HOSPITAL CARE IN THE 100 LARGEST CITIES AND THEIR SUBURBS, 1996-2002
IMPLICATIONS FOR THE FUTURE OF THE HOSPITAL SAFETY NET IN METROPOLITAN AMERICA

American Public Health Association Annual Meeting
Washington, DC
November 5, 2007

DENNIS ANDRULIS
CENTER FOR HEALTH EQUALITY
SCHOOL OF PUBLIC HEALTH
DREXEL UNIVERSITY
PHILADELPHIA, PA

Objective

- Review and compare public hospitals in the context of city hospital tends in numbers, capacity and utilization
- Identify hospital trends in suburban hospitals surrounding the largest US cities
- Consider what findings mean for the urban and suburban safety net

Design

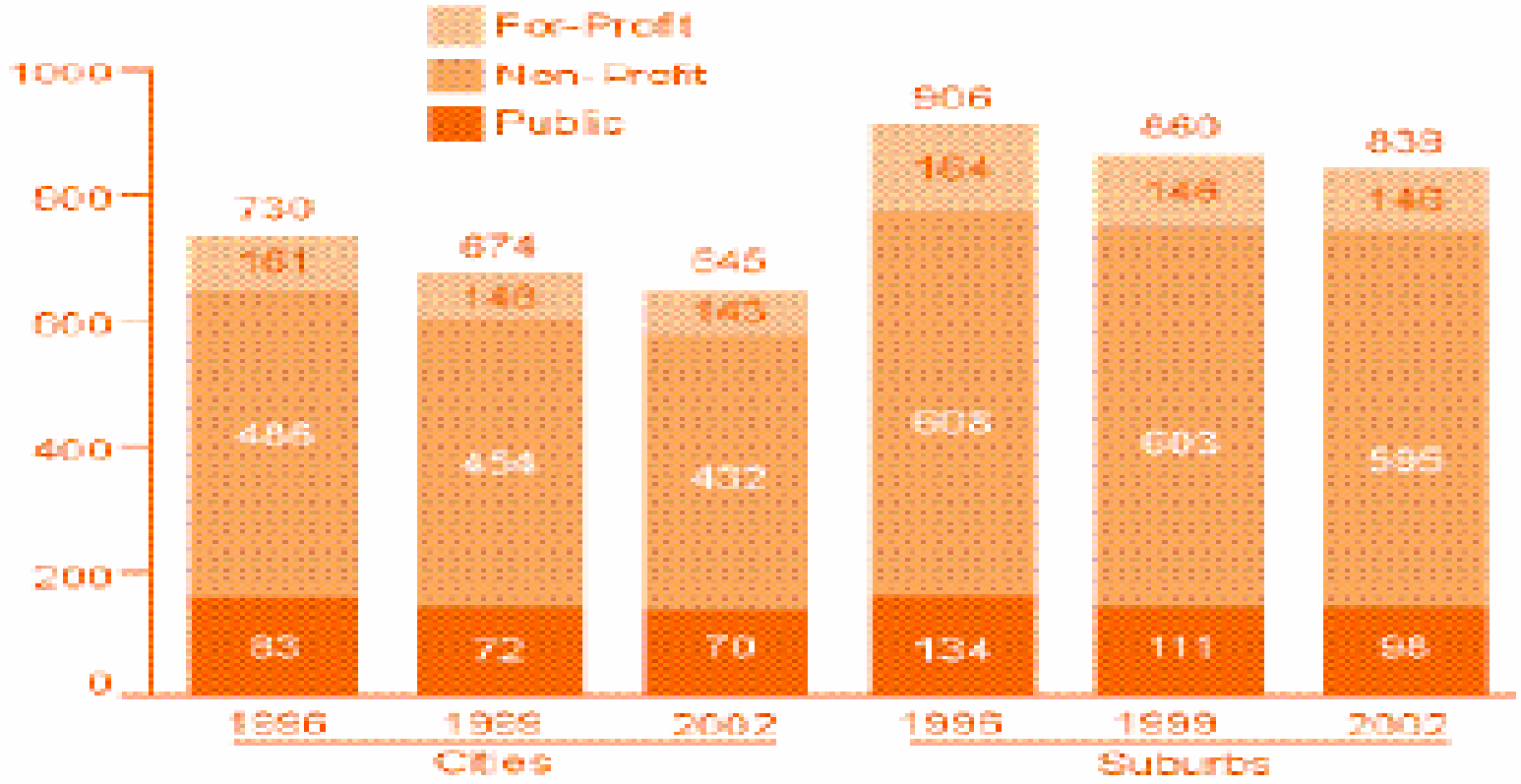
- Obtain and format AHA data for the 100 largest cities and their suburbs (MSAs surrounding these cities) for 1996, 1999 and 2002
- Trisect cities and suburbs into high, medium and low poverty using 2000 Census data
- Develop a socio-demographic profile of these poverty areas

1. Hospital Ownership

a) Public Hospital Losses

- More public hospitals were lost between 1996 and 2002 in both cities (16%) and suburbs (27%) than any other ownership group.
- The 27% loss in suburban areas continues a sharp decline of 47% that occurred between 1980 and 1996.

Chart 1
Number of Hospitals by Ownership Type in the 100 Largest Cities and Their Suburbs



Source: Health Forum, 1986, 1998, and 2002 AHA Annual Survey of Hospitals.

Hospital Ownership (continued)

b) The city public hospital proportion of care declines

- Although they continue to have the highest rates of per hospital use, on average public hospitals were responsible for fewer admissions, days and ED visits.
- For profit hospitals in cities saw double digit growth in these measures

c) Service proportions generally increase in remaining suburban public hospitals

d) And yet urban and suburban public hospitals continue to report the highest average lengths of stay

TABLE 1A
City Hospital Statistics by Type of Ownership, 1996, 1999, 2002

	Hospital Ownership	1996	1999	2002	% Change 96-99	% Change 99-02	% Change 96-02
Number of Hospitals	For-Profit	161	148	143	-8.1	-3.4	-11.2
	Non-Profit	486	454	432	-6.6	-4.8	-11.1
	Public	83	72	70	-13.3	-2.8	-15.7
	Total	730	674	645	-7.7	-4.3	-11.6
Staffed Beds per Hospital	For-Profit	209	226	238	7.9	5.2	13.5
	Non-Profit	372	381	394	2.5	3.2	5.8
	Public	431	420	434	-2.6	3.3	0.6
	Total	343	351	363	2.5	3.4	6.0
Admissions per Hospital	For-Profit	7,496	8,969	10,208	19.6	13.8	36.2
	Non-Profit	14,930	16,602	18,419	11.2	10.9	23.4
	Public	17,321	17,861	18,613	3.1	4.2	7.5
	Total	13,562	15,060	16,619	11.0	10.4	22.5
Occupancy Rate	For-Profit	53.4	57.5	61.5	7.7	7.0	15.1
	Non-Profit	67.3	69.3	72.1	3.0	4.1	7.1
	Public	73.3	75.7	77.1	3.3	1.9	5.3
	Total	66.3	68.4	71.2	3.3	4.1	7.5
Inpatient Days per Hospital	For-Profit	40,972	47,471	53,407	15.9	12.5	30.4
	Non-Profit	91,617	96,441	103,603	5.3	7.4	13.1
	Public	115,710	116,131	122,214	0.4	5.2	5.6
	Total	83,187	87,791	94,494	5.5	7.6	13.6
Average Length of Stay	For-Profit	5.5	5.3	5.2	-3.2	-1.2	-4.3
	Non-Profit	6.1	5.8	5.6	-5.3	-3.2	-8.3
	Public	6.7	6.5	6.6	-2.7	1.0	-1.7
	Total	6.1	5.8	5.7	-5.0	-2.5	-7.3
Outpatient Visits per Hospital	For-Profit	65,782	80,738	91,289	22.7	13.1	38.8
	Non-Profit	181,449	214,040	248,214	18.0	16.0	36.8
	Public	323,333	360,183	408,377	11.4	13.4	26.3
	Total	172,071	200,380	230,805	16.5	15.2	34.1
Emergency Dept. Visits per Hospital	For-Profit	17,077	21,980	27,507	28.7	25.1	61.1
	Non-Profit	33,957	39,851	44,865	17.4	12.6	32.1
	Public	60,176	63,166	70,167	5.0	11.1	16.6
	Total	33,215	38,417	43,763	15.7	13.9	31.8
Medicaid Discharges as Percentage of Total Admissions	For-Profit	17.3	15.9	19.8	-7.8	24.4	14.7
	Non-Profit	16.9	14.2	18.0	-15.8	26.3	6.3
	Public	35.8	31.4	31.1	-12.4	-0.9	-13.2
	Total	19.2	16.5	19.8	-14.1	20.5	3.5
Medicaid Average Length of Stay	For-Profit	4.9	5.1	5.0	4.4	-1.1	3.2
	Non-Profit	6.8	6.8	6.2	-0.2	-8.9	-9.1
	Public	6.8	7.4	7.5	8.6	2.2	11.1
	Total	6.6	6.7	6.3	1.7	-6.3	-4.6

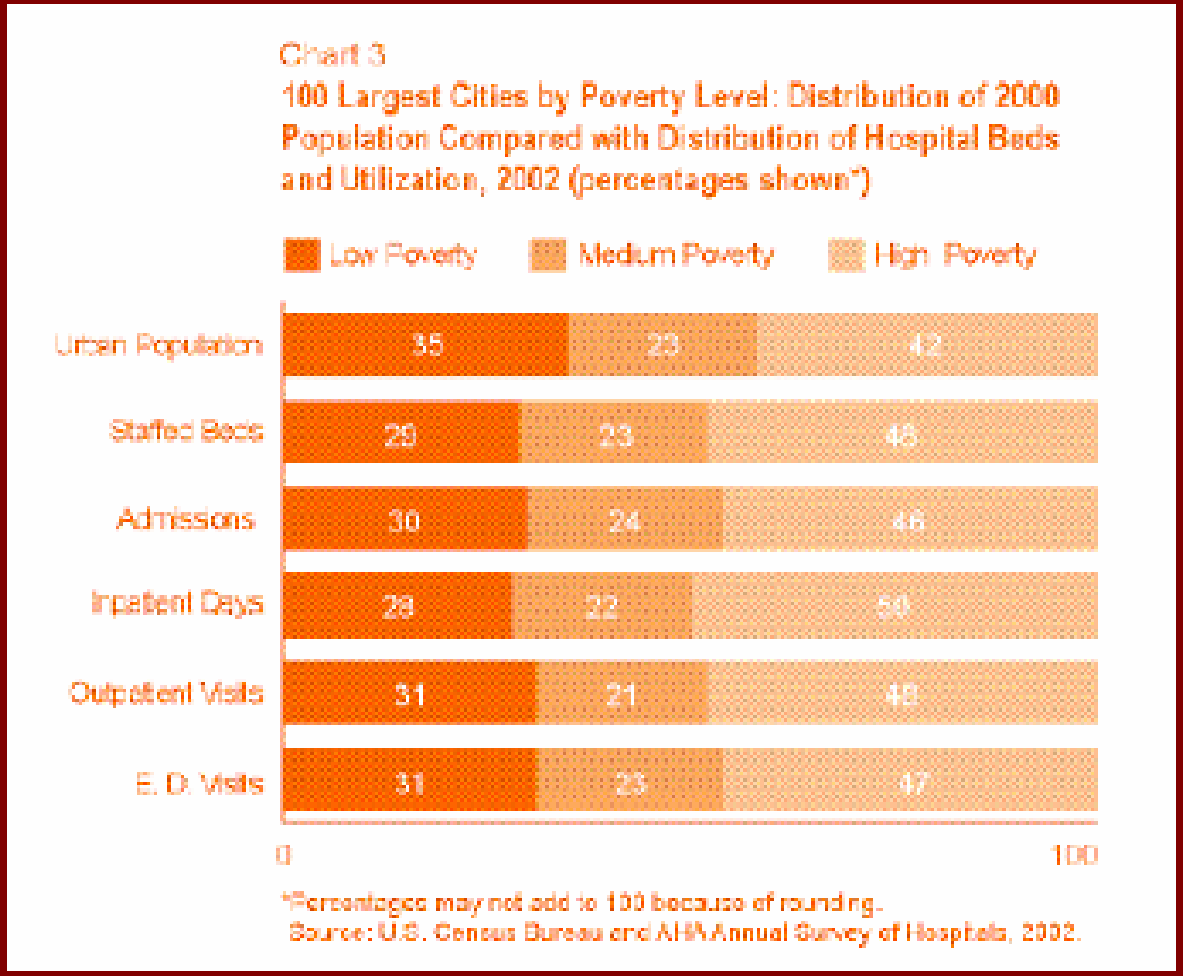
TABLE 1B
Suburban Hospital Statistics by Type of Ownership, 1996, 1999, 2002

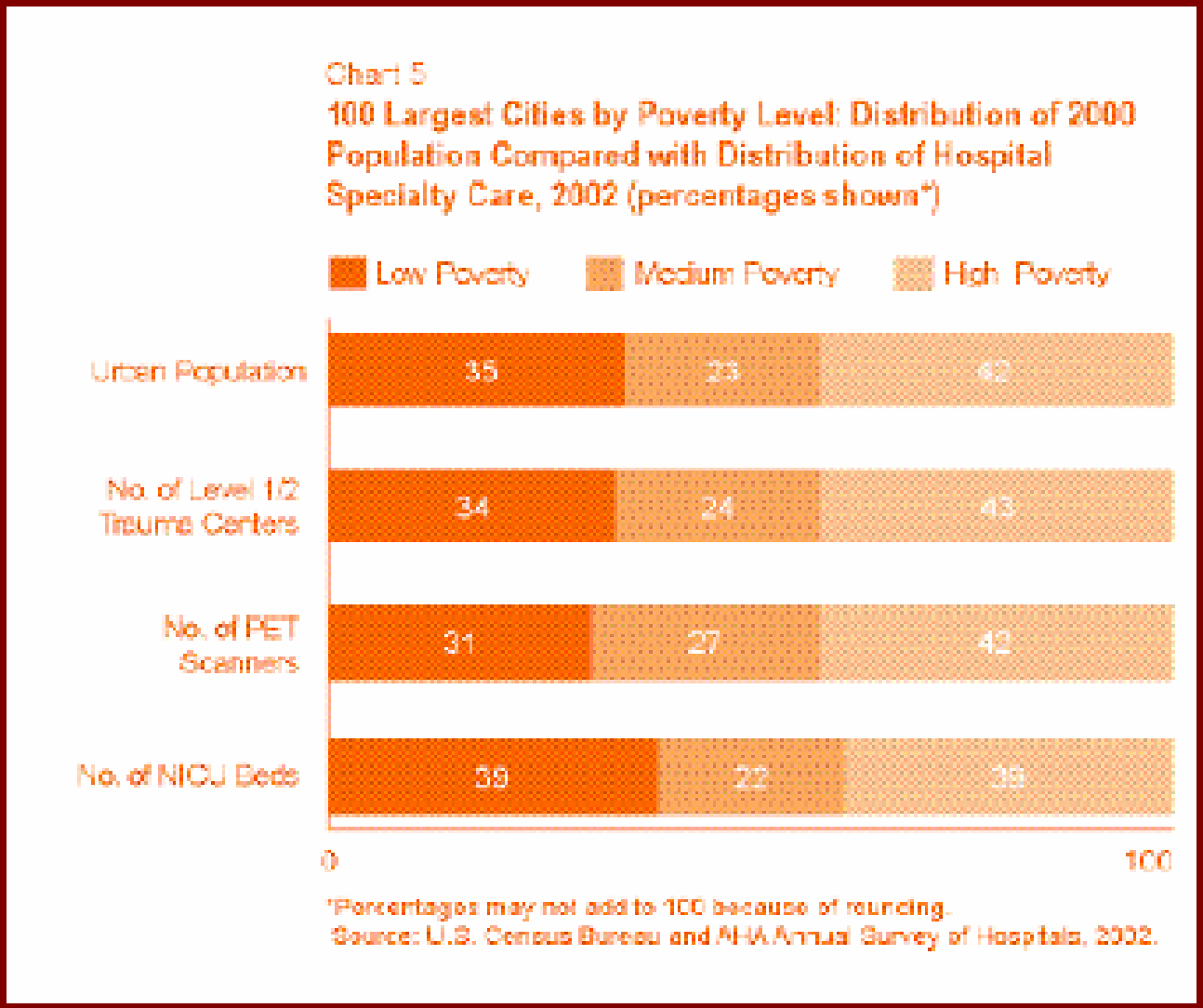
	Hospital Ownership	1996	1999	2002	% Change 96-99	% Change 99-02	% Change 96-02
Number of Hospitals	For-Profit	164	146	146	-11.0	0.0	-11.0
	Non-Profit	608	603	595	-0.8	-1.3	-2.1
	Public	134	111	98	-17.2	-11.7	-26.9
	Total	906	860	839	-5.1	-2.4	-7.4
Staffed Beds per Hospital	For-Profit	148	145	145	-2.2	0.3	-1.9
	Non-Profit	204	203	201	-0.4	-1.1	-1.5
	Public	135	149	171	9.8	14.8	26.1
	Total	184	186	188	1.4	0.8	2.2
Admissions per Hospital	For-Profit	5,412	5,861	6,680	8.3	14.0	23.4
	Non-Profit	8,228	9,077	9,732	10.3	7.2	18.3
	Public	5,149	6,048	7,468	17.5	23.5	45.0
	Total	7,262	8,140	8,936	12.1	9.8	23.0
Occupancy Rate	For-Profit	49.0	53.4	60.1	8.9	12.6	22.6
	Non-Profit	60.9	63.5	66.4	4.3	4.5	9.0
	Public	59.5	66.3	69.1	11.4	4.2	16.1
	Total	59.0	62.5	65.8	5.8	5.4	11.5
Inpatient Days per Hospital	For-Profit	26,587	28,229	31,886	6.2	13.0	19.9
	Non-Profit	45,541	47,160	48,757	3.6	3.4	7.1
	Public	29,518	36,015	43,066	22.0	19.6	45.9
	Total	39,741	42,508	45,156	7.0	6.2	13.6
Average Length of Stay	For-Profit	4.9	4.8	4.8	-2.0	-0.9	-2.8
	Non-Profit	5.5	5.2	5.0	-6.1	-3.6	-9.5
	Public	5.7	6.0	5.8	3.9	-3.1	0.6
	Total	5.5	5.2	5.1	-4.6	-3.2	-7.7
Outpatient Visits per Hospital	For-Profit	48,672	58,376	69,625	19.9	19.3	43.0
	Non-Profit	117,154	136,517	149,959	16.5	9.8	28.0
	Public	83,167	109,429	137,717	31.6	25.9	65.6
	Total	99,731	119,755	134,550	20.1	12.4	34.9
Emergency Dept. Visits per Hospital	For-Profit	16,433	19,524	22,624	18.8	15.9	37.7
	Non-Profit	25,221	28,197	31,841	11.8	12.9	26.2
	Public	19,338	22,367	27,502	15.7	23.0	42.2
	Total	22,760	25,972	29,730	14.1	14.5	30.6
Medicaid Discharges as Percentage of Total Admissions	For-Profit	17.2	14.4	17.9	-16.4	24.4	4.0
	Non-Profit	12.5	10.6	13.3	-15.1	25.0	6.2
	Public	17.8	22.1	18.9	24.6	-14.8	6.2
	Total	14.2	12.8	14.8	-9.8	15.6	4.2
Medicaid Average Length of Stay	For-Profit	4.6	5.0	5.0	8.5	-0.2	8.3
	Non-Profit	6.3	6.3	5.7	0.8	-9.2	-8.5
	Public	6.9	8.3	7.7	19.9	-6.8	11.8
	Total	6.1	6.4	5.9	5.8	-8.7	-3.4

Source: Health Forum, American Hospital Association Annual Survey of Hospitals, 1996, 1999, 2002.

2. City-suburban Poverty

- **For Cities:** The proportion of hospital care tracked closely with the proportions of populations in high, medium and low poverty cities.



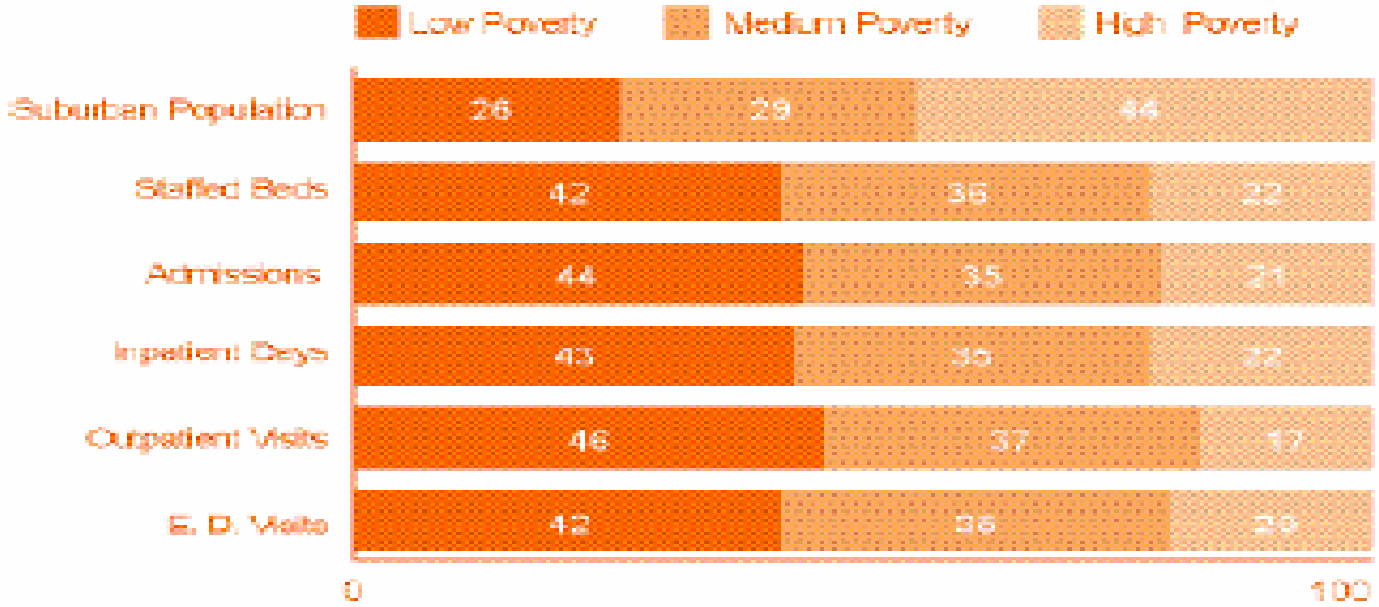


2. City-suburban Poverty con't

- However, the proportions of hospital services and utilization relative to the population in suburban areas identified as high poverty (greater than 10% of MSA population living in poverty during 2000) were, in the aggregate, universally and significantly lower than rates in medium and low poverty areas, suggesting potentially significant underservice.

Chart 4

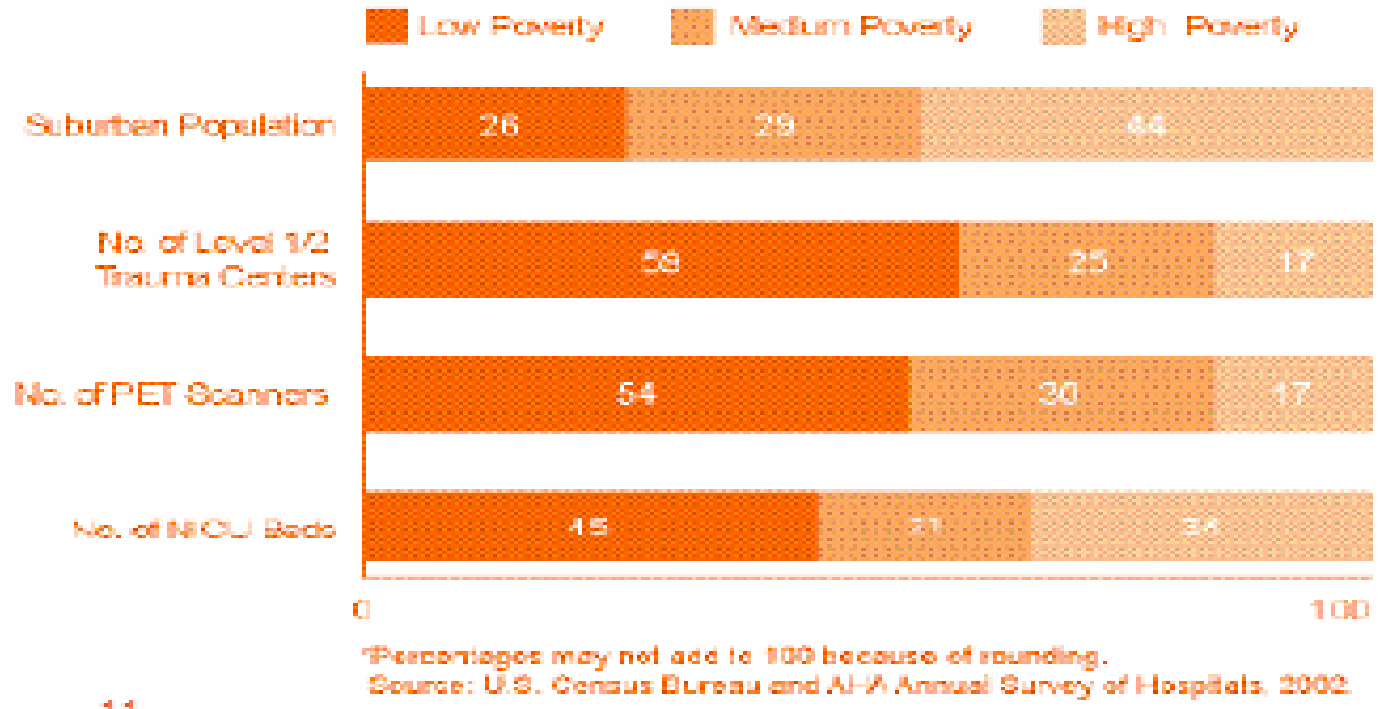
Suburbs of 100 Largest Cities by Poverty Level: Distribution of 2000 Population Compared with Distribution of Hospital Beds and Utilization, 2002 (percentages shown*)



*Percentages may not add to 100 because of rounding.
Source: U.S. Census Bureau and AHA Annual Survey of Hospitals, 2002.

Chart 6

Suburbs of 100 Largest Cities by Poverty Level: Distribution of 2000 Population Compared with Distribution of Hospital Specialty Care, 2002 (percentages shown*)



*Percentages may not add to 100 because of rounding.
Source: U.S. Census Bureau and AHA Annual Survey of Hospitals, 2002.

11

3. Implications for city and suburban public hospitals

a) Prominence of public hospital closures or conversions in cities will most likely demand attention

- Greater likelihood of organized advocacy for affected populations
- Role as employer
- Political Issues
- Volume

Likely outcomes will include alternative strategies for continuing safety net for vulnerable residents

3. Implications for city and suburban public hospitals con't

b) Future for suburban safety net murkier

- Findings suggest market forces, geography, demographics and poverty/insurance combine to create sharp distinctions in availability and access to hospital based services in at least three ways.
- Hospital system may be subdividing suburbs into those with greater potential to attract a more desirable clientele (e.g., insured, more homogeneity), versus less desirable areas with lower rates of insurance, greater poverty, and perhaps other issues such as greater proportions of individuals with limited English proficiency and greater diversity

3. Implications for city and suburban public hospitals con't

- Greater diffusion of especially poorer populations over broader geographic areas may encumber efforts by hospitals to attract a "critical mass" of paying, insured patients in a desirable catchment area.
- Hospital systems tracking suburban growth are likely to be drawn to areas with higher incomes to build a better system "bottom line".

Questions for future consideration for Public Hospitals

- Have some cities and suburbs fared better than others after the loss of their public hospitals? Why? What lessons learned from these changes may be valuable to other communities contemplating divesting or closing their public hospitals?
- With the loss of almost half of the suburban public hospitals between 1980 and 1996, and with significant closures into 2002, what changes are occurring in the suburban safety net and how adequate are they for meeting the needs of vulnerable populations in those areas?

Questions for future consideration

New York Times Article 10/17/07

In Shift, 40% of Immigrants Move Directly to Suburbs

By SAM ROBERTS

About 4 in 10 immigrants are moving directly from abroad to the nation's suburbs, which are growing increasingly diverse, according to census figures released yesterday.

The Census Bureau's annual survey of residential mobility also found that after steadily declining for more than a half-century, the proportion of Americans who move in any given year appears to have leveled off at about one in seven.

"For blacks, especially, it mimics the 50s-style suburban movement, most pronounced for married couples with children, owners and the upwardly mobile," said William H. Frey, a Brookings Institution demographer.

Dr. Frey's analysis of mobility patterns found that while Hispanic and Asian immigrants were more likely to settle first in the nation's cities, "after they get settled, they follow the train to the suburbs."

The migration of blacks to the South continued, with net gains of blacks also seen in the West. The South was the dominant region in recording gains among Hispanics living in the United States who moved.

"The fast growth of construction and low-skilled jobs, plus the general affordability of parts of the South for upwardly mobile Hispanics, has made the South a key destination," Dr. Frey said.

The 2006 Current Population Survey found that nearly 40 million people had moved in the preceding year, or about 14 percent. Residential mobility has remained at that rate for several years now after declining steadily from a high of 20 percent since the census began measuring it in 1948. While the census count of movers from abroad includes returning citizens, the bulk of movers are foreign born.

Audrey Singer, a senior fellow at the Brookings Institution, said traditional gateway cities like New York, Chicago and Los Angeles were still magnets for immigrants who move to join friends and relatives. But particularly in the South and West, where central cities were less likely to develop dense cores, immigrants are following jobs to the suburbs and settling there first.

"It's a really important shift," Ms. Singer said.

The highest rates of moving were among residents of the West and the South, Hispanic people, the unemployed and renters. Some 30 percent of renters lived elsewhere a year earlier, compared with 7 percent of owners.

Almost half of the movers said they changed residences because they wanted more space or less. Sixty-two percent moved within the same county, 20 percent moved from another county in the same state, 14 percent moved from another state and 3 percent moved from abroad.

The Magazine. Sundays.

1. Scope of the suburban poor problem

- Given the presence and movement of lower income, diverse residents to suburbs, how extensive are the problems of accessing primary, acute, specialty and trauma/emergency care for suburban poor? Are they growing?
- Racially and ethnically diverse residents appear likely to experience the greatest gaps in availability of and access to care in poorer suburban areas as are individuals requiring language assistance. What are the implications for efforts to reduce disparities in health care and how might related strategies differ from those proposed or pursued in urban areas?

3. Local, State and National issues

- What national, state and local policy and program recommendations might be made to lower barriers to access/and availability in these areas?
- Are there existing or new models such as regionalization of care, creating networks of care or use of health centers that might provide guidance for redressing in equities in low income suburban areas? How might hospitals otherwise share responsibility for these underserved areas?
- What actions might be encouraged by suburban county governments and constituency representatives for addressing need?