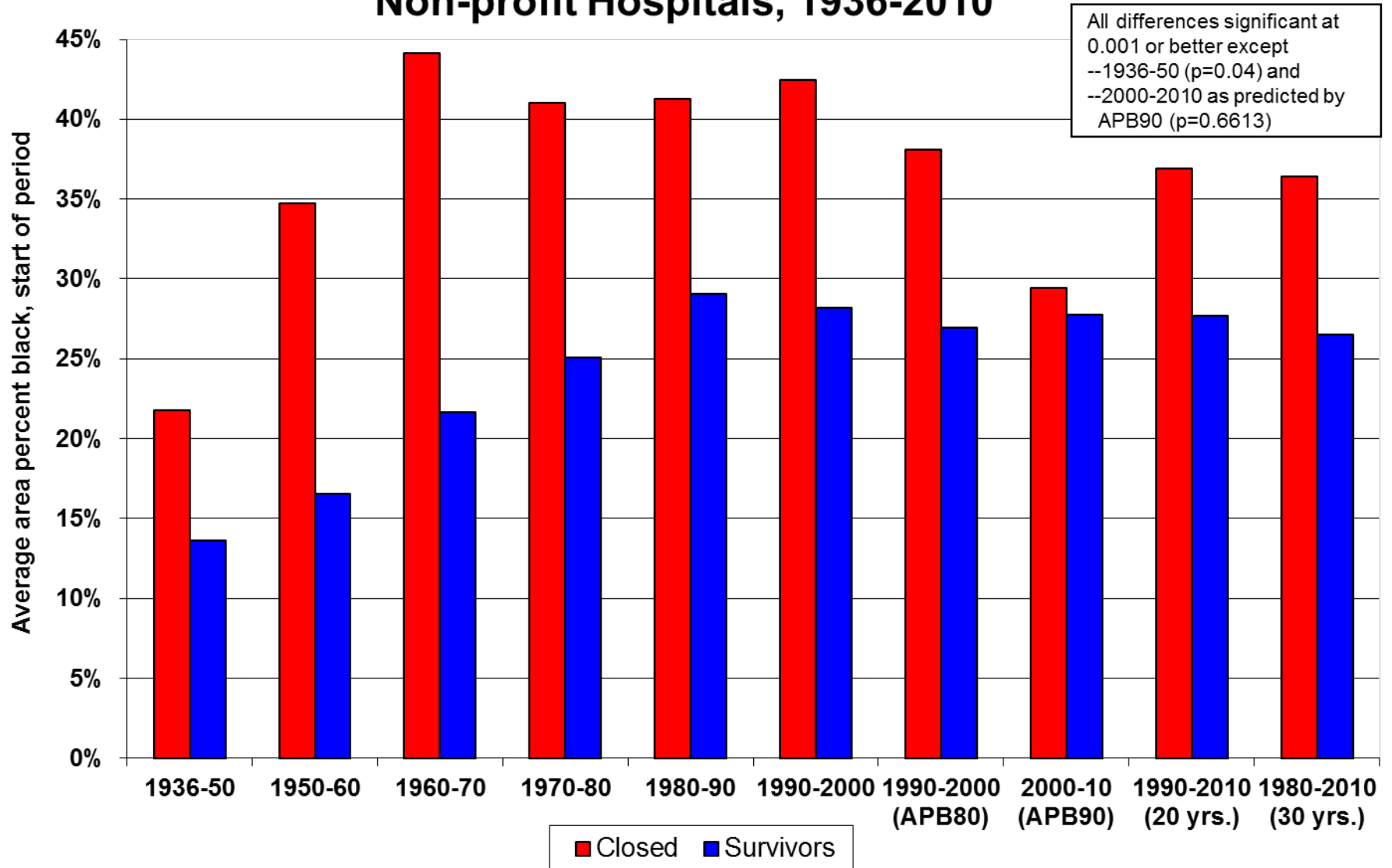
## Hospital Efficiency in 1990 by Medical School Affiliation in 1990 And Survival until 2010



## AREA PERCENT BLACK, ALL HOSPITALS CLOSING AND SURVIVING, 1936 - 2003



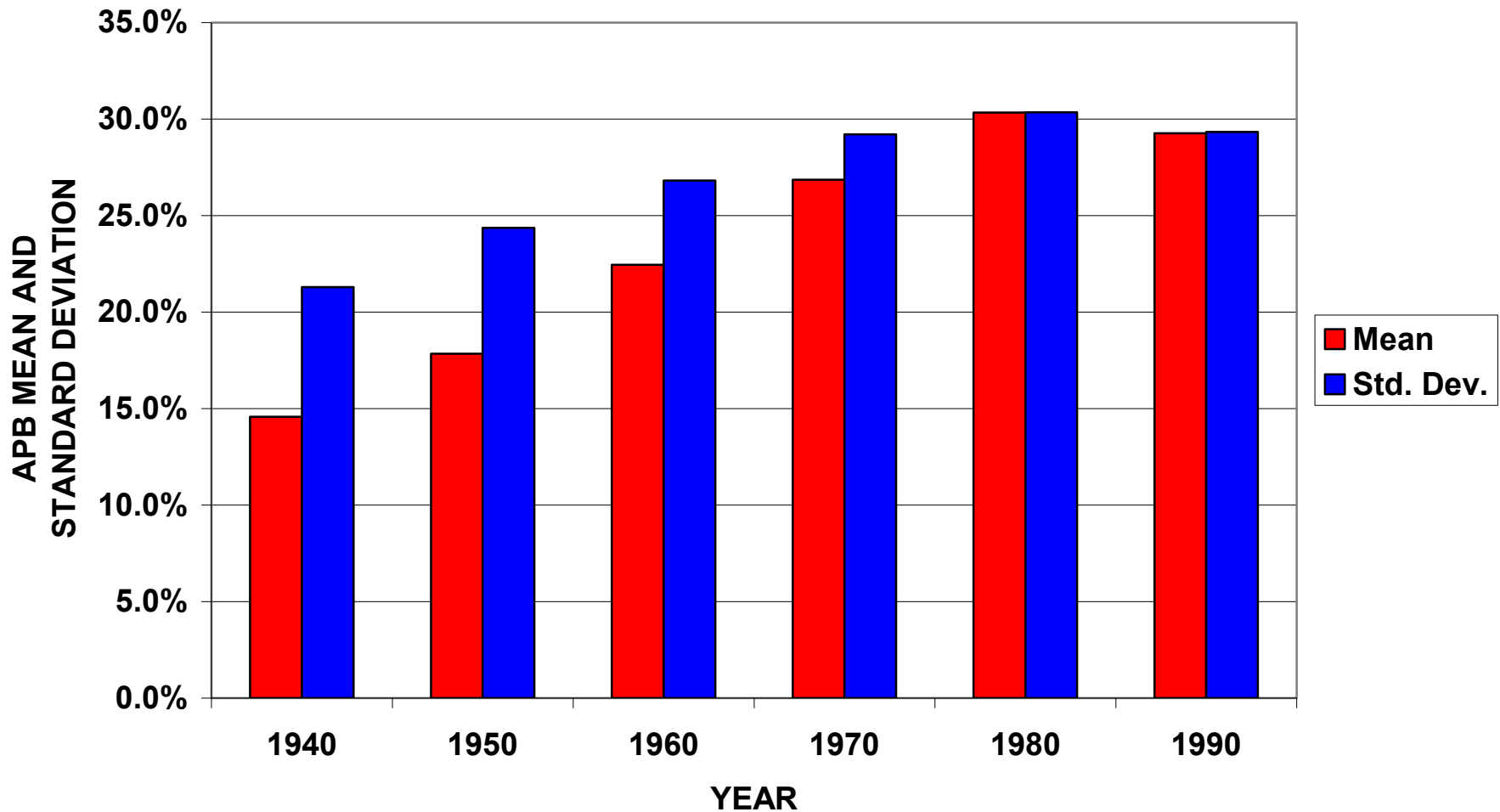
# Area Percent Black, Closing and Surviving Non-profit Hospitals, 1936-2010



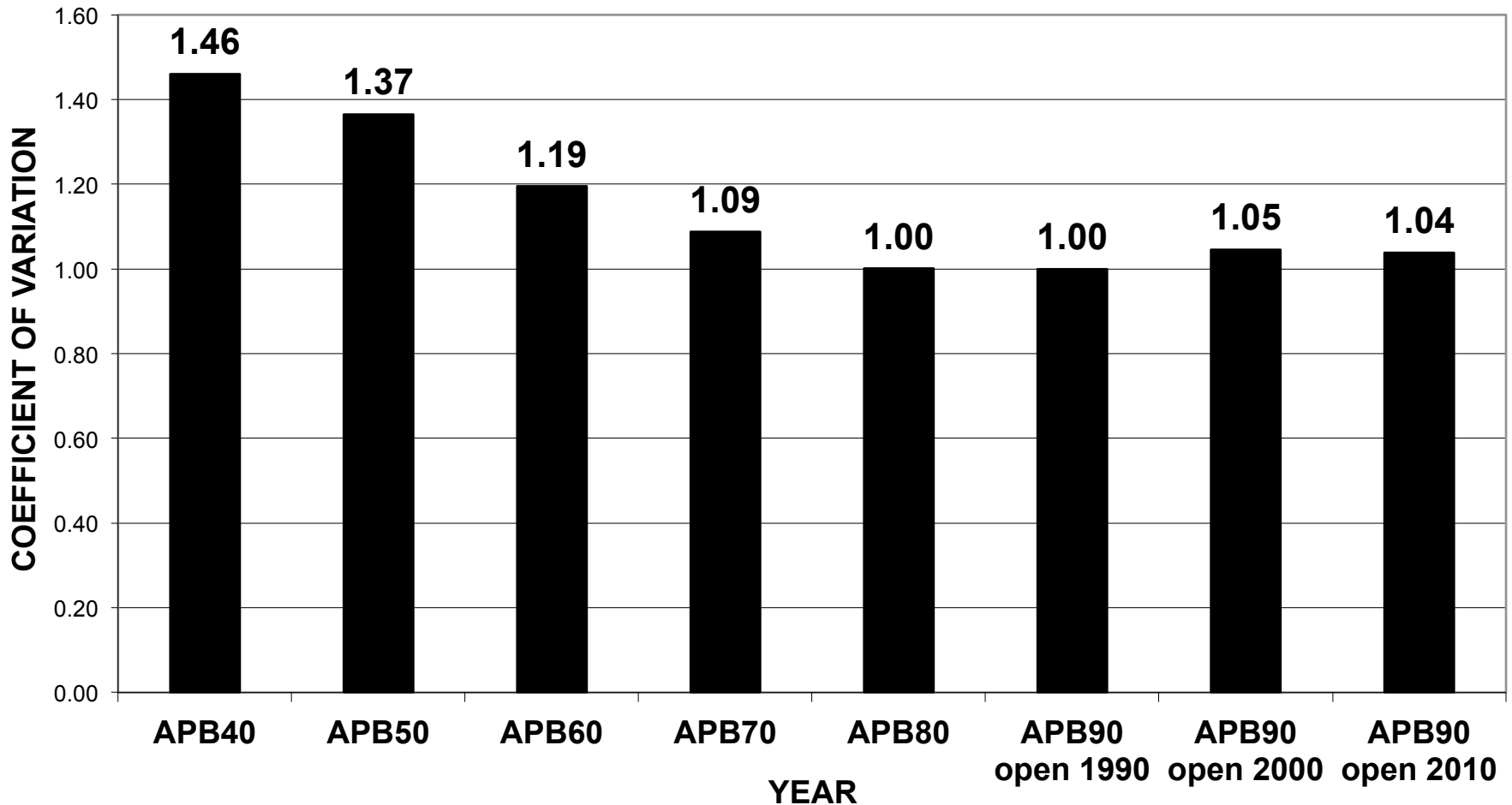
# HOSPITAL SURVIVAL BY OWNERSHIP AND RACE, 1990 - 2010

					mean area
	1990-2010		beds in 1990		percent
<u>ownership</u>	<u>survival</u>	<u>hospitals</u>	<u>total</u>	<u>mean</u>	<u>black, 1990</u>
<b>Public</b>	close	5	1,530	<b>306</b>	<b>67%</b>
	survive	46	27,264	593	33%
	total	52	29,156	561	36%
	% closing	<b>10%</b>	<b>5%</b>		
<b>Non-profit</b>	close	148	34,006	<b>230</b>	<b>37%</b>
	survive	317	130,308	411	28%
	total	477	167,018	350	31%
	% closing	<b>31%</b>	<b>20%</b>		
<b>For-profit</b>	close	53	5,688	<b>135</b>	19%
	survive	47	12,208	203	18%
	total	102	17,896	175	19%
	% closing	<b>52%</b>	<b>32%</b>		
<b>All 1990 hospitals</b>		<b>630</b>	<b>213,591</b>	<b>339</b>	<b>29%</b>

## AREA PERCENT BLACK (APB) MEAN AND STANDARD DEVIATION, 1940 - 1990



## AREA PERCENT BLACK'S (APB) COEFFICIENT OF VARIATION, 1940 - 2010





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

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



# Predicting hospital closings, 1990 - 2010

<u>Predictor, 1990 values</u>	<u>Significance</u>
Beds (fewer)	0.000
Hospital fund balance / adj. daily census (lower)	0.000
Occupancy rate (lower)	0.004
Area percent black (higher)	0.008
Hospitals within 1 mile (more)	0.034
Case mix-adjusted cost / discharge (efficiency)	0.637
Operating margin	0.679

**Model C-statistic = 0.819**

# Predicted Chance of Hospital Closing, 1990 – 2010

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

Independent Variable	$\beta$ 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%
<b>Predicted probability of closing mean hospital</b>			<b>26.2%</b>

**Model C-statistic = 0.819**

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<b>Predicted probability of closing mean hospital</b>			<b>26.2%</b>

**Model C-statistic = 0.819**

# Predicted Chance of Hospital Closing, 1990 – 2010

(**At-risk hospital** – predicted by riskiest quartile values of variables in 1990)

Independent Variable	$\beta$ Estimate (coefficient)	Riskiest quartile 1990 values	Prediction for hospital in riskiest quartile
Intercept	-2.190	1.000	-2.190
Beds	0.005	176.0	0.949
Area percent black	-0.010	45.4	-0.472
Occupancy rate	1.948	57.0	1.111
Hospitals in 1 mile	-0.168	2.0	-0.336
Fund balance/adjusted census	0.004	\$33,508	0.143
Case mix-adjusted cost/discharge	0.000	\$4,769	0.067
Sum			-0.729
Exponential			0.482
Predicted probability of survival			32.5%
<b>Predicted probability of closing hospital in riskiest quartile</b>			<b>67.5%</b>

**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%	<b>6.1%</b>	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%	<b>62.9%</b>	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.

# Predicted Chance of Hospital Closing, 1980–2010

(**Mean hospital** – as function of mean 1980 characteristics)

Independent Variable	$\beta$ Estimate (coefficient)	Values for mean hospital	Prediction for mean hospital
Intercept	-3.441	1.000	-3.441
Beds	0.004	324.2	1.452
Area percent black	-0.011	29.7	-0.324
Medical school affiliation	0.329	0.7	0.002
Occupancy rate	2.681	0.8	2.038
Hospitals in 1 mile	-0.190	1.6	0.000
Fund balance/adjusted census	0.010	\$56,470	0.544

Sum	0.271
Exponential value of sum	1.311
Predicted probability of survival	56.7%
<b>Predicted probability of closing of mean hospital</b>	<b>43.3%</b>

Model C-statistic was 0.824.

Of 608 non-public hospitals with 50 or more beds in 1980, 291 (47.9%) closed by 2010.

# Decade-by-decade Logistic Regression Results

- All exclude public hospitals or  $< 50$  beds
- Backwards stepwise: 0=closed + 1=open
- Panel 1 – six decades from 1936 to 2000
- Panel 2 – predicting from decade-old data
- Panel 3 – multi-decade predictions

# Panel 1 – Decade-by-decade, 1936-50-60-70-80-90-2000

- All values for predictors are for the year at start of the period
- A few consistent, standard-set predictors:
  - Beds,
  - Area percent black,
  - teaching,
  - occupancy rate
- Fairly consistent results
- C-statistics range from 0.760 to 0.836



# Logistic Regression Summary by Decade, 1936 - 2000

Dependent Variable	<b>Alive 1936-50</b>	27 close
3a	0=close/1=survive	461 survive
Independent Variables	$\beta$ Estimate	P-value
Intercept	1.1327	0.0188
BEDS37	0.0115	0.0159
APB40	-0.0184	0.0161
TCHNG37	1.2939	0.0174
Model c-statistic 0.836		

Dependent Variable	<b>Alive 1950-60</b>	43 close
3b	0=close/1=survive	465 survive
Independent Variables	$\beta$ Estimate	P-value
Intercept	1.8446	<0.0001
BEDS50	0.0063	0.0006
APB50	-0.0243	<0.0001
Model c-statistic 0.776		

Dependent Variable	<b>Alive 1960-70</b>	54 close
3c		518 survive
Independent Variables	$\beta$ Estimate	P-value
Intercept	-0.7793	0.3449
BEDS60	0.00285	0.0191
APB60	-0.0231	<0.0001
OCCUP60	4.1752	0.0004
Model c-statistic 0.760		

Dependent Variable	<b>Alive 1970-80</b>	97 close
3d		530 survive
Independent Variables	$\beta$ Estimate	P-value
Intercept	-2.531	0.0007
BEDS70	0.00588	<0.0001
APB70	-0.01	0.0077
OCCUP70	4.1607	<0.0001
Model c-statistic 0.784		

Dependent Variable	<b>Alive 1980-90</b>	111 close
3e		507 survive
Independent Variables	$\beta$ Estimate	P-value
Intercept	0.0631	0.8177
BEDS80	0.0072	<0.0001
APB80	-0.014	<0.0001
MSA80	0.5126	0.0166
Model c-statistic 0.817		

Dependent Variable	<b>Alive 1990-2000</b>	111 close
3f		446 survive
Independent Variables	$\beta$ Estimate	P-value
Intercept	-1.2439	0.0035
BEDS90TF	0.00756	<0.0001
APB90	-0.015	0.0001
OCCUP90	1.9522	0.005
Model c-statistic 0.811		

# Panel 2 – Predicting from Decade-old Data

- Values of independent variables are 10 years old at start of period
  - Closings 2000 – 2010 as function of 1990 values
  - Closings 1990 – 2000 as function of 1980 values
- Compare standard-set with expanded-set of independent variables

# 2. Predicting from Decade-old Data

Consistent standard-set  
predictors

Expanded-set  
predictors

Dependent Variable: <b>Alive 2000-2010</b>	82 close		Dependent Variable: <b>Alive 2000-2010</b>	82 close	
3g	=f(1990 values)	355 survive	5	=f(1990 values)	355 survive
Independent Variables	$\beta$ Estimate	P-value	Independent Variabl	$\beta$ Estimate	P-value
Intercept	-0.5705	0.2243	Intercept	-0.204	0.475
BEDS90TF	0.00341	0.0001	BEDS90	0.004	0.000
OCCUP90	1.4668	0.0484	FBXAC90	0.004	0.000
Model c-statistic	0.717		Model c-statistic	0.746	
Dependent Variable <b>Alive 1990-2000</b>	107 close				
3k	=f(1980 values)	398 survive			
Independent Variables	$\beta$ Estimate	P-value			
Intercept	-2.4103	0.0009			
BEDS80	0.00403	<0.0001			
APB80	-0.0136	0.0009			
MSA80	0.4057	0.0243			
OCCUP80	3.5587	0.0005			
Model c-statistic	0.792				

# Panel 3 – Multi-decade Predictions

- Predicting 20 or 30 years of behavior
- As function of values at beginning of period
- Consistent standard-set predictors compared with expanded-set predictors

# 3a. Multi-decade predictions: 1990-2010

Consistent standard-set  
predictors

Expanded-set  
predictors

Dependent Variable:	<b>Alive</b>	193 close	Dependent Variable:	<b>Alive</b>	193 close
3i	<b>1990-2010</b>	355 survive	6	<b>1990-2010</b>	355 survive
Independent Variables	$\beta$ Estimate	P-value	Independent Variable	$\beta$ Estimate	P-value
Intercept	-2.0105	<0.0001	Intercept	-2.190	0.000
BEDS90TF	0.00541	<0.0001	BEDS90	0.005	0.000
APB90	-0.0117	0.0007	APB90	-0.010	0.003
OCCUP90	2.2134	0.0004	OCCUP90	1.948	0.003
			HM190	-0.168	0.035
			FBXAC90	0.004	0.000
Model c-statistic	0.787		Model c-statistic	0.815	

# 3b. Multi-decade predictions 1980 - 2000

Consistent standard-set  
predictors

Expanded-set  
predictors

Dependent Variable:	<b>Alive</b>	220 close
3j	<b>1980-2000</b>	398 survive
Independent Variables	$\beta$ Estimate	P-value
Intercept	-2.9883	<0.0001
BEDS80	0.00525	<0.0001
APB80	-0.0154	<0.0001
MSA80	0.4964	0.001
OCCUP80	3.1194	0.0002
Model c-statistic 0.827		

Dependent Variable	<b>Alive</b>	220 close
2	<b>1980-2000</b>	398 survive
Independent Variab	$\beta$ Estimate	P-value
Intercept	-3.5476	0.0000
BEDS80	0.0053	0.0000
APB80	-0.0153	0.0000
MSA80	0.3740	0.0293
OCCUP80	3.7380	0.0000
HMI180	-0.2228	0.0007
FBXAC80	0.0097	0.0001
Model c-statistic 0.846		

# 3c. Multi-decade predictions, 1980 - 2010

Consistent standard-set  
predictors

Expanded-set  
predictors

Dependent Variable:	<b>Alive</b>	291 close		Dependent Variable	<b>Alive</b>	291 close
3l	<b>1980-2010</b>	317 survive		3	<b>1980-2010</b>	317 survive
Independent Variables	$\beta$ Estimate	P-value		Independent Variab	$\beta$ Estimate	P-value
Intercept	-2.7837	<0.0001		Intercept	-3.441	0.000
BEDS80	0.00428	<0.0001		BEDS80	0.004	0.000
APB80	-0.0114	0.0005		APB80	-0.011	0.001
MSA80	0.4825	0.0003		MSA80	0.329	0.029
OCCUP80	2.102	0.0093		OCCUP80	2.681	0.002
				HMI180	-0.190	0.002
				FBXAC80	0.010	0.000
Model c-statistic	0.805			Model c-statistic	0.824	

# Characteristics of survivors and closings, 1990-2000, 1990-2010, and 2000-2010

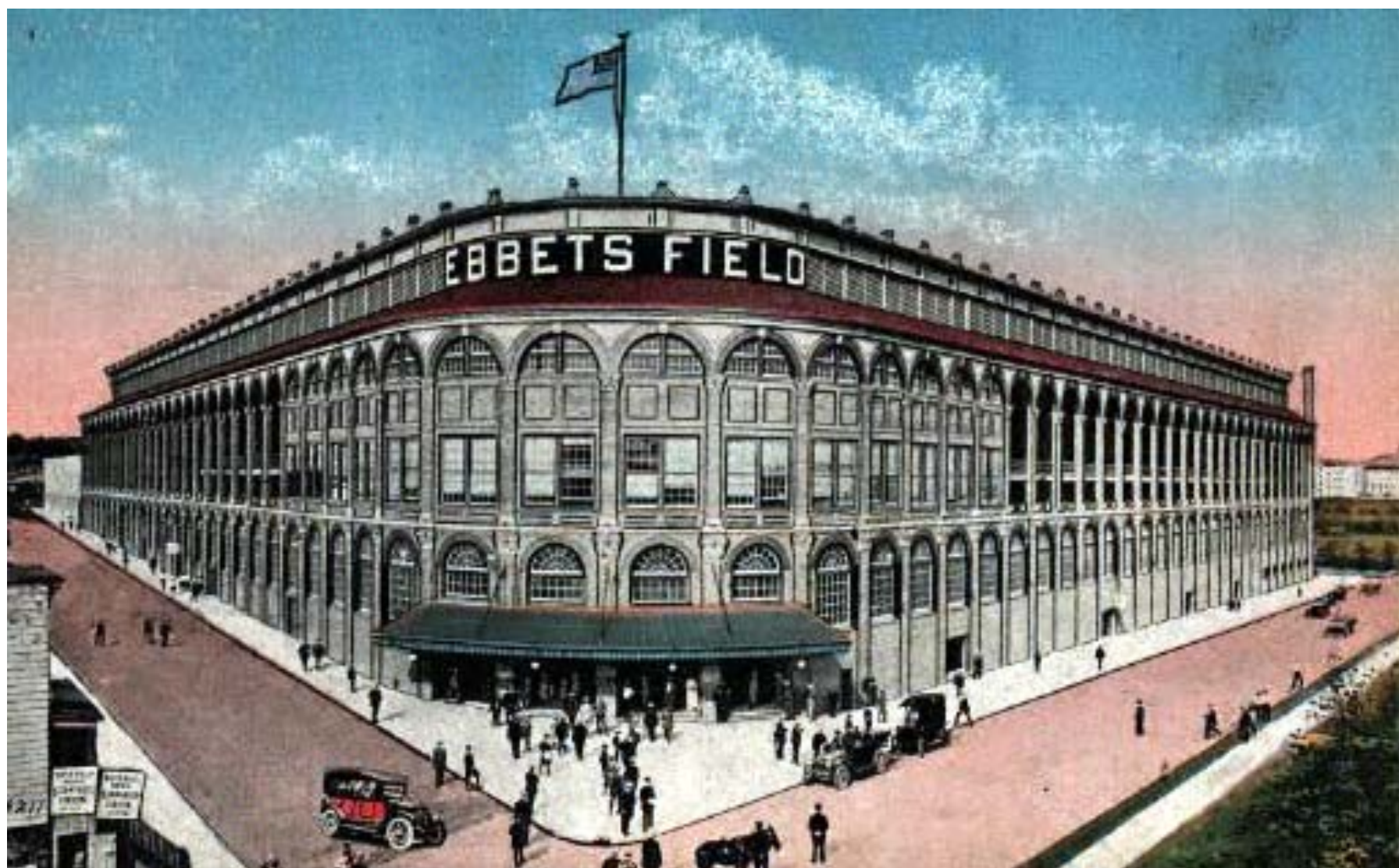
Predicting closings, 1990 - 2000

Predicting closings  
1990 - 2010

Predicting Closings,  
2000 - 2010

	1990 mean values					1990 mean values				1990 mean values		
Predictors	all 1990 hospitals	still open 2000	close by 2000	p		still open 2010	close by 2010	p		still open 2010	close by 2010	p
1990 values predict	<b>n = 612</b>	<b>n=499</b>	<b>n=113</b>			<b>n = 404</b>	<b>n = 198</b>			<b>n = 404</b>	<b>n = 85</b>	
Beds 90	348.0	385.3	183.2	0.0000		413.4	216.3	0.0000		413.2	259.1	0.0000
Ownership 90	2.1	2.0	2.3	0.0000		2.0	2.2	0.0000		2.0	2.2	0.0032
Area % Hispanic 90	15.7	15.8	15.0	0.6812		16.3	14.4	0.2910		16.2	14.8	0.5662
Area % minority 90	44.2	42.9	50.2	0.0170		42.7	47.2	0.0775		42.8	44.1	0.7173
Area % black 90	29.4	27.9	36.1	0.0077		27.3	33.6	0.0130		27.4	30.1	0.4392
Med sch affil 90	0.79	0.91	0.27	0.0000		0.98	0.40	0.0000		0.98	0.55	0.0001
COTH 90	0.32	0.37	0.09	0.0000		0.40	0.13	0.0000		0.40	0.19	0.0002
Age assets 90	8.13	8.16	8.01	0.7504		8.07	8.30	0.5547		8.07	8.63	0.2829
Cost, cmi-adjust 90	\$4,890	\$4,943	\$4,656	0.3782		\$4,975	\$4,684	0.2858		\$4,954	\$4,728	0.5703
Cost, unadjusted 90	\$6,644	\$6,818	\$5,882	0.0473		\$6,973	\$5,951	0.0096		\$6,987	\$6,091	0.1165
Hosps w/in 1 mile 90	1.23	1.25	1.12	0.3816		1.26	1.08	0.1657		1.2	1.0	0.1883
Occupancy rate 90	67.3%	69.7%	56.7%	0.0000		71.4%	58.9%	0.0000		71.3%	61.8%	0.0000
Fund bal/adj cens 90	\$133,280	\$149,463	\$62,393	0.0000		\$162,753	\$72,558	0.0000		\$164,504	\$107,236	0.0127
Total margin 90	0.68	1.57	-3.19	0.0000		2.10	-2.26	0.0000		2.04	-0.99	0.0052
Operating margin 90	-1.27	-0.66	-3.94	0.0074		-0.03	-3.88	0.0002		-0.14	-3.72	0.0097







# Closed Brooklyn Hospitals



St. Mary's



Interboro



Brooklyn Jewish

# Shibe Park, Philadelphia







Mt. Sinai



Presbyterian



Northeastern



Hospital of Women's  
Medical College

# Braves Field, Boston



**The wrong team left town. “Survival of the fattest.”**

# C. Why do hospital closings matter?

Access

Cost

Quality

# So what?

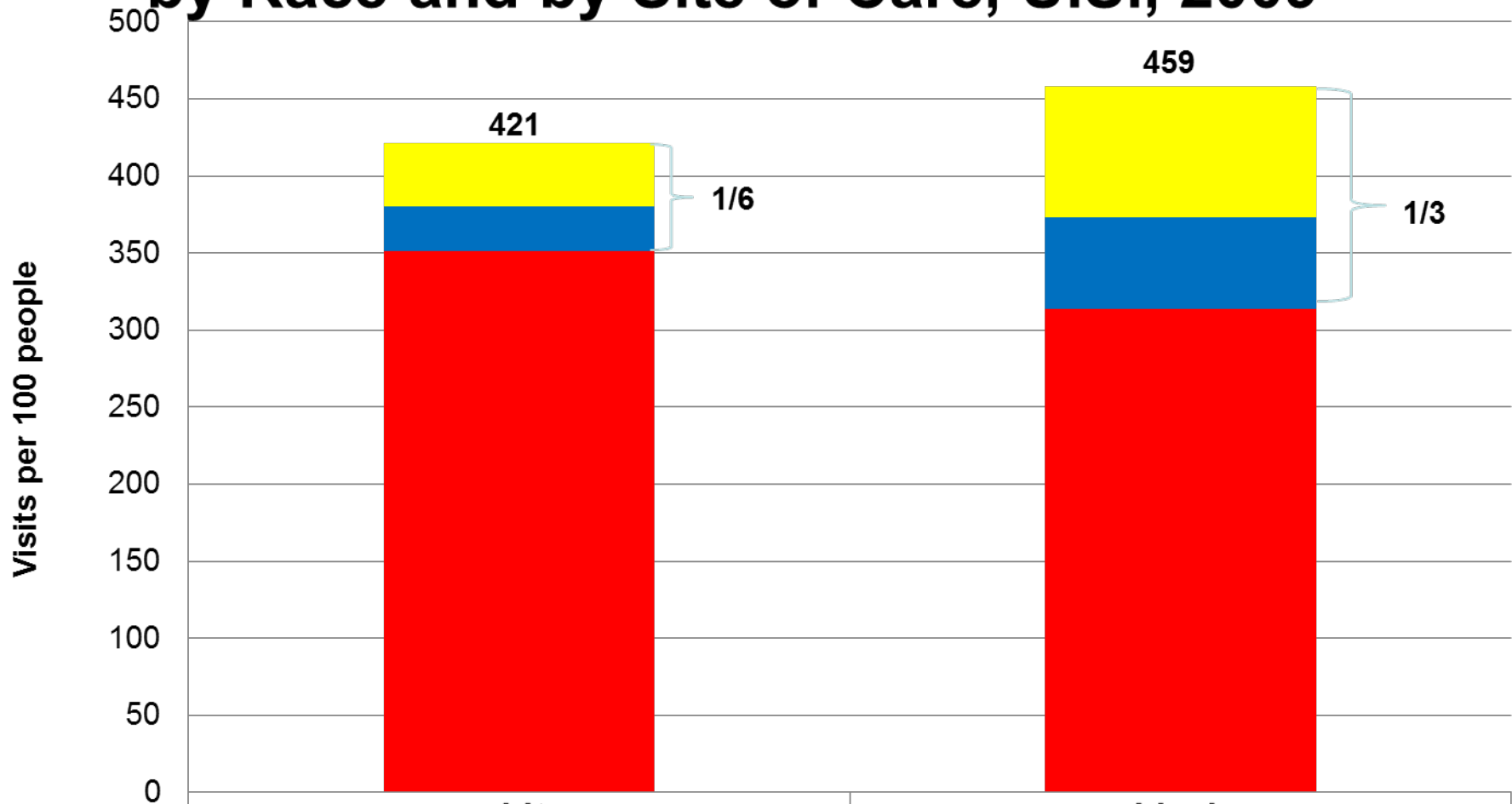
- Don't patients just vote with their feet, avoiding low-quality or unresponsive hospitals?
- How can a hospital be needed if it's losing \$
- Do we really need many hospitals?
  - Won't community health centers substitute?
  - Won't we live forever if we lose a little weight?
- Consider access – cost – quality → →

# ACCESS - Ambulatory

- Share of all doctor visits made at hospital emergency room or outpatient department
  - Blacks 32 percent
  - Whites 15 percent
- So hospital closings disproportionately displace ambulatory care for blacks.
- Loss of a hospital undermines remaining physicians in private practice in an area.
- CHC capacity likely to remain inadequate, especially in arranging specialty physician care.



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



■ ER
■ OPD
■ MD office

white

41

29

351

black

85

59

314

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

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# If doctors exit community hospitals, they're forced to close

- Hospitals + doctors = symbiotic, not substitutes
- If neighborhood changes, ordinary non-teaching community hospitals often want to provide care to new residents
- But, if doctors in private practice followed former residents to suburbs, lack of physicians can mean no care for patients and no revenue for hospital
- Loss of hospital can drive away remaining docs

# ACCESS – inpatient

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

St. Louis, Missouri

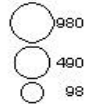
★ Hospitals Closing, 1936 - 2003

● Hospitals Open, 2003

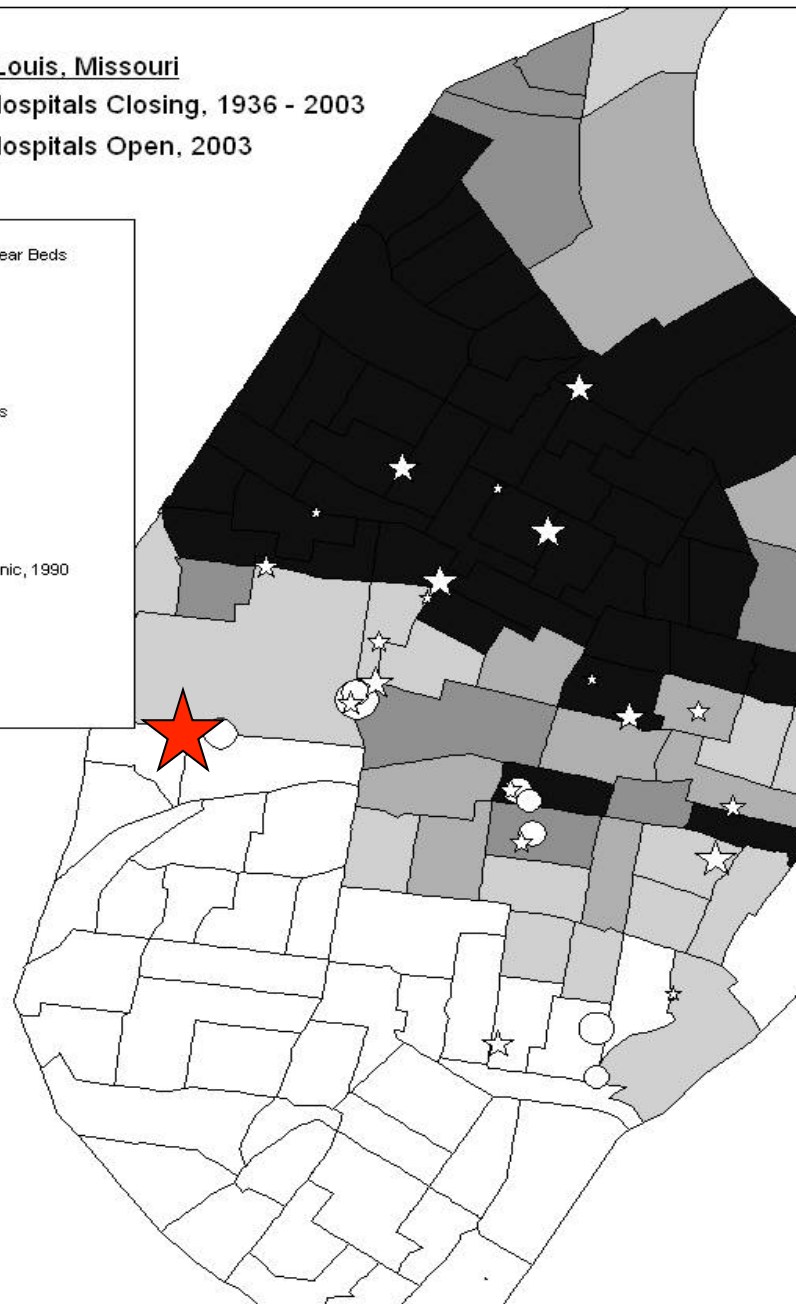
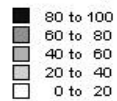
Closed Hospitals: Final Year Beds



Open Hospitals: 2001 Beds



Tract Percent Black & Hispanic, 1990



★ Closed 2003 - 2010

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# Sportsman's Park, St. Louis





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





De Paul



Evangelical Deaconess



Missouri Baptist



# Detroit, Michigan

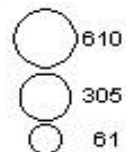
★ Hospitals Closing, 1936 - 2003

● Hospitals Open, 2003

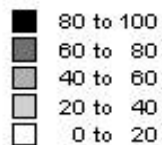
Hospitals: Final Year Beds



Open Hospitals: 2001 Beds



Percent Black & Hispanic, 1990

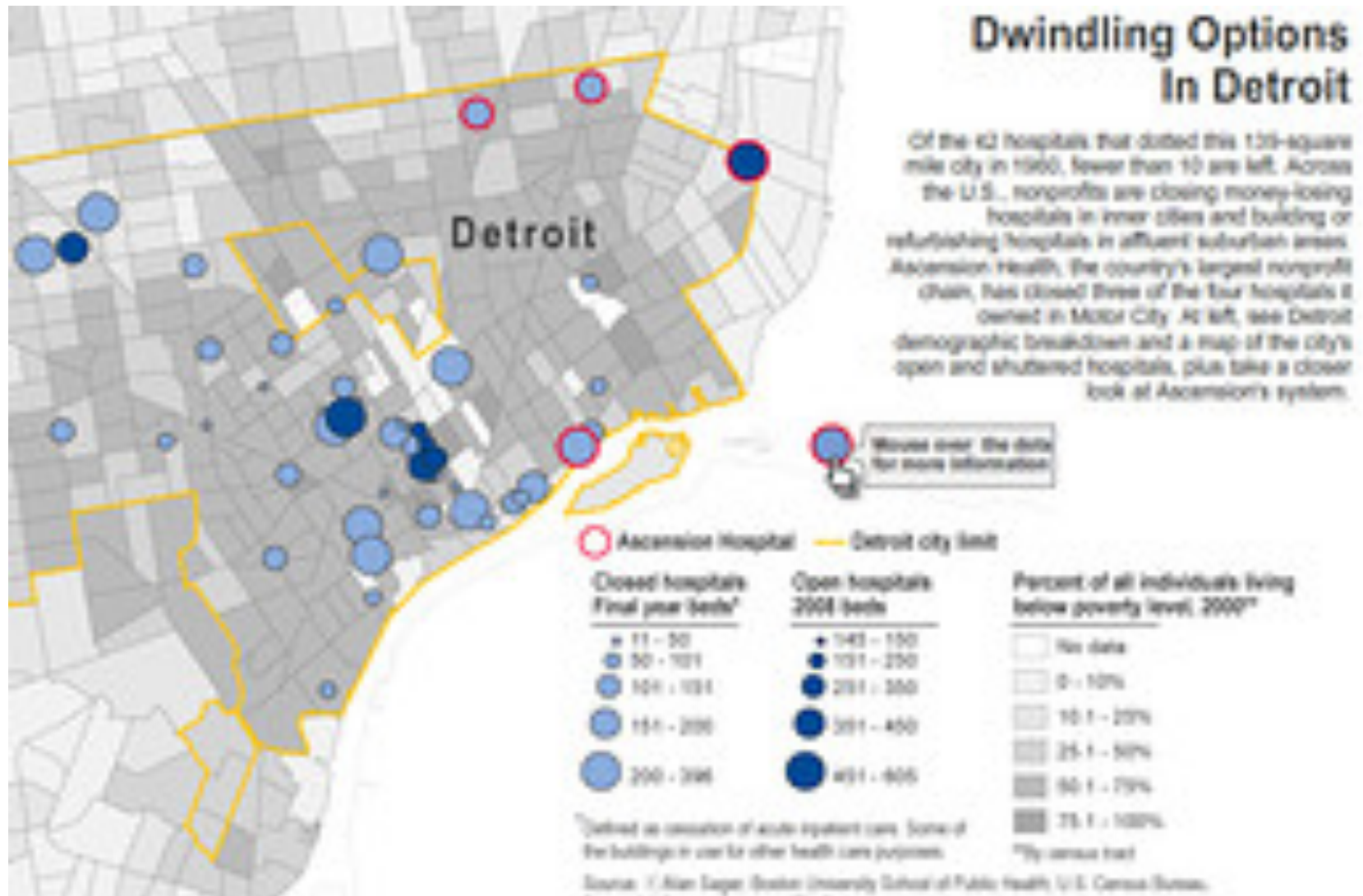


★ Closed 2003 - 2010

1960 – 42 hospitals  
2010 – 4 hospitals (sites of care)



# Barbara Martinez, “Nonprofit Hospitals Leave the City for Greener Pastures,” *WSJ*, 14 Oct. 08



# 8057 Detroit Riverview, - 2008



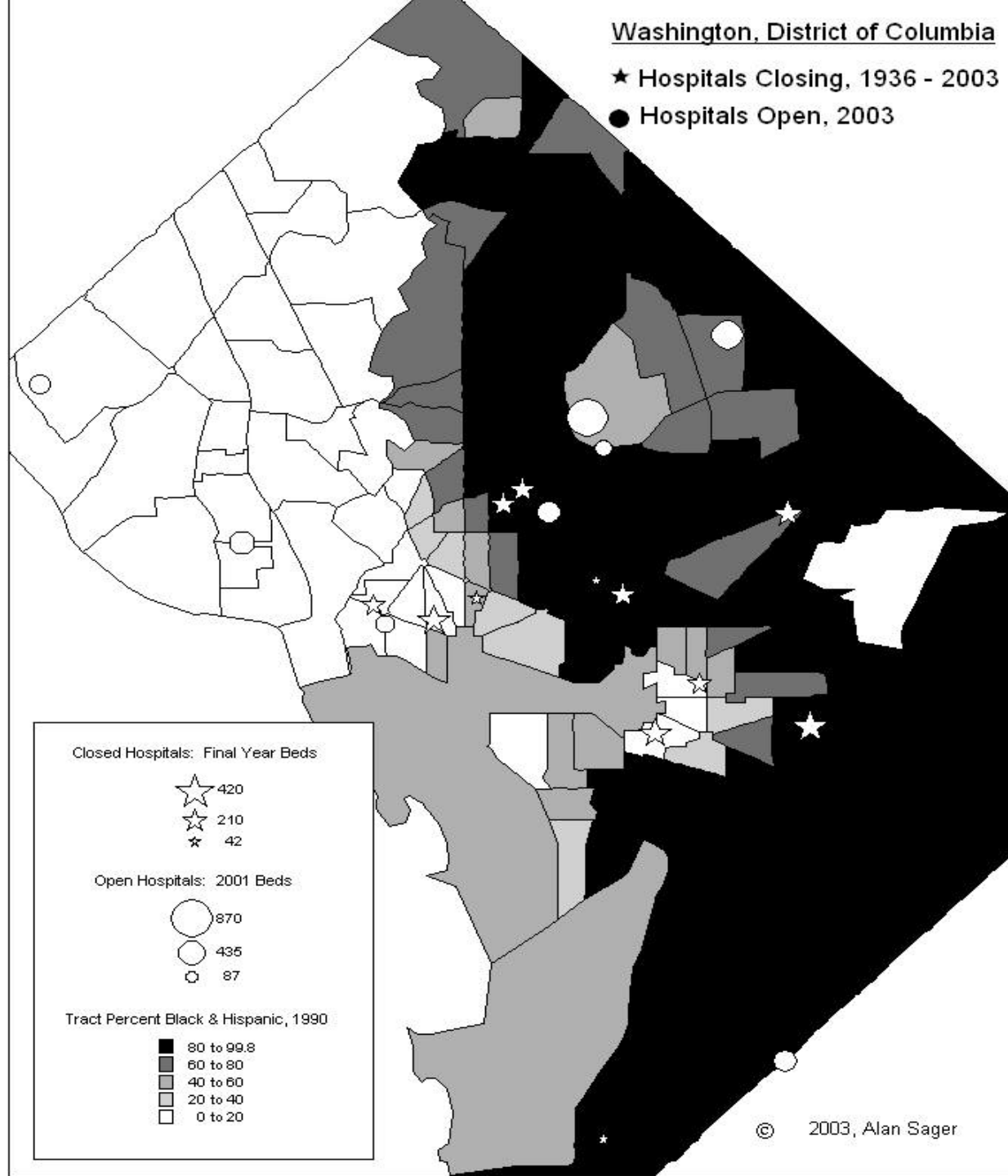
# 8054 Southwest Detroit Hospital, 1974 - 1991



# Washington, District of Columbia

★ Hospitals Closing, 1936 - 2003

● Hospitals Open, 2003





# Griffith Stadium, Washington, D.C.



Eastern Dispensary



18007 D. C. General, 1846 - 2001



Sibley Hospital (old)



Garfield Memorial Hospital<sup>74</sup>

## Baltimore, Maryland

★ Hospitals Closing, 1936 - 2003

● Hospitals Open, 2003





# Cleveland, Ohio

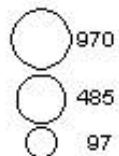
★ Hospitals Closing, 1936 - 2003

● Hospitals Open, 2003

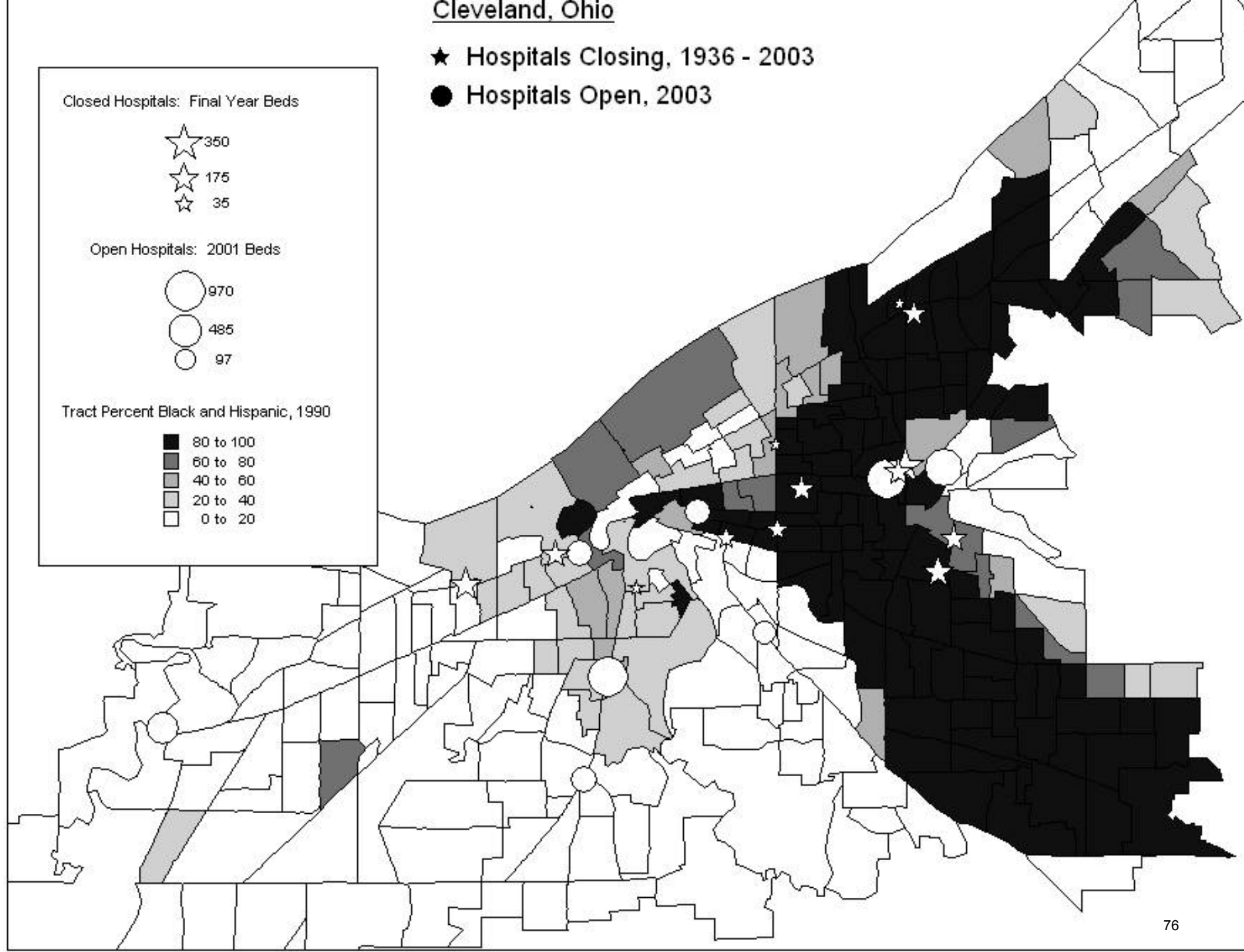
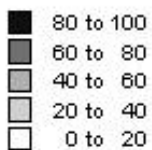
Closed Hospitals: Final Year Beds



Open Hospitals: 2001 Beds



Tract Percent Black and Hispanic, 1990



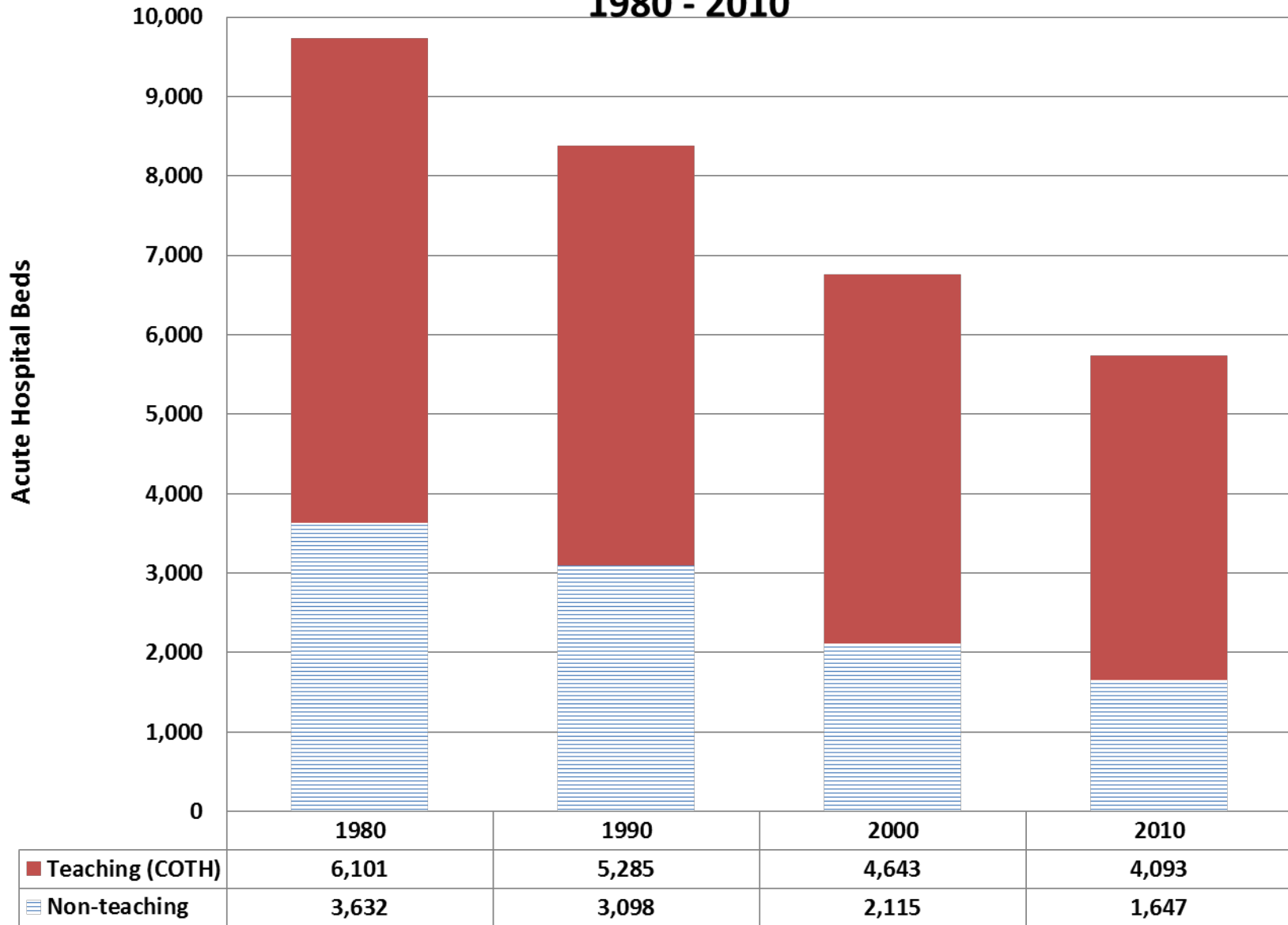


# Nina Bernstein, “Seeking a Cure for Troubled Hospitals in Brooklyn,” *NYT*, 9 Nov. 11

“The effort to reduce costs by cutting capacity has often meant closing smaller hospitals. Those hospitals are more likely to be in minority areas. Five hospitals in Brooklyn are now in peril, putting pressure on Kings County, State University of New York Downstate and Woodhull medical centers, the public hospitals.”



## Brooklyn Acute Hospital Beds by Teaching (COTH) Status, 1980 - 2010



# 29002 San Jose Medical Center - 2004



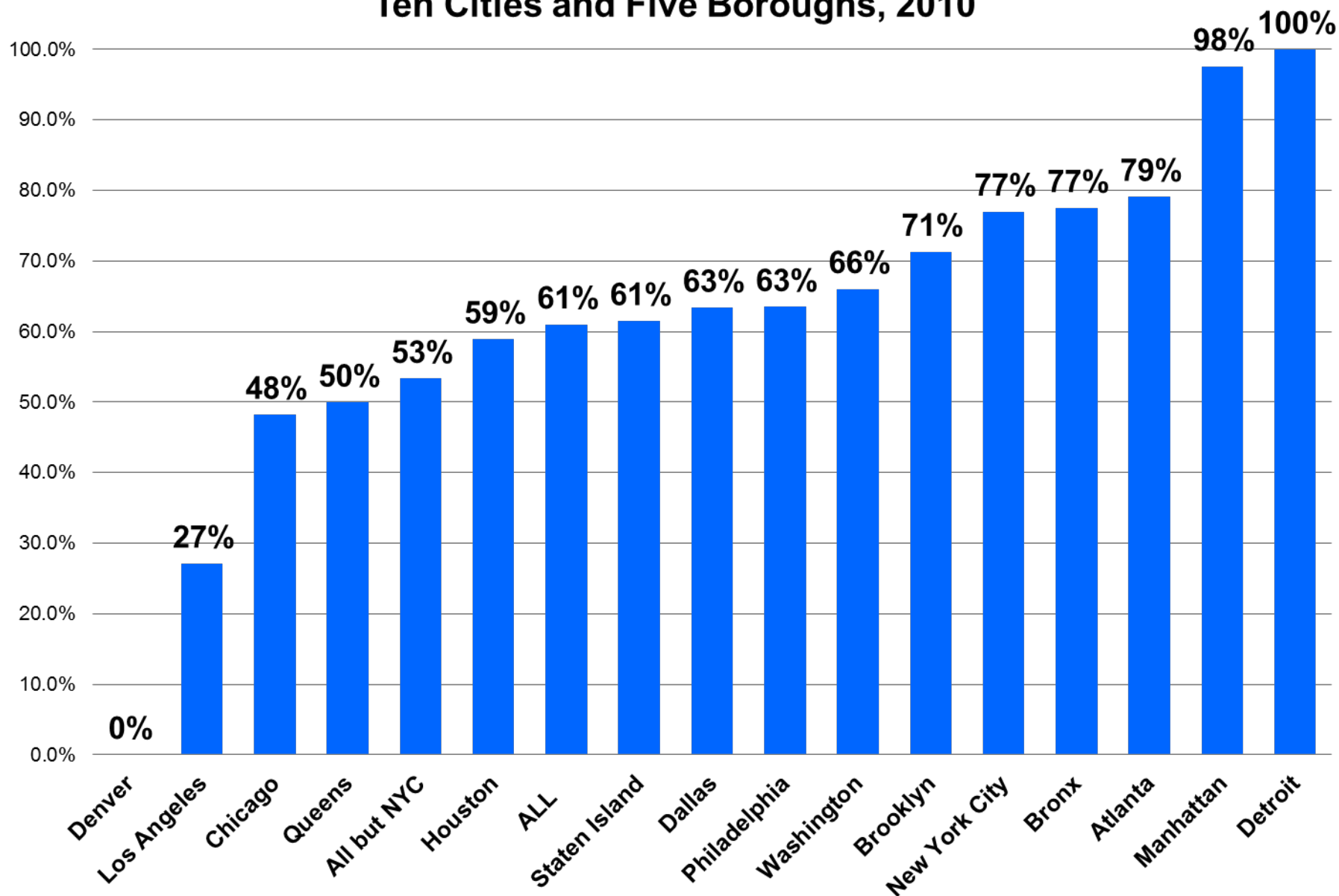
## How Much of 1990s' Care Capacity Survived to 2010?

	<u>Closing</u>	<u>Surviving</u>	<u>All</u>	<u>Closing % of All</u>
<b>Beds</b>	<b>43,040</b>	<b>167,227</b>	<b>210,267</b>	<b>20.5%</b>
<b>Admissions, total</b>	<b>1,389,756</b>	<b>6,138,392</b>	<b>7,528,148</b>	<b>18.5%</b>
<b>Admissions, Medicare</b>	<b>407,537</b>	<b>1,676,125</b>	<b>2,083,662</b>	<b>19.6%</b>
<b>Admissions, Medicaid</b>	<b>321,768</b>	<b>1,210,903</b>	<b>1,532,671</b>	<b>21.0%</b>
<b>Outpatient visits, total</b>	<b>14,293,329</b>	<b>62,323,207</b>	<b>76,616,536</b>	<b>18.7%</b>
<b>Emergency visits</b>	<b>3,765,315</b>	<b>14,747,054</b>	<b>18,512,368</b>	<b>20.3%</b>
<b>Non-emergency visits</b>	<b>10,528,014</b>	<b>47,576,153</b>	<b>58,104,168</b>	<b>18.1%</b>

# COST

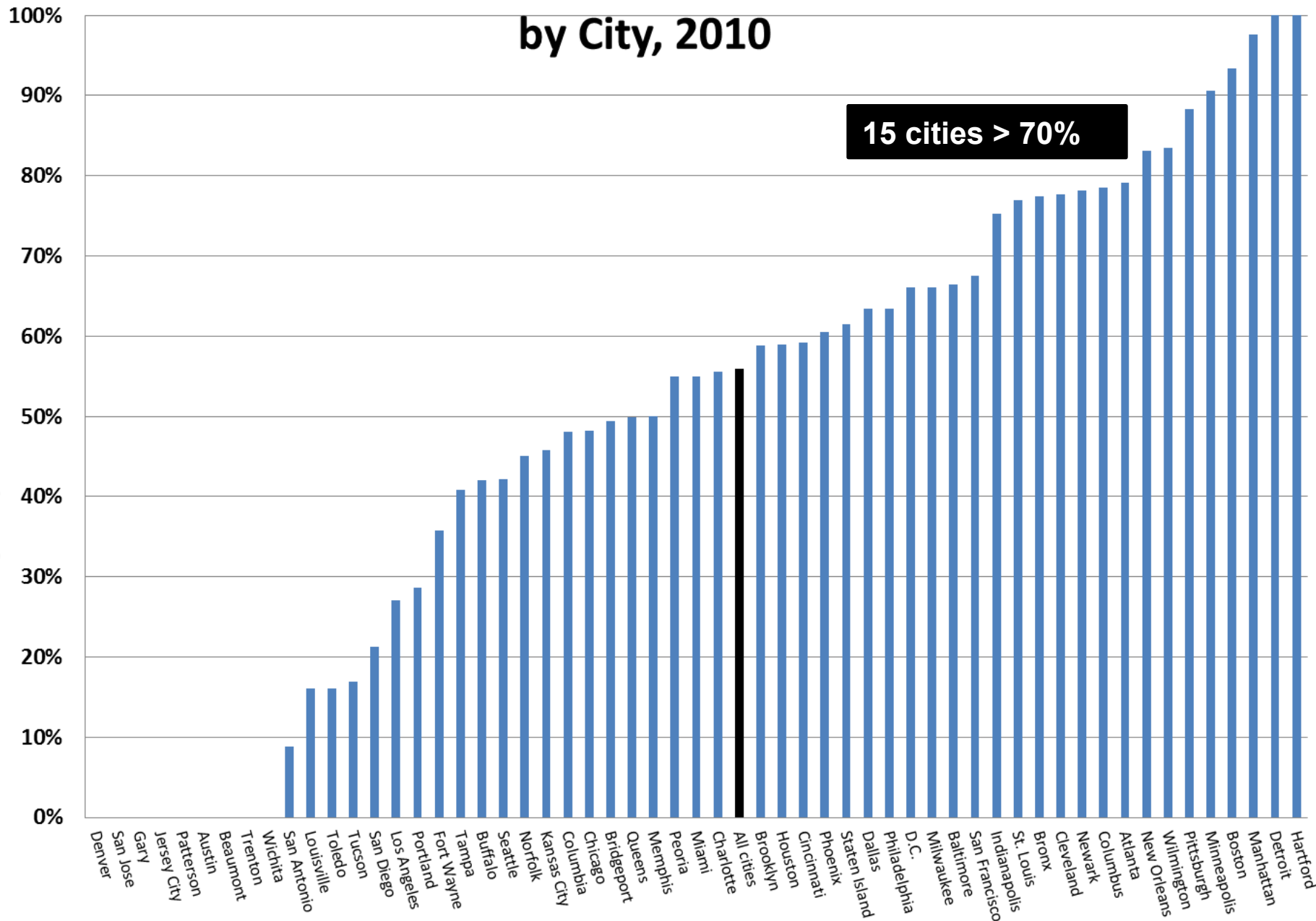
- Fewer hospitals → fewer competitors → less price competition → higher revenue for surviving hospitals → enables them to incur higher costs.
- Slight/moderate tendency, decade after decade, for the more efficient—the less expensive—hospitals to close
- Teaching hospitals' growing share of most cities' hospital beds (great variation x city!)
  - 44% in 1950
  - 77% in 2010
- Major COTH teaching hospitals' share rises from 46% in 1970 to 56% in 2010 (also great variation by city)
- Growing tendency to care for our lower-income urban patients in the world's costliest teaching hospitals
  - Puts added cost pressure on Medicaid

## Major Teaching Hospital (COTH) Percent of Acute Beds, Ten Cities and Five Boroughs, 2010



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

Council of Teaching Hospitals Members' Shares of Beds, 2010





# QUALITY

- Were many closed hospitals effectively segregated racially and unequal in quality?
- If so, closing of heavily black non-teaching hospitals and relocation of their patients to large teaching hospitals might → more integrated, mainstream care, boosting quality.
- But
  - Do patients with routine problems get good care in large teaching hospitals that focus on complex problems?
  - And is care at integrated teaching hospitals racially neutral?

# 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—could easily rise substantially in coming decades.

# CASE FOR INTERVENTION - 2

5. Cost of replacing closed beds has surpassed ~ \$1M → \$2-3M for LAC-USC
  - \$1-2-3 billion / 1,000 beds
6. Hospital today is usually worth more than promises tomorrow, especially when its survival depends on organizing needed care
7. Jobs matter.
8. 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.

# ACTION STEPS

1. Identify needed hospitals likely to close
  - Which hospitals (and ERs) are needed to protect the health of the public, today and tomorrow.
    - ✓ What types of hospitals and where should they be located?
    - ✓ Only one state has such a list.
    - ✓ Which hospitals are required to attract and retain needed doctors to each locality?
  - Identify hospitals that are likely to close in time to intervene
    - ✓ Track financial ratios annually
    - ✓ Use long-term predictive model

# ACTION STEPS - 2

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 bailed us out.”
  - They often believe that hospitals that can't compete in the market deserve to close.

# ACTION STEPS - 3

## 3. For temporary protection

- Enact state hospital receivership laws, allowing officials or citizens to petition a court to take control of a hospital and stabilize its finances.
- Or urge governors to declare that closing Hospital X constitutes a “public health emergency,” allowing state to seize control of needed hospital and stabilize it.
- Underpin either legal step with short-term financial relief through state trust fund financed by 0.25 percent of each hospital’s revenue, → about \$2 billion yearly in U.S.
- Consider mothballing instead of delicensing.

# ACTION STEPS - 4

4. To durably protect each needed hospital, establish all-payer rate setting to guarantee enough money to sustain efficient, high-quality operation
  - In a free market, each payer would pay the same price
  - Without a free market, only a public structure can protect each needed hospital, regardless of its teaching status, neighborhood demographics, or endowment
5. Seriously address quality problems at all hospitals.