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**Trends Affecting Hospitals
and Health Systems**

*TrendWatch
Chartbook*

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TrendWatch Chartbook 2002

Trends Affecting
Hospitals and Health Systems

October 2002

Prepared by
The Lewin Group, Inc.
for
The American Hospital Association

TrendWatch is a partnership between The American Hospital Association and The Lewin Group designed to provide research and analysis of important and emerging trends in the hospital and health care field. The TrendWatch team members track hospital and health care issues, prepare quarterly reports on emerging and important trends, and offer technical support to AHA and member organizations.

The American Hospital Association (AHA) is the national organization that represents and serves all types of hospitals, health care networks, and their patients and communities. Close to 5,000 institutional, 600 associate, and 40,000 personal members come together to form the AHA.



The Lewin Group is a strategic health and human services consulting firm with 30 years' experience in the US and around the world. The Lewin Group's mission is to help improve health policy and increase knowledge about health and human services systems worldwide.



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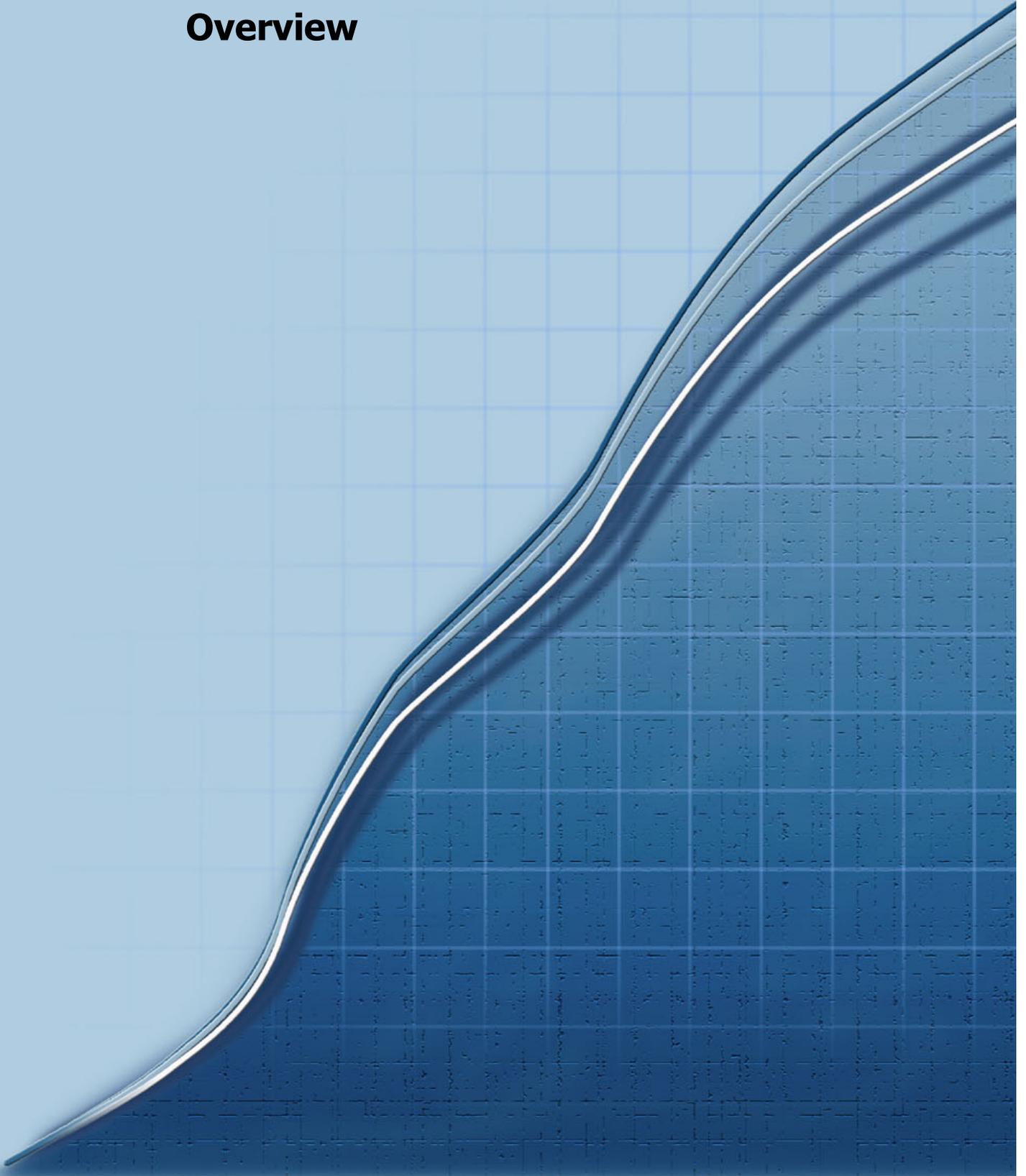
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Overview



Overview

Though the health care system has changed in many ways over the last decade, many of the same issues that drove the national dialogue on health care reform in the early nineties have resurfaced. Growth in national health care spending is accelerating again after moderating in the mid-1990s, and health insurance premium increases are in the double digits. As was the case last year, growth in spending on prescription drugs drove growth in spending on health care services. Spending on prescription drugs rose 17.3 percent, more than double the overall national rate. Tightly managed care, once viewed as the solution to rising health care spending, suffered a backlash from consumers in the mid-nineties. HMO enrollment dropped from a peak of 31 percent in 1996 to 23 percent in 2001, although it climbed to 26 percent in 2002. According to 2001 estimates, progress in reducing the rate of uninsurance appears to have ended in the wake of the economic slowdown as employers find it harder to afford coverage, the unemployment rate rises, and states face pressures to reduce Medicaid spending to reduce budget deficits. Employers are increasing the amount of cost sharing required of employees, but the outcome of this cost containment strategy remains uncertain.

At the federal level, the US Congress is again dealing with a growing budget deficit. Despite this, pressure is high to provide a prescription drug benefit for seniors, yet how such a benefit would be funded or what its impact would be on the deficit are unclear. Medicare+Choice is struggling – the percentage of Medicare beneficiaries enrolled in Medicare HMOs declined for the first time since the program began. This is largely due to decreased availability of Medicare HMO coverage as many health plans have withdrawn from the program. Meanwhile, the number of Medicare beneficiaries is growing, with significant increases expected after 2010 when Baby Boomers begin to retire.

Against this backdrop, hospitals face many challenges.

- According to AHA Annual Survey data, between 1999 and 2000, hospital total margins leveled off at 4.6 percent after dropping over 2 percentage points since 1997. Hospital margins for patient care remained negative and nearly a third of hospitals lost money overall. Financial stress is reflected in the capital markets as Standard and Poor's downgraded six times more hospitals than it upgraded.



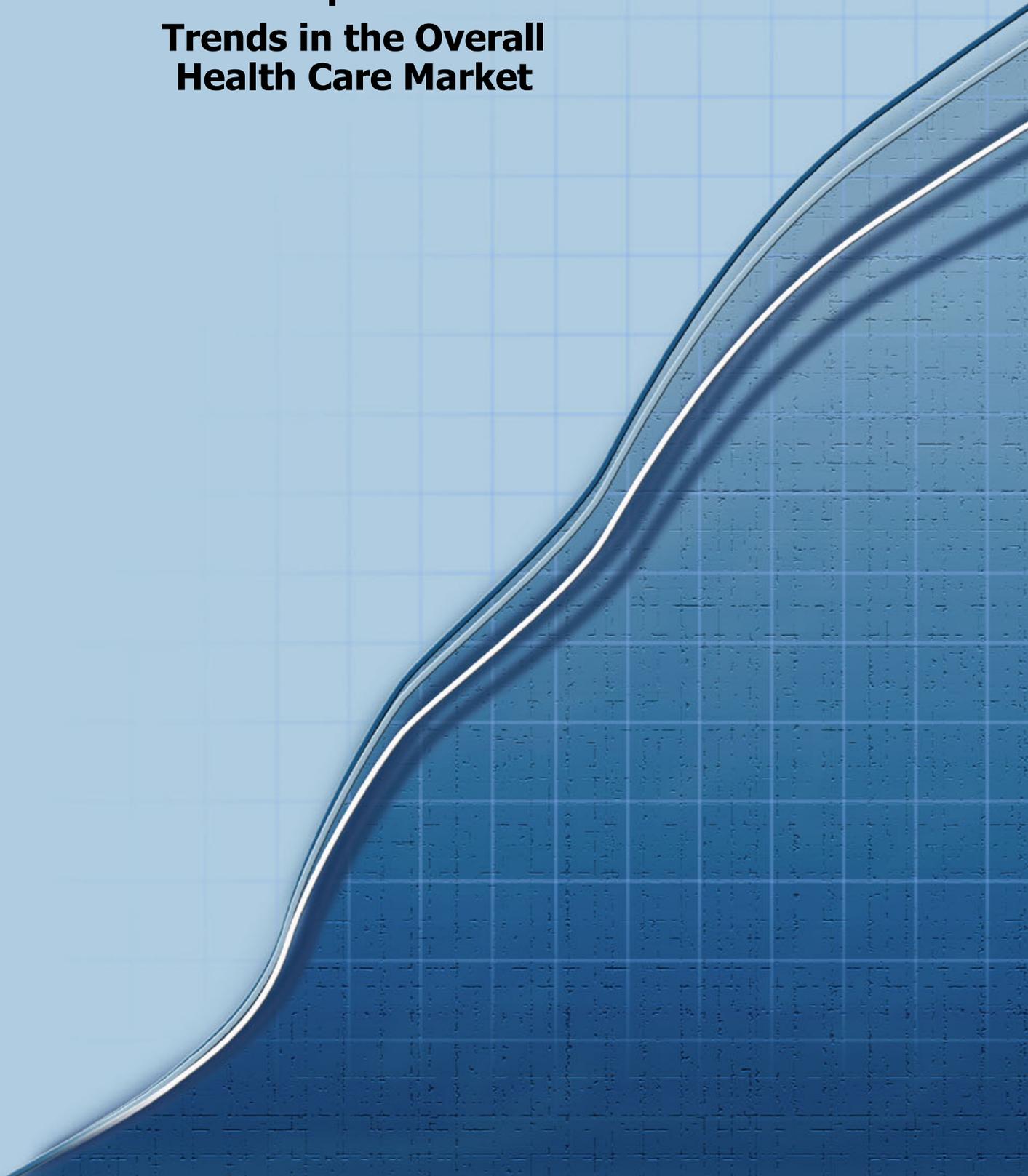
- Payment rates relative to costs continue to decline for Medicare and Medicaid – programs that together account for more than 50 percent of hospital costs.
- Hospitals are facing a critical shortage of health care professionals, especially pharmacists, registered nurses, and imaging and laboratory technicians, as a result of increasing demand, competition from other health care employers, declining enrollment in health education programs, and an aging workforce. Today's shortage is expected to worsen over the next 20 years.
- Demand for hospital services is increasing. After sharp declines in the eighties and early nineties, hospital inpatient days and admissions are now increasing. Outpatient volume has increased by 150 percent since 1980. As demand increases, hospitals are facing capacity constraints. In a recent nationwide survey, over 60 percent of hospitals reported that their emergency departments were “at” or “over” capacity and over 30 percent reported having to divert ambulances. At a time of constrained capacity – both physical capacity and human capacity – hospitals also are focusing on disaster readiness and implementation of the Health Insurance Portability and Accountability Act (HIPAA) requirements.
- As the population ages, the demand for health care services will continue to rise. Between 1990 and 2000, the U.S. population increased by about 13.1 percent (33 million people); the population over age 85 grew about 40.3 percent (1.2 million people). According to Census Bureau projections, the percent of the U.S. population over age 65 will double in the next 30 years.
- Hospitals are confronting upward pressures on costs. Facing a severe shortage of health care workers, hospital labor costs are rising at a rate 38 percent above that of other service industries. Hospitals also are experiencing rising costs for pharmaceuticals and other new technologies. The current crisis in the medical liability insurance industry has led to premium increases in the triple digits for many hospitals, according to a limited survey of hospital risk managers.⁽¹⁾
- The U.S. population is also becoming more racially and ethnically diverse, and hospitals are trying to recruit a workforce that better reflects the population they serve. By 2020, the Hispanic population is projected to grow

⁽¹⁾ American Hospital Association/ASHRM Survey of Hospital Experience with Professional Liability Insurance, 2002

70 percent, and the population of Asian and Pacific Islanders is projected to grow 75 percent. In order to make the provision of care more effective for people of different ethnicities, hospitals and health care workers must become more attuned to cultural differences in an effort to facilitate communication and enhance the quality of care.

The following charts present an analysis of trends in the hospital field within the context of the broader environment for health care. Hospital data are drawn primarily from the American Hospital Association Annual Surveys. Other data come from a variety of sources. The Chartbook begins with a chapter on overall trends in health care spending, financing, and coverage. The next four chapters look at trends specific to the hospital field, including organizational trends, volume and utilization, financing, and workforce issues. The final chapter examines demographic shifts and hospital capacity to serve a changing population.

**Chapter 1:
Trends in the Overall
Health Care Market**



Chapter 1: Trends in the Overall Health Care Market

National Health Spending

Since 1997, the growth rate for national spending on health has increased each year. This trend continued from 1999 to 2000, with spending growing by 6.9 percent, over a percentage point higher than the prior year's growth. In addition, spending per capita grew by 5.9 percent. Health spending as a percentage of Gross Domestic Product remained at 13 percent, although this is likely to change as growth in the overall economy slows relative to growth in health care spending (Charts 1.1 - 1.4).

The percentage of national health expenditures for hospital care continued to decrease relative to other health services and supplies (down to 32.8 percent in 2000 from 33.4 percent in 1999). Furthermore, spending on physician services, hospital care, and nursing home care grew less than the overall rate of growth in spending for health services and supplies. After declining in 1998 and 1999, spending on home health increased slightly in 2000 (Charts 1.5 - 1.6).

The needs of an aging population, breakthrough drugs that allow more conditions to be treated through medication, and direct-to-consumer marketing have increased demand for prescription drugs. From 1999 to 2000, spending on pharmaceuticals rose 17.3 percent – more than double the overall rate of growth in spending for health services and supplies. In addition, although prescription drugs represent only 9.7 percent of health care spending, growth in drug spending represented 21.4 percent of overall growth in national health spending, down slightly from the prior year. Both private health insurance and consumer prescription drug spending continued to rise, with private health insurance paying for a larger share of prescription drugs than consumers (Charts 1.6 - 1.9).

Trends in Health Care Coverage and Premiums

After a 2 year decline, the percentage of the population uninsured nationally increased from 14.2 percent in 2000 to 14.6 percent in 2001. Whether this increase will continue depends on the pace of the economy, employer response to increasing premiums, and the effect of budgetary pressures on state coverage programs. Texas has the highest rate of uninsurance, with an average across 2000 and 2001 of 23.2 percent of its residents uninsured, while Rhode Island has the lowest (Charts 1.12 - 1.13).



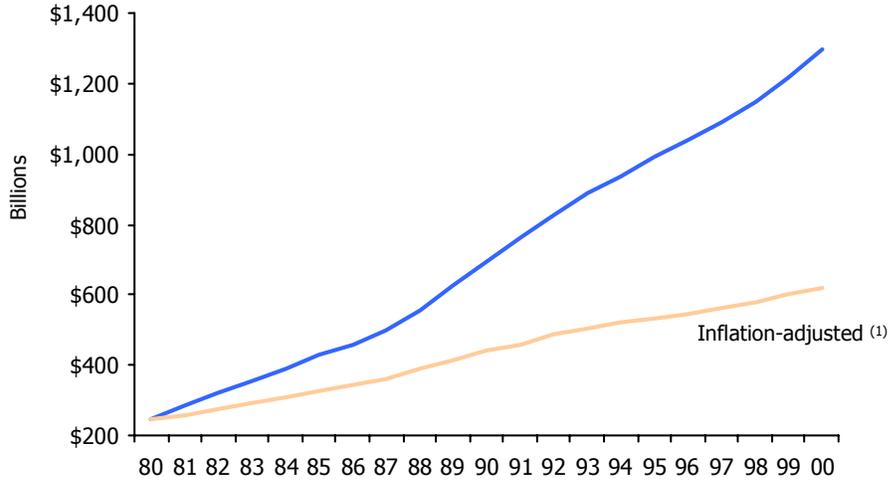
Between 2000 and 2001, the percentage of individuals under private coverage decreased from 71.9 percent to 70.9 percent. The percentage of the population under HMO type coverage declined from 28 percent in 1999 to 23 percent in 2001, and climbed to 26 percent in 2002. Conventional indemnity coverage and point-of-service plan enrollment fell between 1999 and 2002. PPO enrollment increased from 38 percent in 1999 to 52 percent in 2002 (Charts 1.11, 1.18 -1.19).

Trends in enrollment in public insurance programs are mixed. Medicare enrollment increased slightly between 1998 and 1999 (the most recent years for which data are available) while Medicaid enrollment decreased slightly. Enrollment in SCHIP increased from 2 million in 1999 to 4.6 million in 2001. After sharp increases between 1991 and 1998, Medicaid managed care enrollment continued to hold constant, while the percentage of beneficiaries enrolled in Medicare HMOs actually declined for the first time since the program's inception (Charts 1.14 - 1.17, 1.20, 1.22, 1.23).

Private health insurance premiums jumped by 12.7 percent in 2002 as health plans, particularly HMOs, continued to rebound from losses experienced in the late 1990s. Consumer backlash against managed care may be contributing to increased premiums as health plans ease controls on choice and utilization (Chart 1.24).



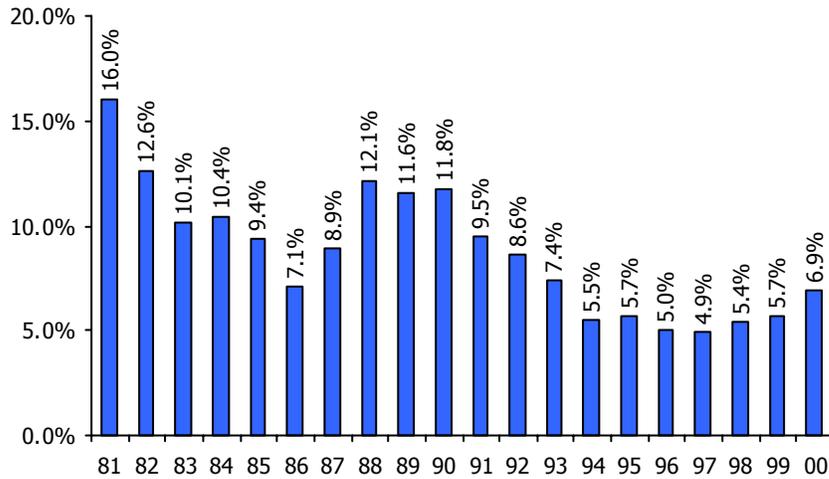
Chart 1.1:
Total National Health Expenditures
 1980 - 2000



Source: Centers for Medicare & Medicaid Services, Office of the Actuary

(1) Expressed in 1980 dollars; adjusted using the overall Consumer Price Index for All Urban Consumers

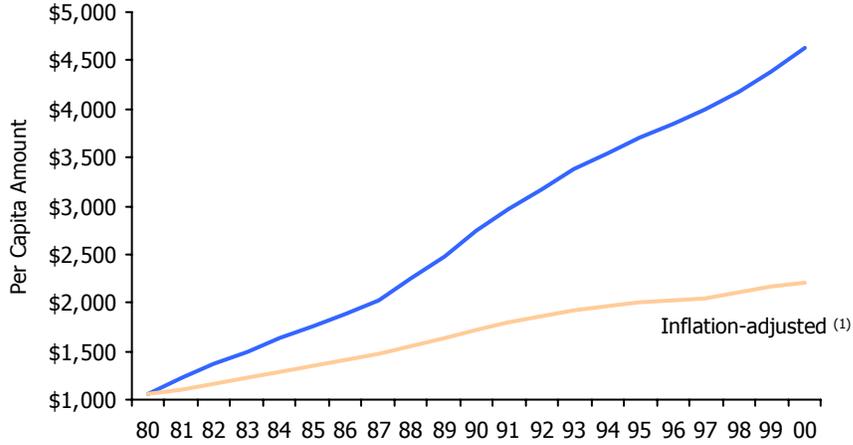
Chart 1.2:
Percent Change in Total National Health Expenditures
 1981 - 2000



Source: Centers for Medicare & Medicaid Services, Office of the Actuary



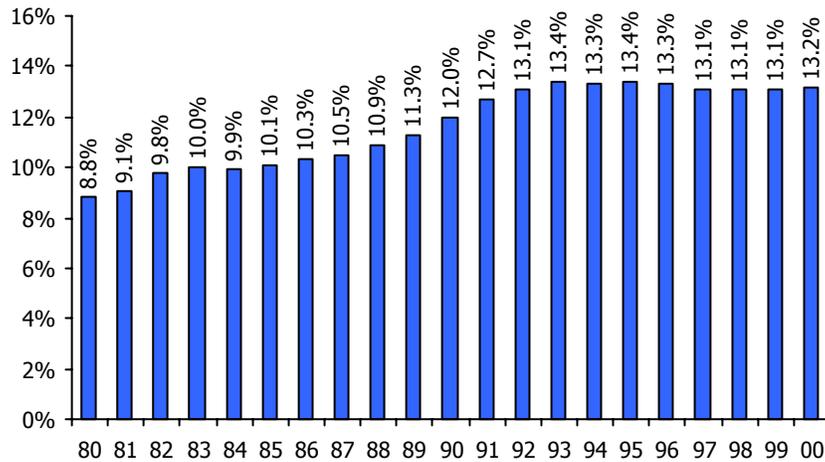
**Chart 1.3:
Per Capita National Health Expenditures
1980 - 2000**



Source: Centers for Medicare & Medicaid Services, Office of the Actuary

(1) Expressed in 1980 dollars; adjusted using the overall Consumer Price Index for All Urban Consumers

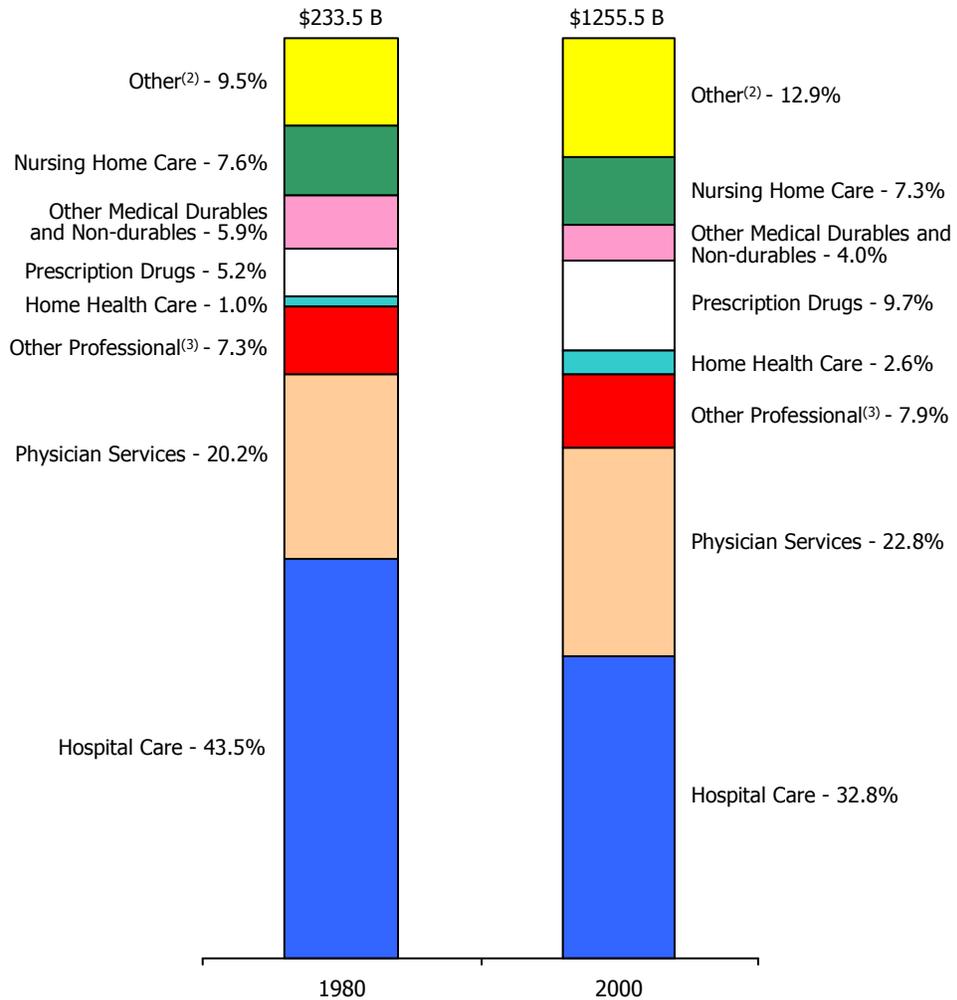
**Chart 1.4:
National Health Expenditures
as a Percentage of Gross Domestic Product
1980 - 2000**



Source: Centers for Medicare & Medicaid Services, Office of the Actuary



**Chart 1.5:
National Expenditures for Health Services
and Supplies⁽¹⁾ by Category
1980 and 2000**



Source: Centers for Medicare & Medicaid Services, Office of the Actuary

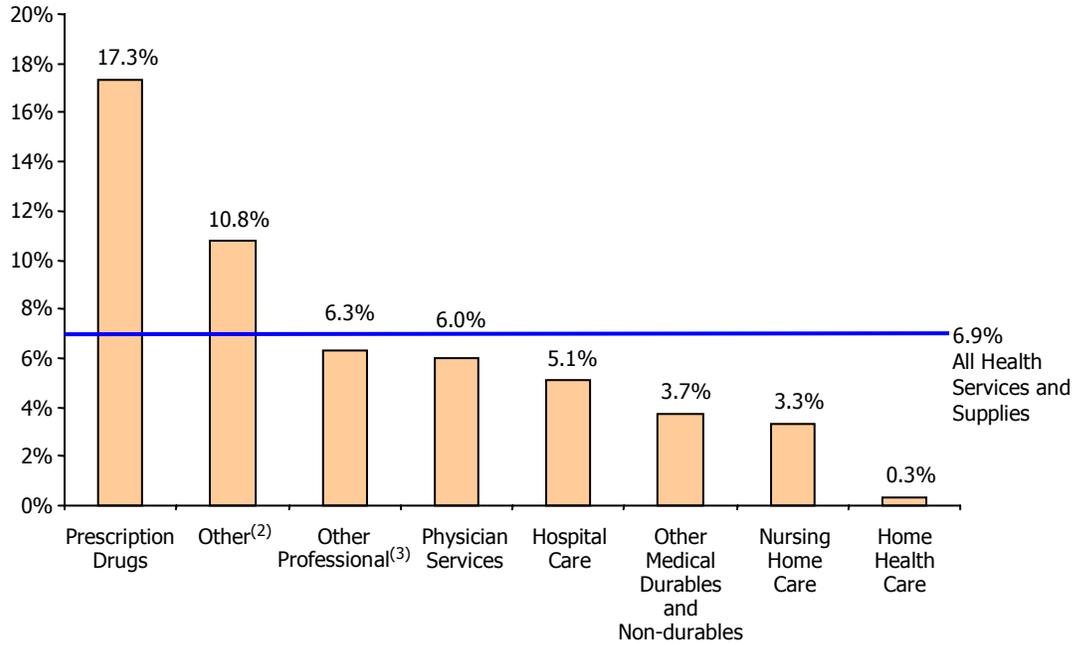
(1) Excludes medical research and medical facilities construction

(2) "Other" includes net cost of insurance and administration, government public health activities, and other personal health care

(3) "Other professional" includes dental and other non-physician professional services



**Chart 1.6:
Percent Change in National Expenditures for Health
Services and Supplies⁽¹⁾ by Category
1999 -2000**

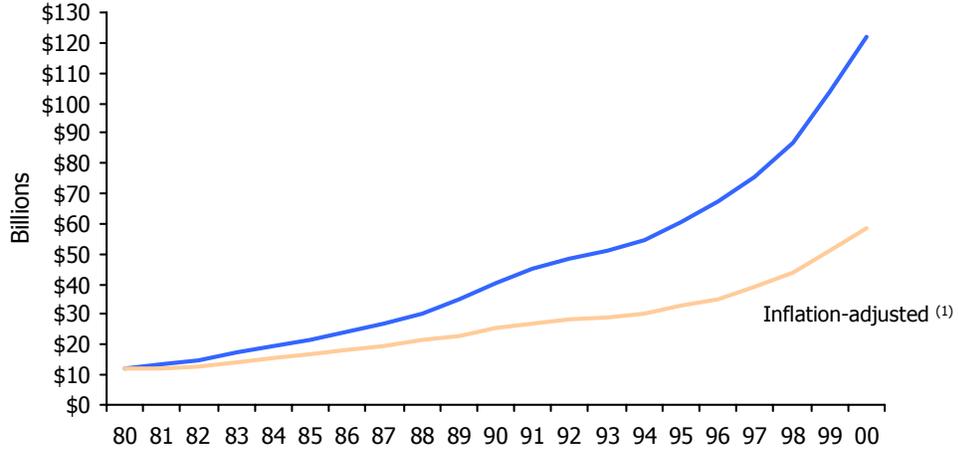


Source: Centers for Medicare & Medicaid Services, Office of the Actuary

- (1) Excludes medical research and medical facilities construction
- (2) "Other" includes net cost of insurance and administration, government public health activities, and other personal health care
- (3) "Other professional" includes dental and other non-physician professional services



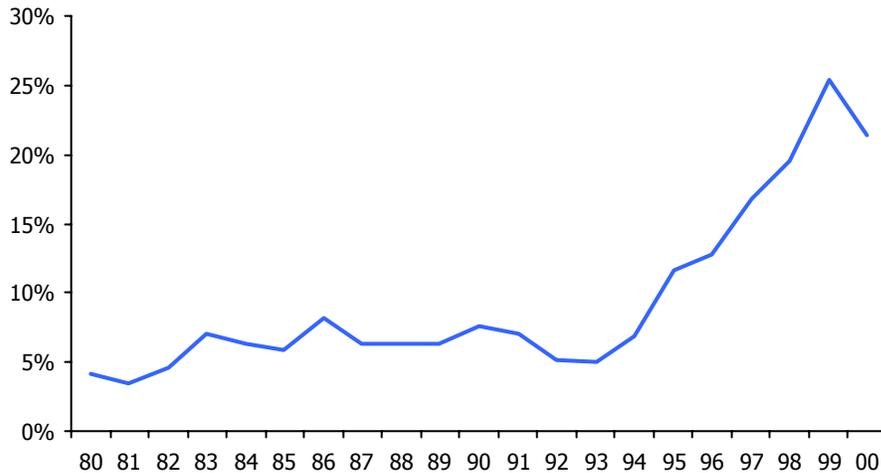
**Chart 1.7:
Total Prescription Drug Spending
1980 - 2000**



Source: Centers for Medicare & Medicaid Services, Office of the Actuary

⁽¹⁾ Expressed in 1980 dollars; adjusted using the overall Consumer Price Index for All Urban Consumers

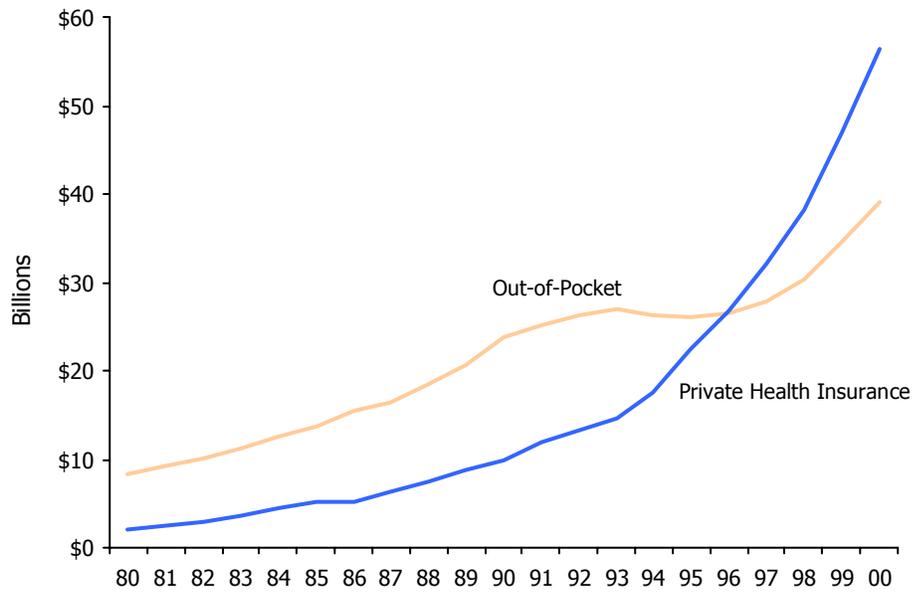
**Chart 1.8:
Growth in Total Prescription Drug Spending
as a Percentage of Total Growth in National Health Expenditures
1980 - 2000**



Source: Centers for Medicare & Medicaid Services, Office of the Actuary



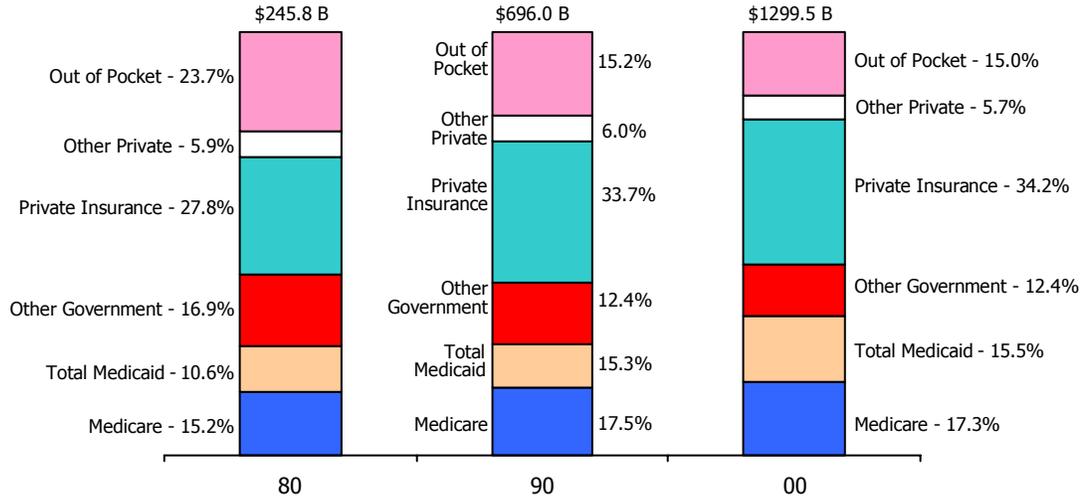
**Chart 1.9:
Consumer Out-of-Pocket Spending
vs. Private Health Insurance Spending
for Prescription Drugs
1980 - 2000**



Source: Centers for Medicare & Medicaid Services, Office of the Actuary

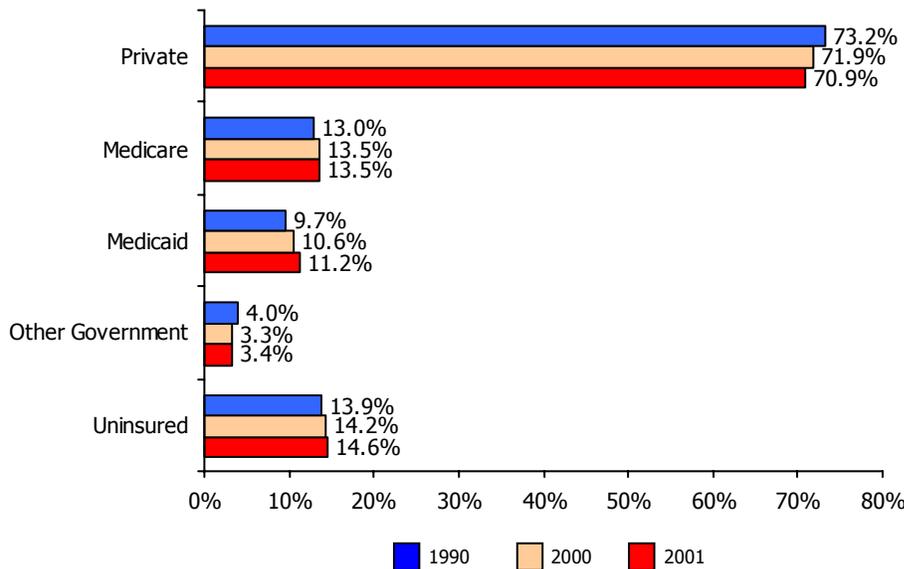


**Chart 1.10:
Distribution of National Health Expenditures
by Source of Payment
1980, 1990, and 2000**



Source: Centers for Medicare & Medicaid Services, Office of the Actuary

**Chart 1.11:
Distribution of Health Insurance Coverage
Percentage of Population Covered by Payer
1990, 2000, and 2001⁽¹⁾**

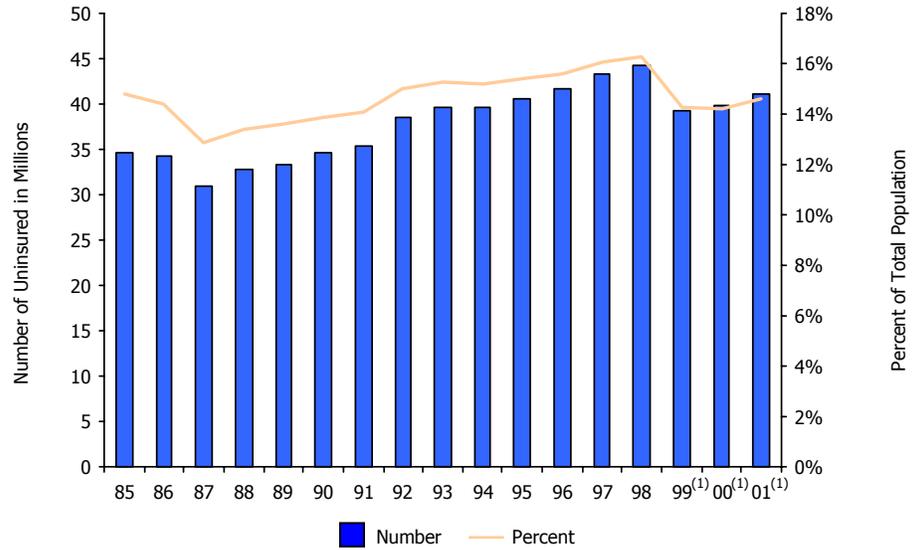


Source: US Census Bureau

⁽¹⁾ 2000 and 2001 data use population estimates based on Census 2000.



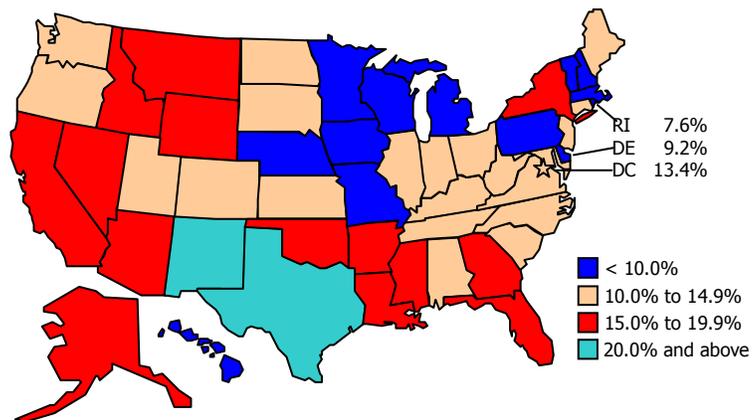
**Chart 1.12:
Number and Percent Uninsured⁽¹⁾
1985 - 2001**



Source: US Census Bureau

⁽¹⁾ 1999, 2000, and 2001 data use population estimates based on Census 2000.

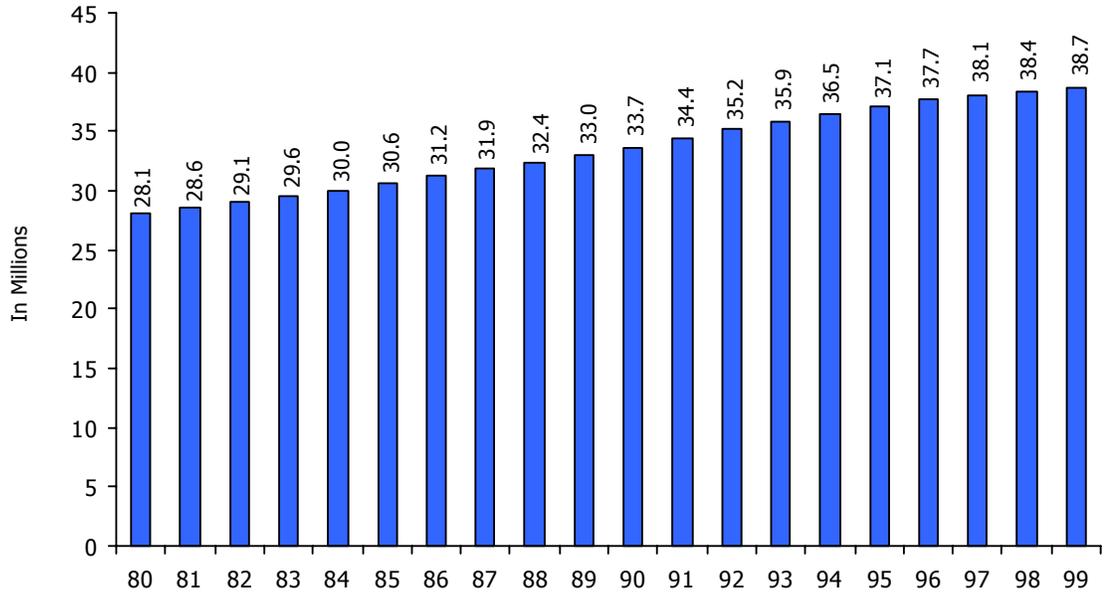
**Chart 1.13:
Average Percent Uninsured by State
2000 - 2001**



Source: US Census Bureau



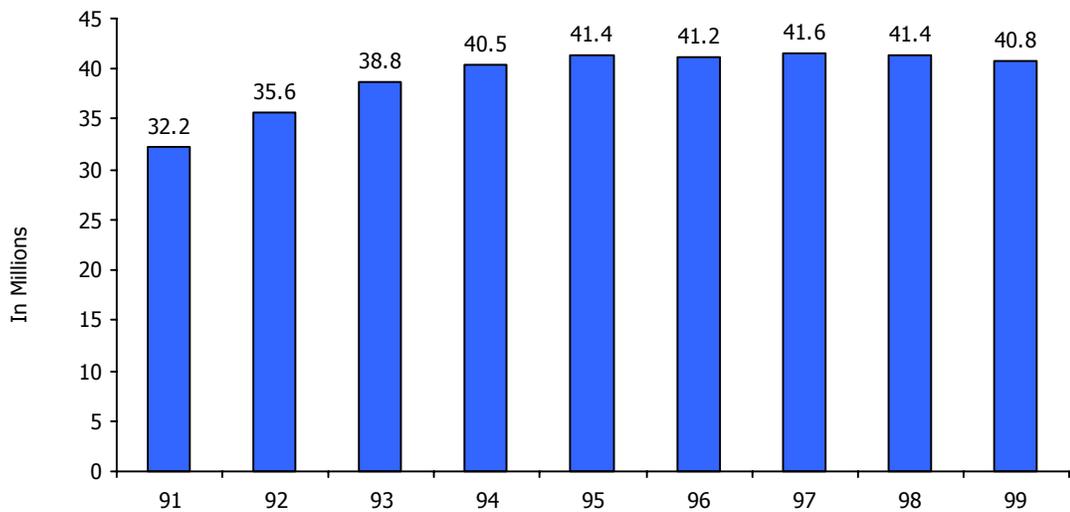
Chart 1.14:
Medicare Enrollees⁽¹⁾ 1980 - 1999



Source: Centers for Medicare & Medicaid Services

⁽¹⁾ Hospital insurance (Part A) enrollees only; includes all persons (aged and disabled)

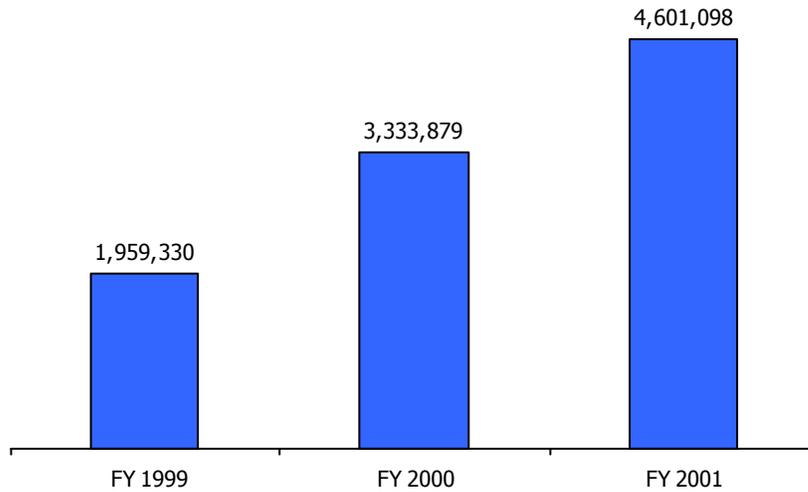
Chart 1.15:
Medicaid Enrollees 1991 - 1999⁽¹⁾



Source: Centers for Medicare & Medicaid Services

⁽¹⁾ Includes S-CHIP Enrollees

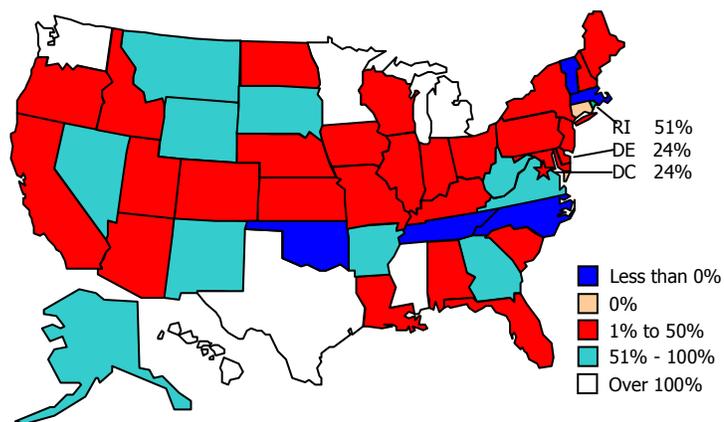
**Chart 1.16:
 National SCHIP Enrollment⁽¹⁾
 FY 1999 - FY 2001**



Source: Centers for Medicare & Medicaid Services

⁽¹⁾ Number of children enrolled at any point in the year

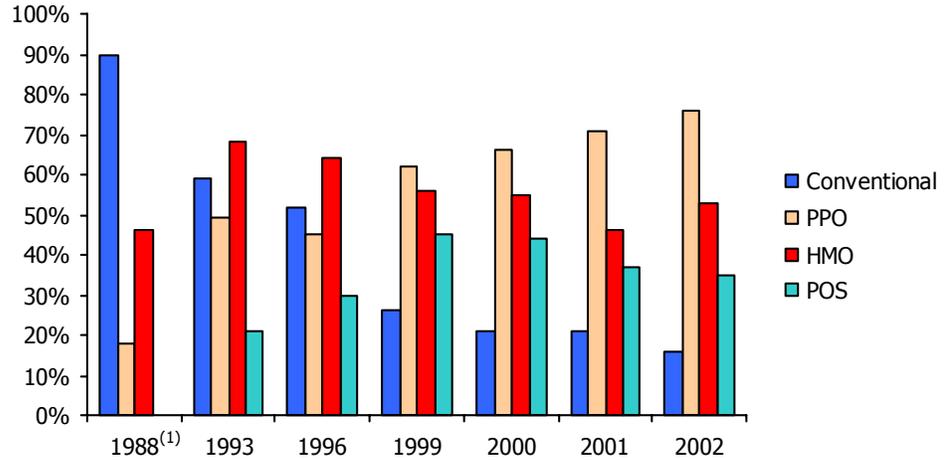
**Chart 1.17:
 Percent Change in SCHIP Enrollment By State
 FY 2000 - FY 2001**



Source: Centers for Medicare & Medicaid Services



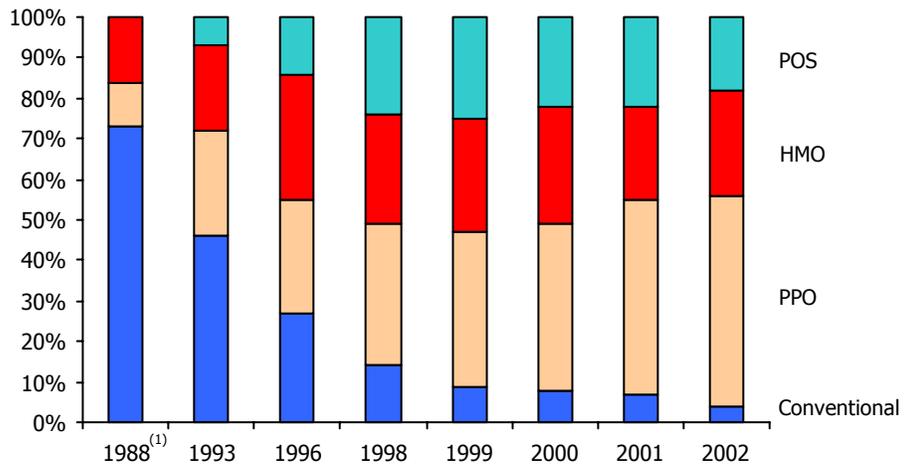
Chart 1.18:
Percentage of Employees with Employer-based Coverage
Who Can Choose Conventional, PPO, HMO and POS Plans
 1988 - 2002



Source: The Kaiser Family Foundation and Health Research and Educational Trust, Employer Health Benefits 2000, 2001, and 2002 Annual Surveys

⁽¹⁾ Point-of-service plans not separately identified

Chart 1.19:
Distribution of Employer-sponsored Health Insurance Enrollment
by Type of Plan
 1988 - 2002

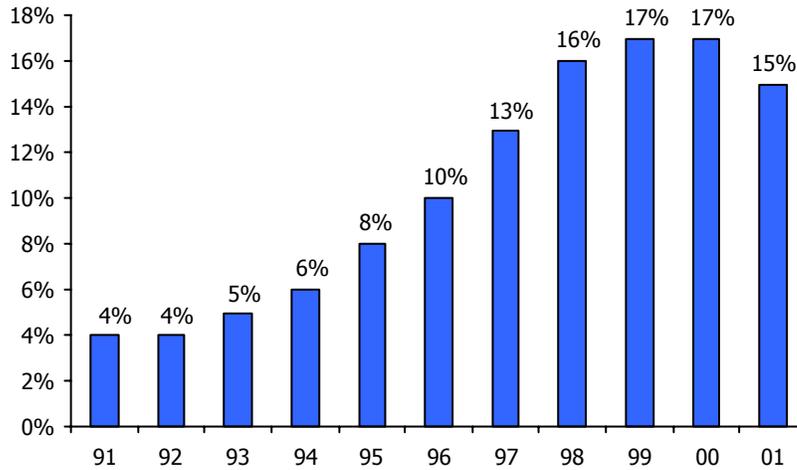


Source: The Kaiser Family Foundation and Health Research and Educational Trust, Employer Health Benefits 2002 Annual Survey

⁽¹⁾ Point-of-service plans not separately identified



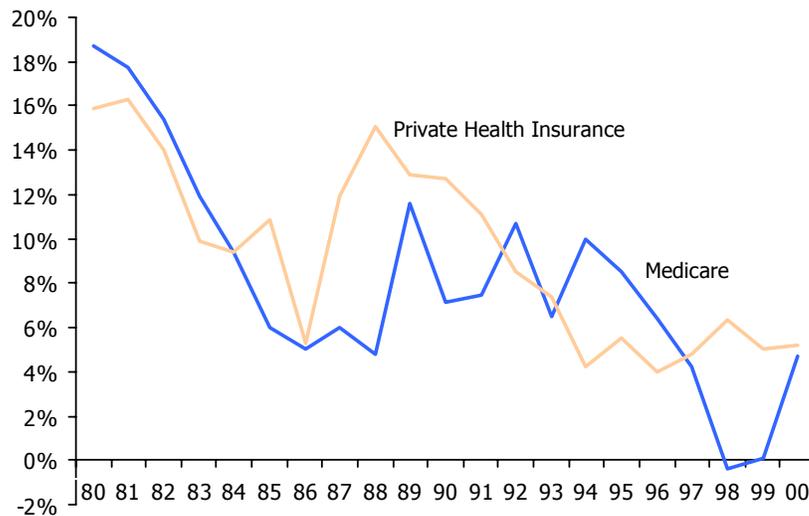
Chart 1.20:
Percentage of Medicare Beneficiaries Enrolled
in Medicare Managed Care⁽¹⁾
1991 - 2001



Source: Centers for Medicare & Medicaid Services, Office of the Actuary

⁽¹⁾ Percentages are risk enrollees divided by enrollees who have both hospital insurance and supplementary medical insurance

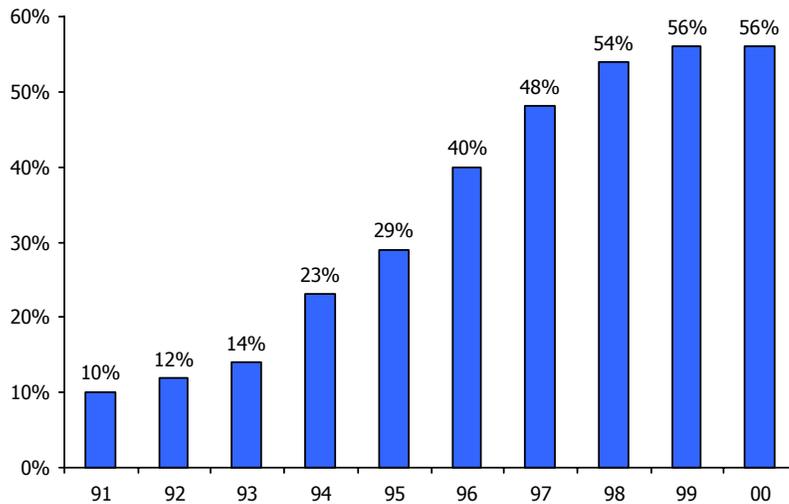
Chart 1.21:
Percent Growth in Medicare Spending per Beneficiary vs.
Private Health Insurance Spending per Enrollee
1980 - 2000



Source: Centers for Medicare & Medicaid Services, Office of the Actuary

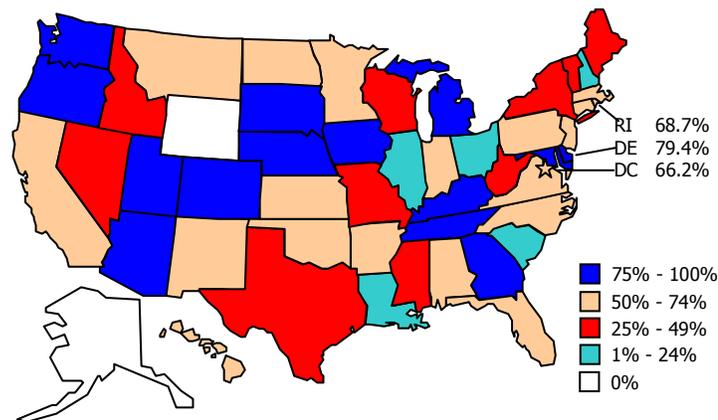


Chart 1.22:
Percentage of Medicaid Beneficiaries Enrolled
in Medicaid Managed Care
1991 - 2000



Source: Centers for Medicare & Medicaid Services, Office of the Actuary

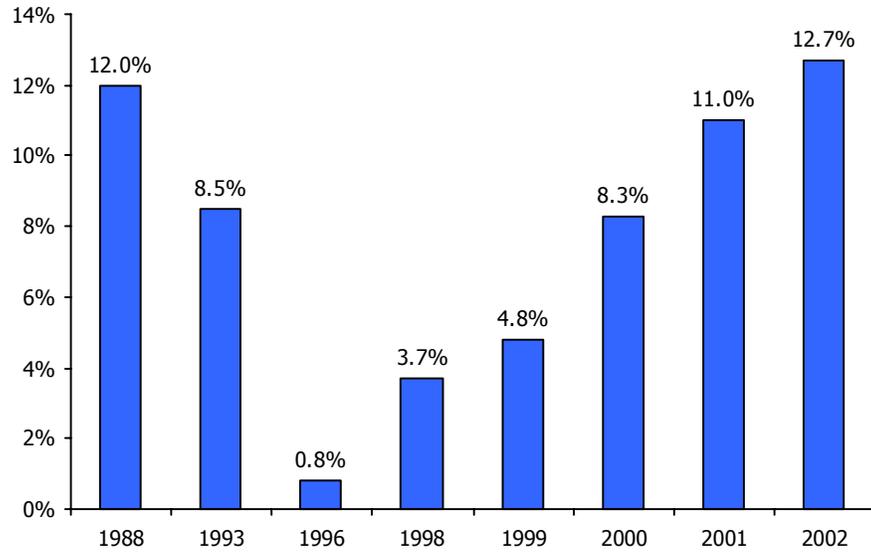
Chart 1.23:
Percentage of Medicaid Beneficiaries Enrolled
in Medicaid Managed Care by State
2000



Source: Centers for Medicare & Medicaid Services, Office of the Actuary

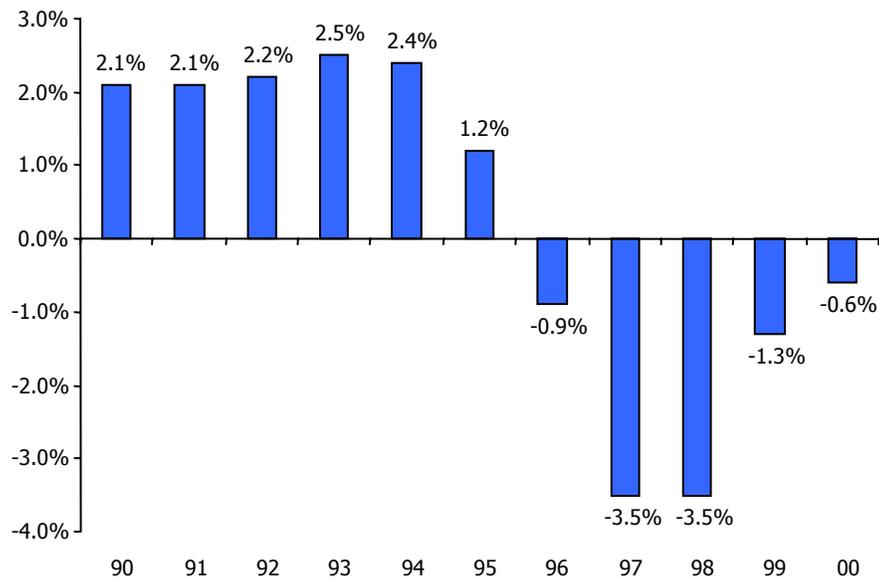


Chart 1.24:
Annual Change in Health Insurance Premiums
1988 - 2002



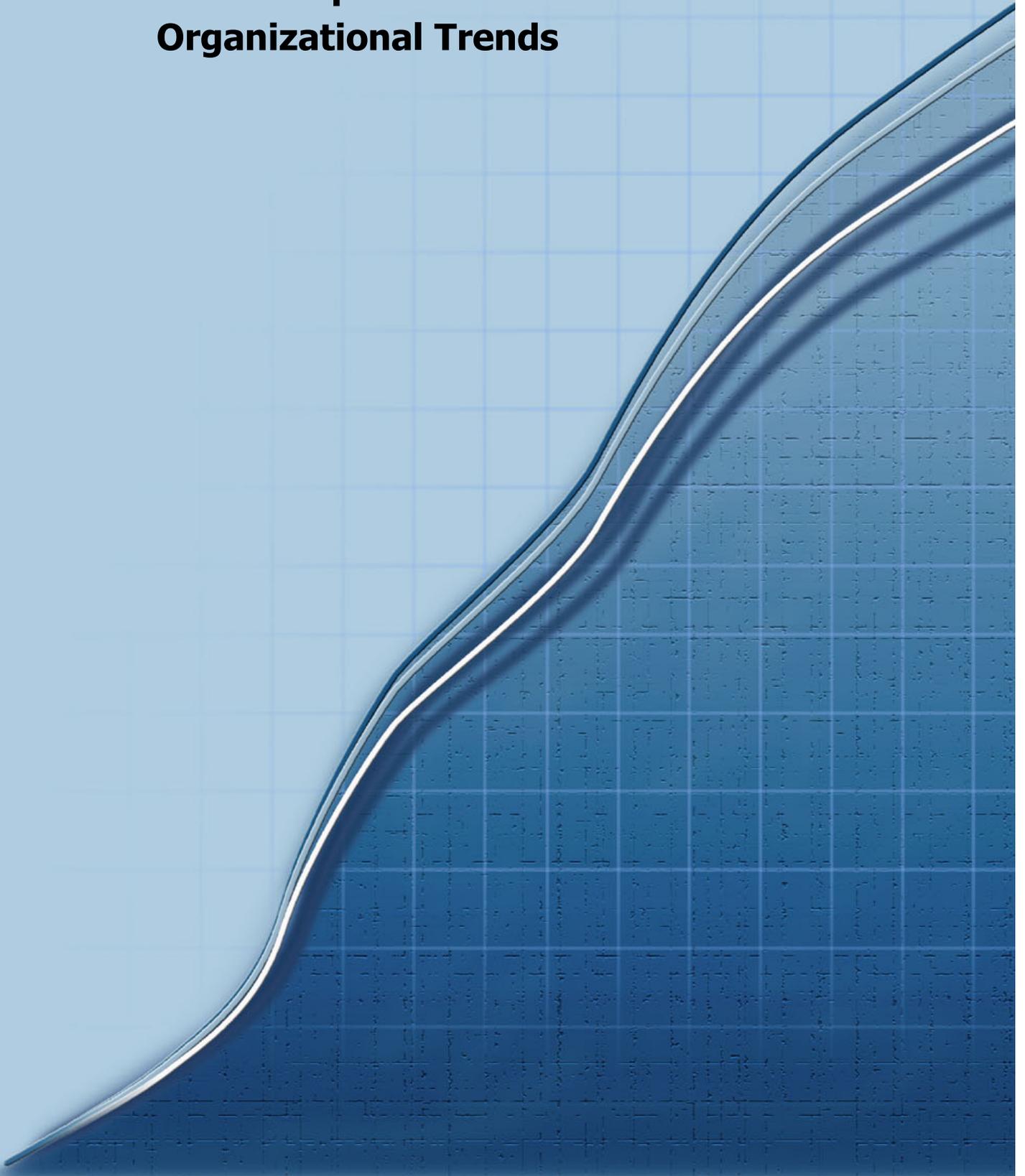
Source: The Kaiser Family Foundation and Health Research and Educational Trust, Employer Health Benefits 1999, 2000, 2001, and 2002 Annual Surveys

Chart 1.25:
HMO Plan Median Operating Margins
1990 - 2000



Source: Interstudy Competitive Edge: HMO Industry Report 11.2

Chapter 2: Organizational Trends



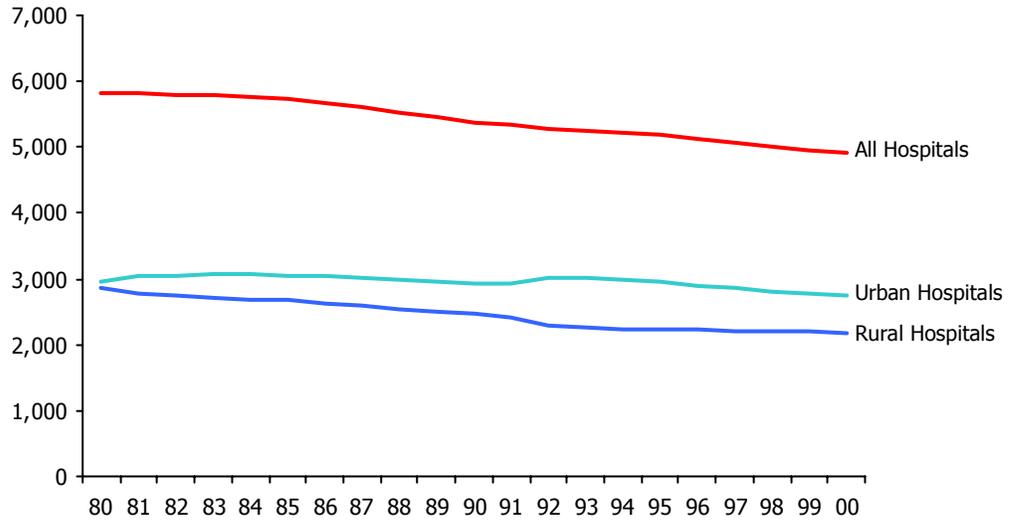
Chapter 2: Organizational Trends

Technological advances, payer pressures, the policy environment, and consumer demand influence hospitals' organizational structure and service offerings. The numbers of community hospitals and hospital beds are still decreasing even as inpatient volume (Chapter 3) has begun to rise. In addition, the number of hospital beds per thousand population continues to decline overall, though the rates for 2000 still show significant variation across states. Hospital outpatient revenue has increased to 35 percent of total hospital revenue, up from 13 percent in 1980 and 23 percent in 1990 (Charts 2.1 - 2.4).

The level of horizontal integration, as measured by the number of hospitals in systems, remained constant after a slight decrease from 1997 to 1998 and a slight increase in 1999. Hospitals continued the recent shift away from vertical integration. The percentage of hospitals engaging in various physician relationships or offering insurance products, two forms of vertical integration, declined again in 2000 after increases through the mid-nineties. With the exception of assisted living, hospitals also continued to curtail non-hospital services including home health, hospice, skilled nursing, and long term care. Medicare reimbursement pressures, specifically BBA, likely played a role. (Charts 2.5 - 2.8).



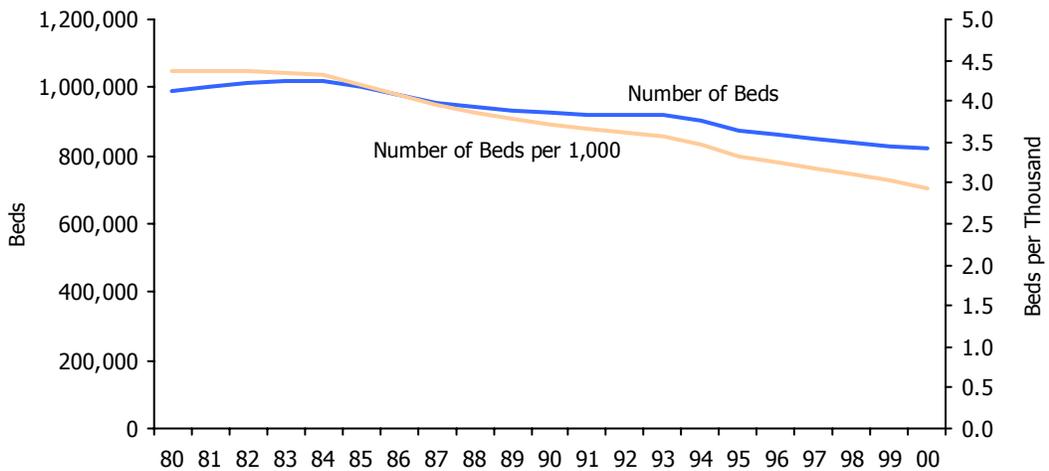
Chart 2.1:
Number of Community Hospitals⁽¹⁾
 1980 - 2000



Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1980 - 2000 for community hospitals

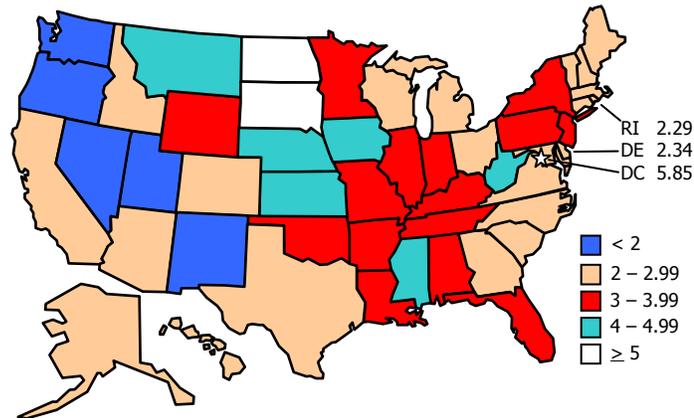
⁽¹⁾ All nonfederal, short-term general, and special hospitals whose facilities and services are available to the public.

Chart 2.2:
Number of Beds
and Number of Beds per 1,000 Persons
 1980 - 2000



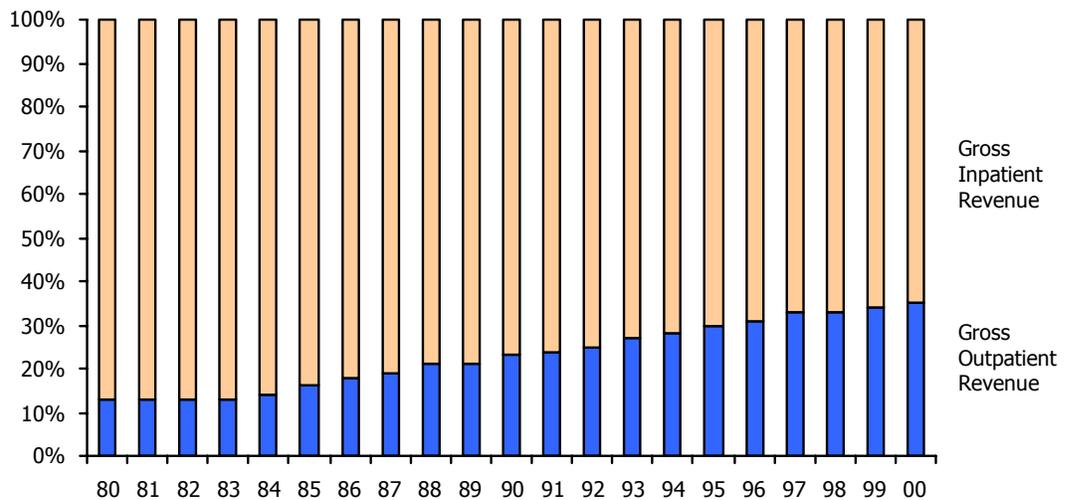
Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1980 - 2000 for community hospitals

Chart 2.3:
Beds per 1,000 by State
2000



Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 2000 for community hospitals

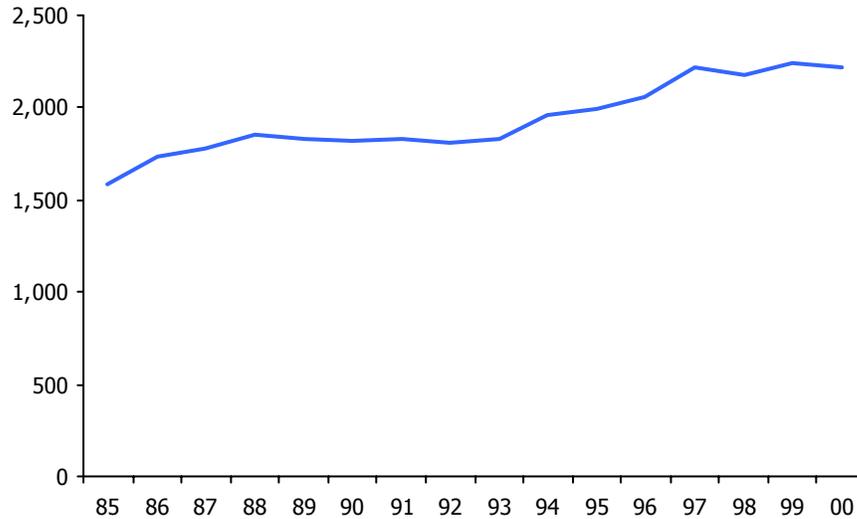
Chart 2.4:
Distribution of Outpatient vs. Inpatient Revenues
1980 - 2000



Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1980 - 2000 for community hospitals



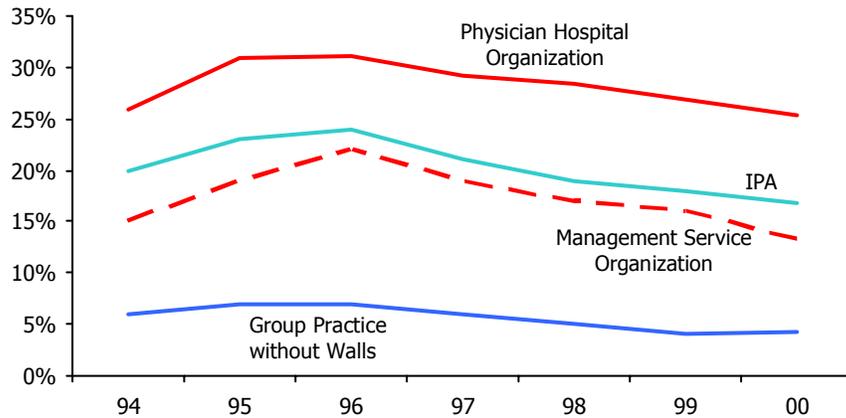
**Chart 2.5:
Number of Hospitals in Health Systems⁽¹⁾
1985 - 2000**



Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1985 - 2000 for community hospitals

⁽¹⁾ Hospitals that are part of a corporate body that may own and/or manage health provider facilities or health-related subsidiaries as well as non-health-related facilities including freestanding and/or subsidiary corporations

**Chart 2.6:
Percentage of Hospitals with Physician Affiliates⁽¹⁾
by Type of Relationship
1994 - 2000**

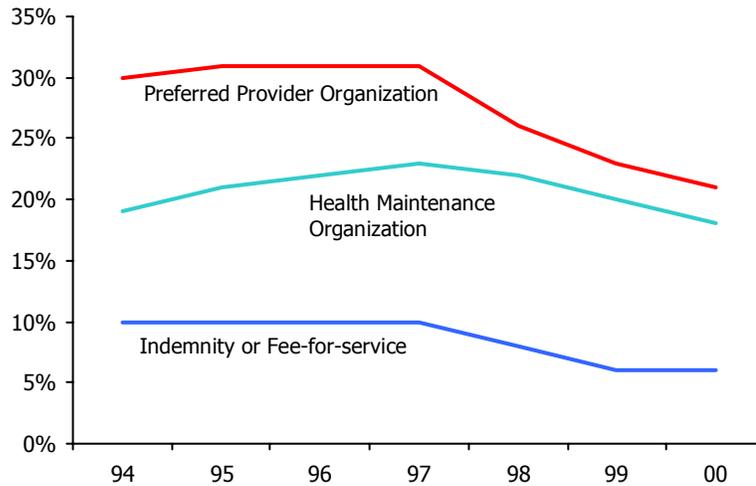


Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1994 - 2000 for community hospitals

⁽¹⁾ A hospital is considered to have a physician relationship if the relationship exists as part of the hospital or a system or network of which the hospital is a part

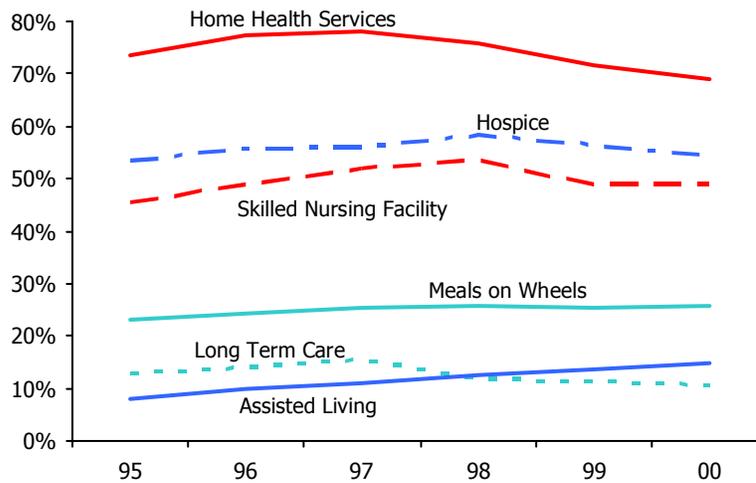


Chart 2.7:
Percentage of Hospitals with Insurance Products
by Type of Insurance
1994 - 2000



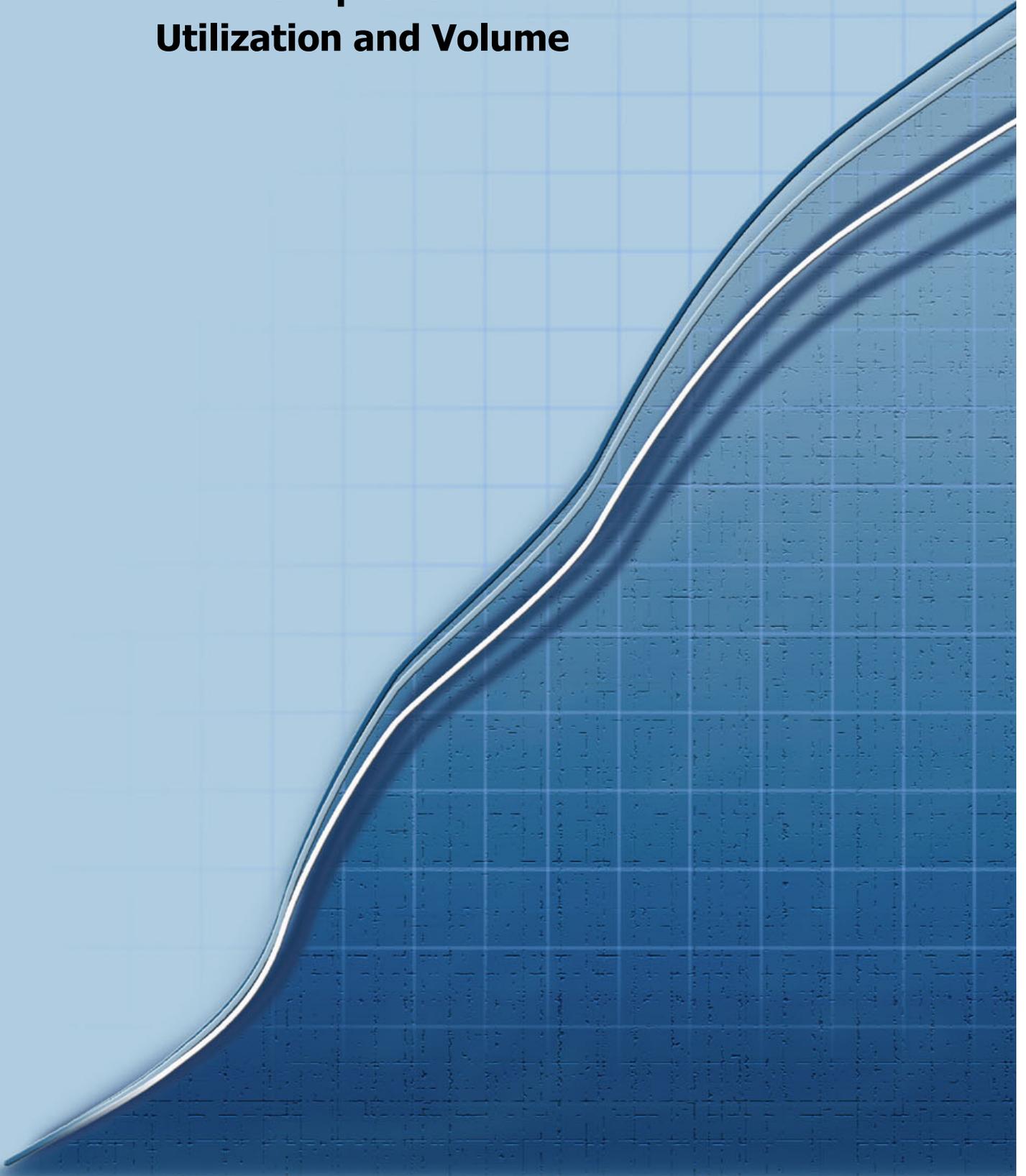
Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1994 - 2000 for community hospitals

Chart 2.8:
Percentage of Hospitals Offering “Non-hospital” Services
1995 - 2000



Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1995 - 2000 for community hospitals

Chapter 3: Utilization and Volume



Chapter 3: Utilization and Volume

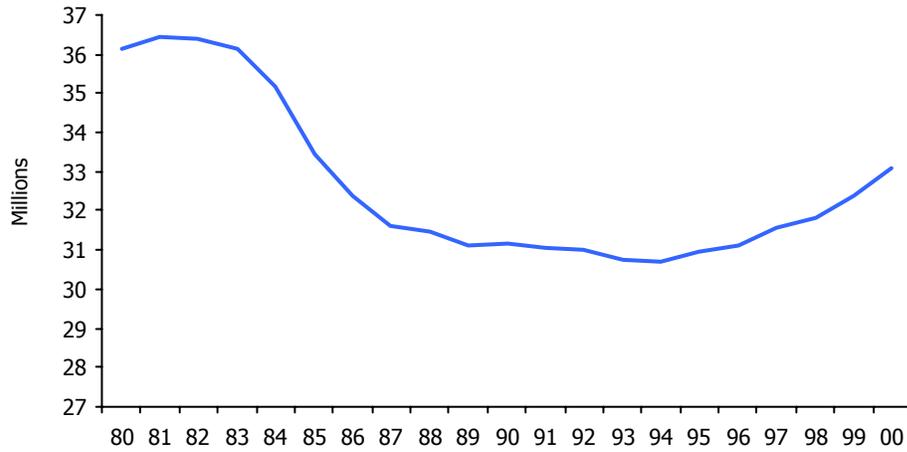
Over the last 20 years, hospital inpatient volume has declined significantly as decreased utilization rates – measured in inpatient days per thousand population – outweighed population growth. In 2000, however, hospital days rose slightly for the second year, reflecting an increase in admissions even as length of stay continued to decline. The managed care backlash, population growth and aging, and changes in Medicare payment for home health and skilled nursing facilities may be driving this increased utilization (Charts 3.1 - 3.8).

Despite decreases in the number of hospitals with emergency departments, the number of ED visits has increased by about 19 percent since 1990 (Charts 3.9 - 3.10). In a recent AHA survey, 62 percent of hospitals reported their EDs were at or over capacity and 33 percent reported having to divert ambulances (Charts 3.11 - 3.12). Managed care backlash may be contributing to increased ED use as many states have passed laws requiring payment for ED visits that meet a “prudent layperson” standard for medical necessity. The Emergency Medical Treatment and Active Labor Act, a federal law, also guarantees access to ED care for uninsured populations who may have difficulty accessing other venues of care.

As new technology has allowed for more care to shift to outpatient departments, outpatient visits have increased by 150 percent since 1980 and outpatient utilization rates continue to increase. Outpatient surgeries now represent 63 percent of all surgeries up from 18 percent in 1980 (Charts 3.14 - 3.16).

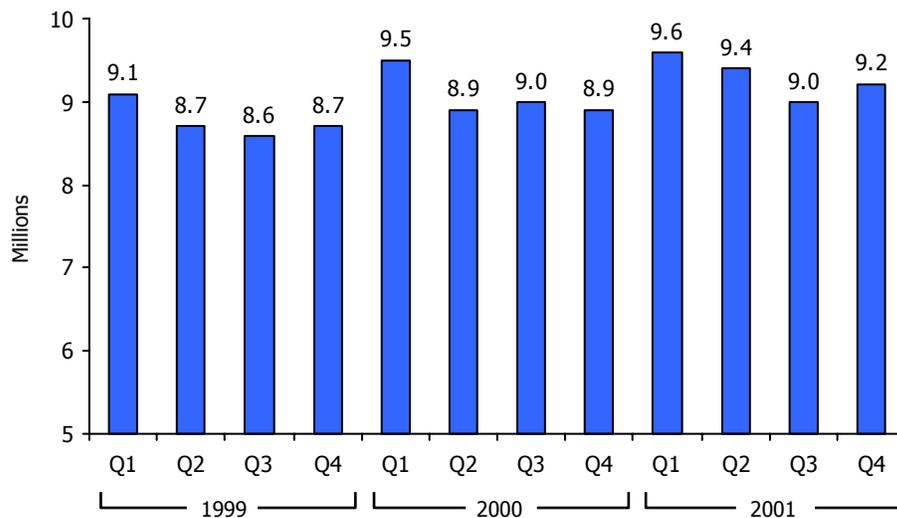


Chart 3.1:
Inpatient Admissions in Community Hospitals
 1980 - 2000



Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1980 - 2000 for community hospitals

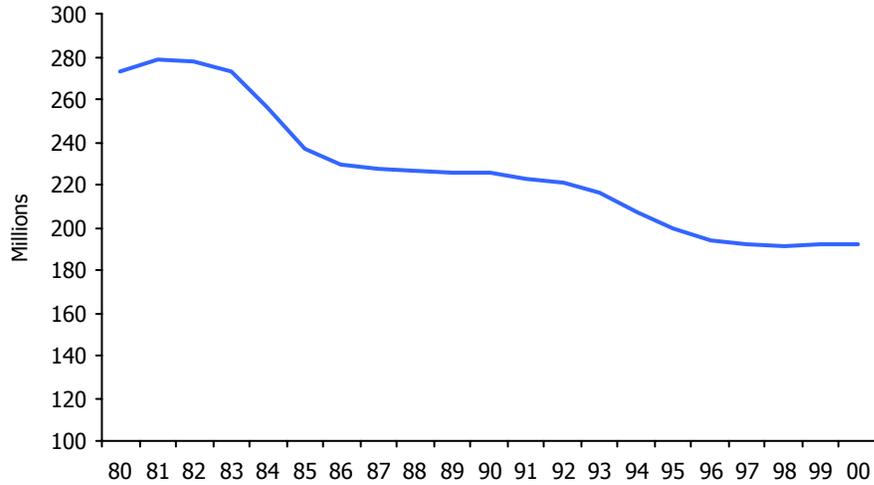
Chart 3.2:
Inpatient Discharges by Calendar Quarter
 1999 - 2001



Source: National Hospital Indicator Survey, first quarter 1999 - fourth quarter 2001

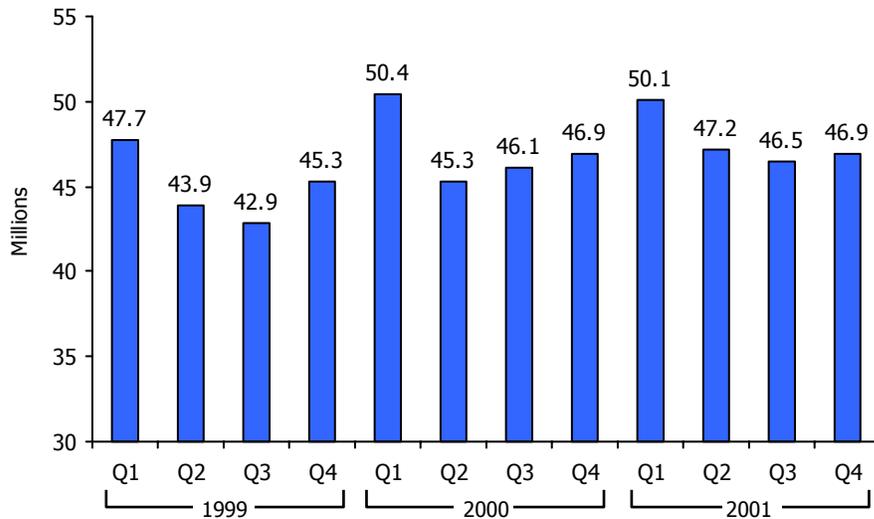


Chart 3.3:
Total Inpatient Days in Community Hospitals
 1980 - 2000



Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1980 - 2000 for community hospitals

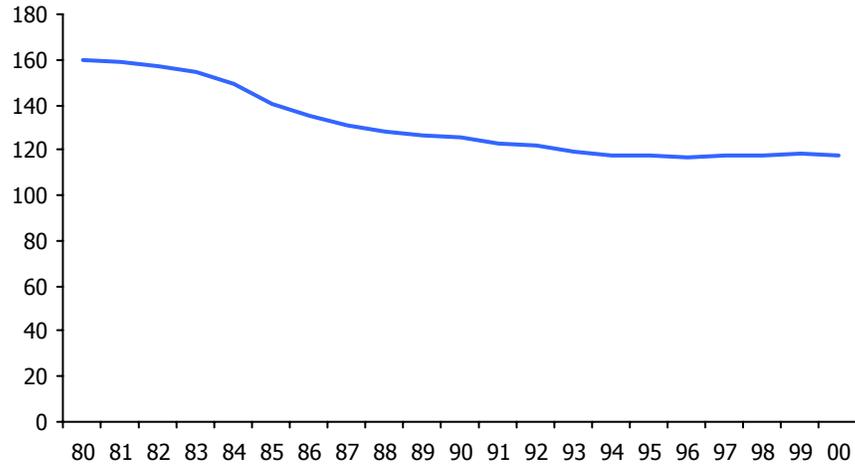
Chart 3.4:
Inpatient Days by Calendar Quarter
 1999 - 2001



Source: National Hospital Indicator Survey, first quarter 1999 - fourth quarter 2001

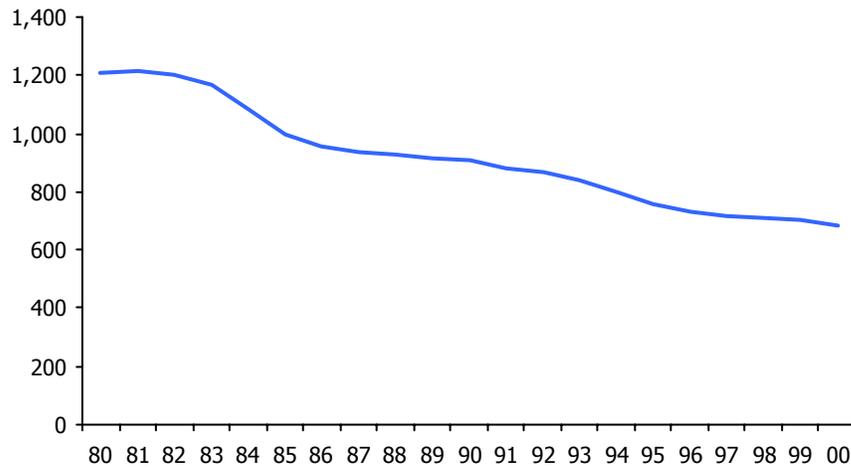


Chart 3.5:
Inpatient Admissions per 1,000 Persons
 1980 - 2000



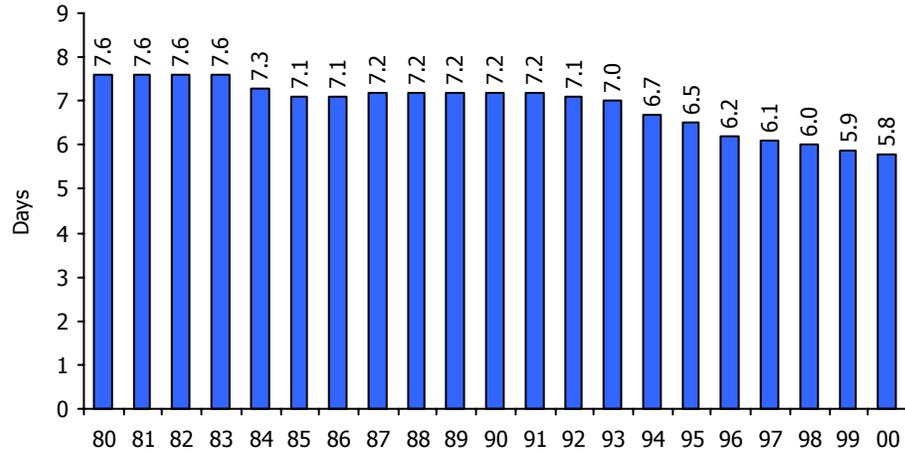
Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1980 - 2000 for community hospitals and US Census Bureau data

Chart 3.6:
Inpatient Days per 1,000 Persons
 1980 - 2000



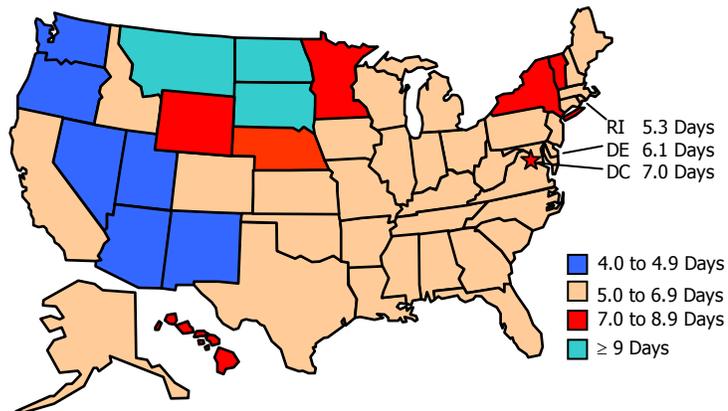
Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1980 - 2000 for community hospitals and US Census Bureau data

Chart 3.7:
Average Length of Stay in Community Hospitals
 1980 - 2000



Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1980 - 2000 for community hospitals

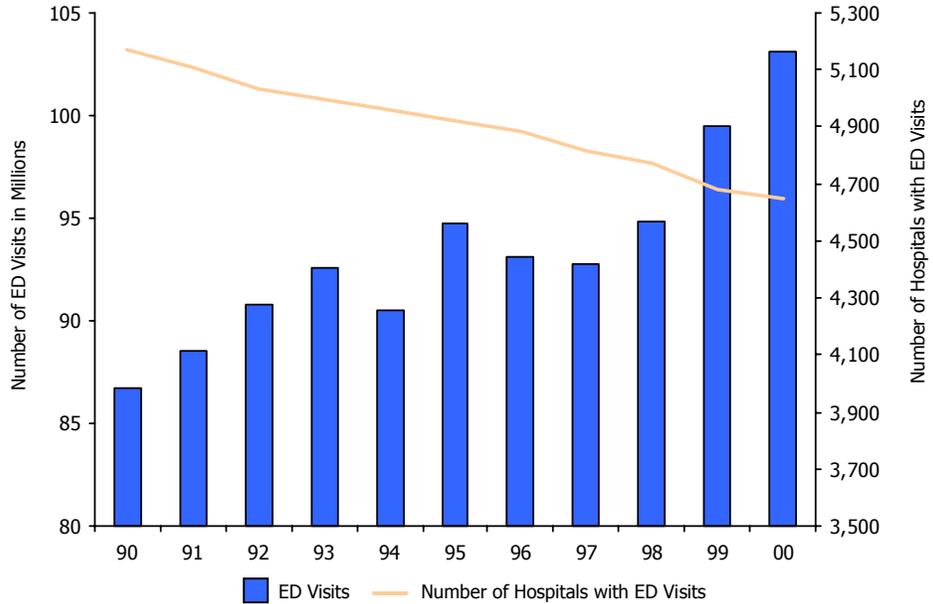
Chart 3.8:
Average Length of Stay in Community Hospitals
 by State
 2000



Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 2000 for community hospitals

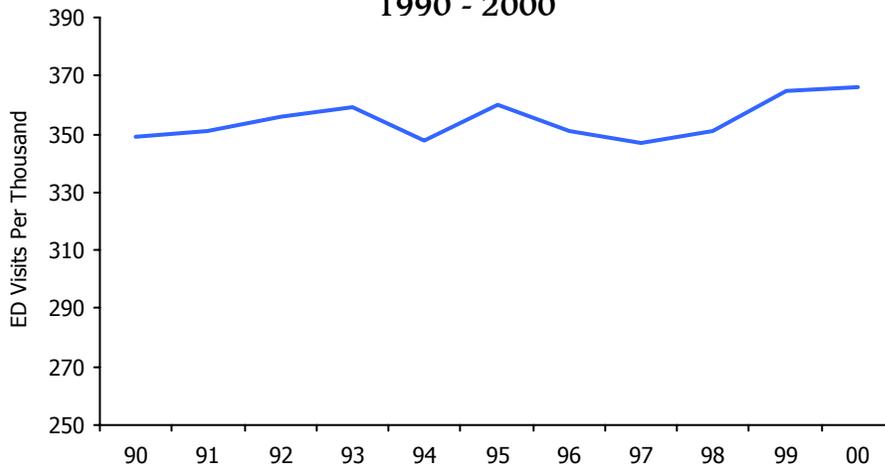


**Chart 3.9:
Emergency Department Visits
and Emergency Departments in Community Hospitals
1990 - 2000**



Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1990 - 2000 for community hospitals

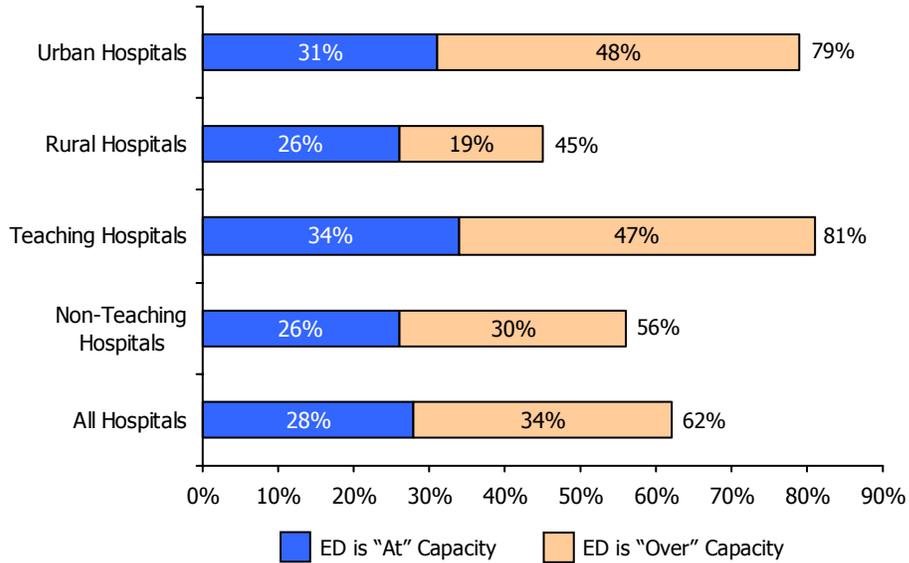
**Chart 3.10:
Hospital Emergency Department Visits per 1,000
Persons
1990 - 2000**



Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1990 - 2000 for community hospitals and US Census Bureau data

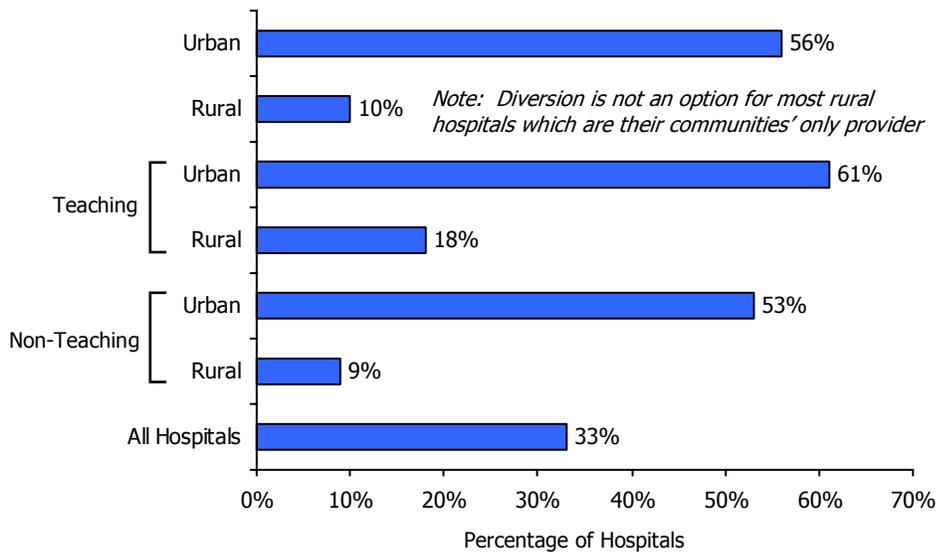


Chart 3.11:
Percentage of Hospitals Reporting Emergency Department Capacity Issues by Type of Hospital
2001



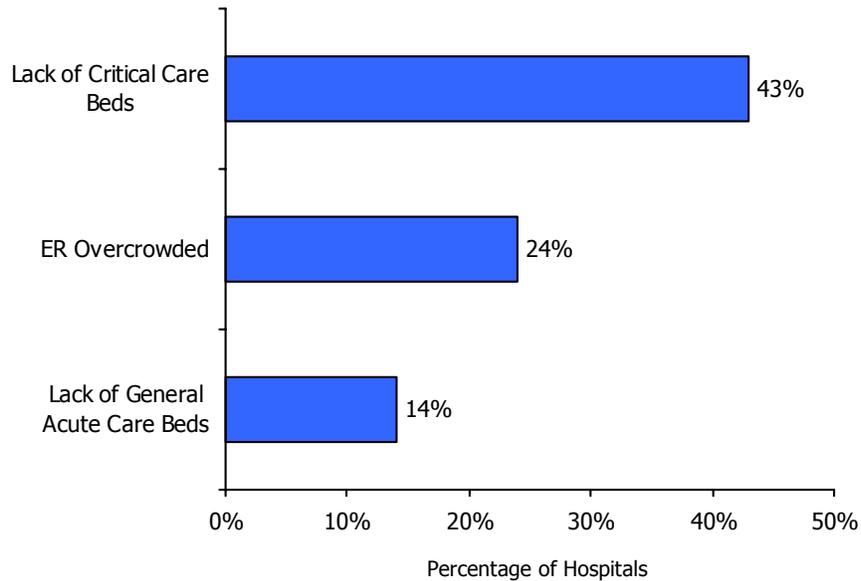
Source: The Lewin Group analysis of American Hospital Association Emergency Department and Hospital Capacity Survey, 2002

Chart 3.12:
Percentage of Hospitals Reporting Time on Ambulance Diversion
November 2001



Source: The Lewin Group analysis of American Hospital Association Emergency Department and Hospital Capacity Survey, 2002

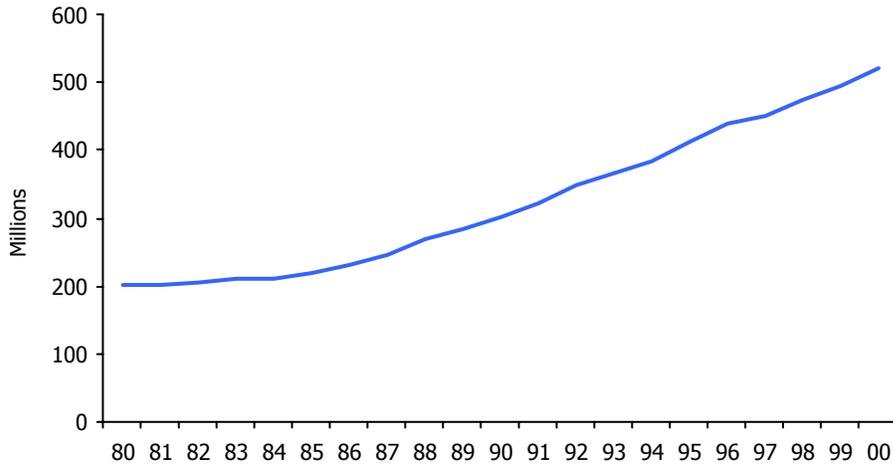
Chart 3.13:
**Percentage of Hospitals Reporting Factor as Number One
Reason for Ambulance Diversion
2001**



Source: The Lewin Group analysis of American Hospital Association Emergency Department and Hospital Capacity Survey, 2002

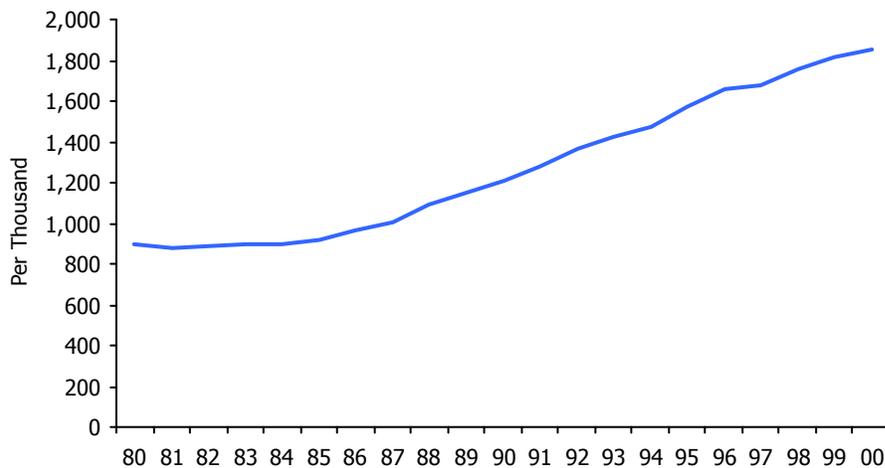


Chart 3.14:
Total Hospital Outpatient Visits
in Community Hospitals
1980 - 2000



Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1980 - 2000 for community hospitals

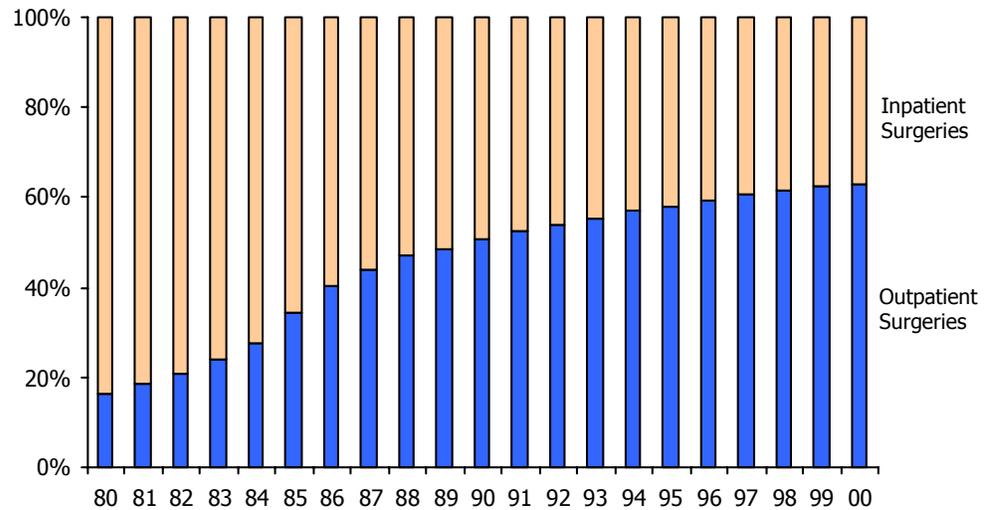
Chart 3.15:
Hospital Outpatient Visits per 1,000 Persons
1980 - 2000



Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1980 - 2000 for community hospitals and US Census Bureau data

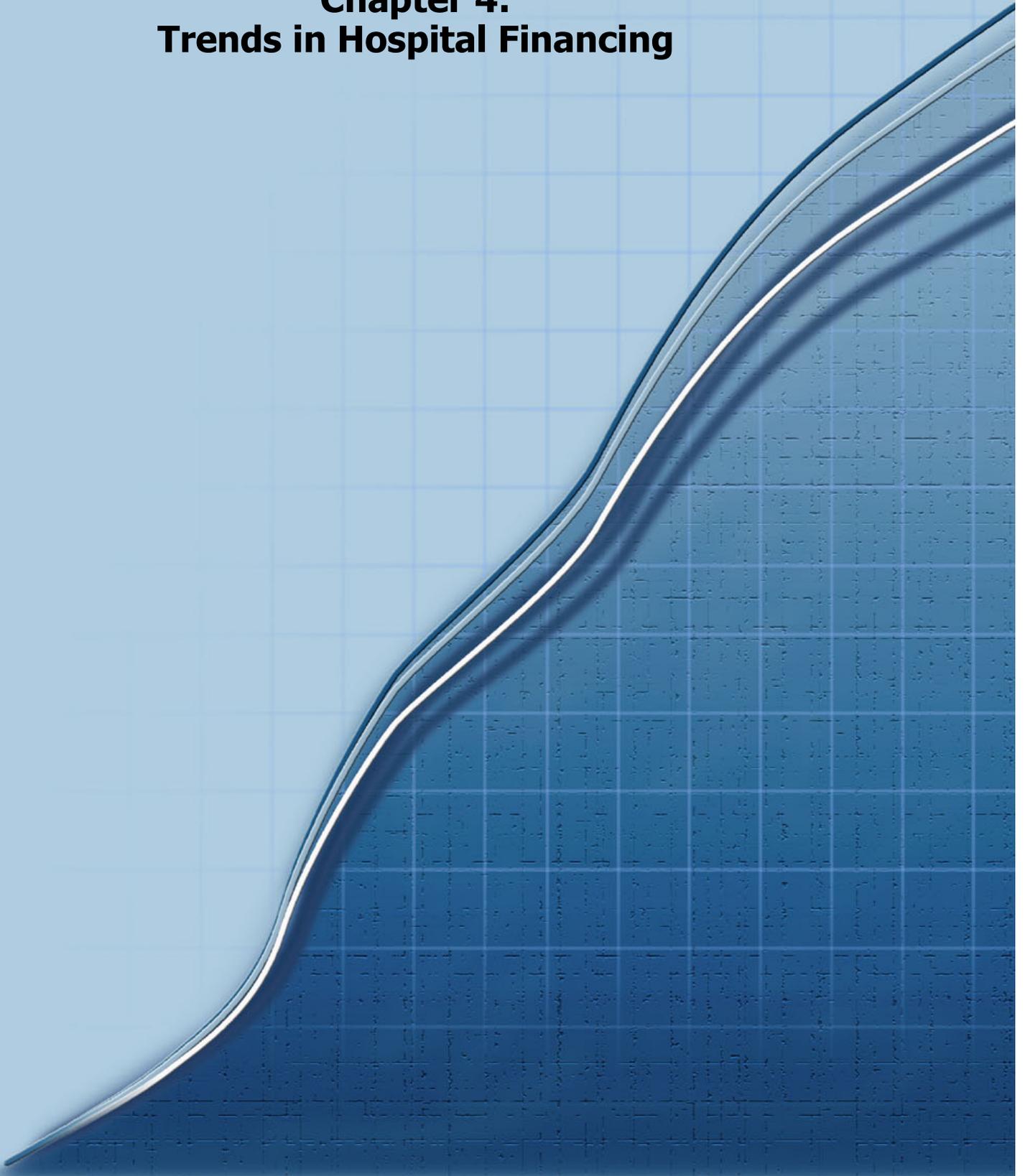


Chart 3.16:
Percentage Share of Inpatient vs. Outpatient Surgeries
1980 - 2000



Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1980 - 2000 for community hospitals

Chapter 4: Trends in Hospital Financing



Chapter 4: Trends in Hospital Financing

According to the AHA Annual Survey, aggregate total hospital margins leveled off at 4.6 percent in 2000, down from a high of 6.7 percent in 1996, though roughly one in three hospitals had a negative total margin. Hospital operating revenue and expense increases per adjusted admission were nearly even at 2.4 percent and 2.5 percent respectively. Sample data from the National Hospital Indicator Survey for 2001 suggest a total margin of 4.7 percent (Charts 4.1 - 4.2, 4.5).

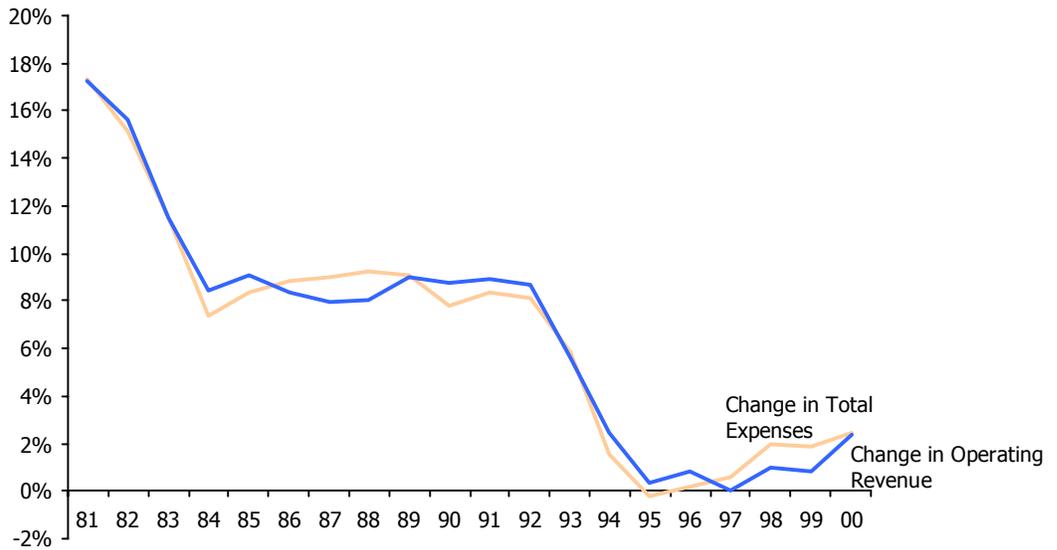
Against the backdrop of a weakened economy, the financial state of hospitals is far from secure. Aggregate non-operating gains (e.g., income from investments) as a percentage of total net revenue remained at 2.6 from 1999 to 2000. These gains represent more than half of the aggregate total margin of 4.6 percent. In addition, in 2001, Standard and Poor's downgraded more non-profit hospitals than it upgraded by a factor of 6, slightly higher than the previous two years (Charts 4.3 - 4.4, 4.6).

The distribution of hospital cost by payer type has not changed in the last year. However, since 1980, hospital reliance on Medicare and Medicaid has increased. In 1980, Medicare represented 35 percent of total costs, growing to 38 percent by 2000. Over the same period, Medicaid increased from 10 percent to 13 percent. Meanwhile, private payers' share of costs decreased from 42 percent to 39 percent. Since 1980, uncompensated care increased from five percent to six percent of total costs (Chart 4.8).

Medicare and Medicaid payments continued to decline relative to costs. In 2000, Medicare paid one percent less than the cost of providing care, while Medicaid, in the aggregate, paid about 5 percent less. Private payers paid more than the cost of providing care helping some hospitals compensate for losses from public payers and uncompensated care (Chart 4.9).



**Chart 4.1:
Annual Change in Hospital Operating Revenue and Expenses
per Adjusted Admission⁽¹⁾
1981 - 2000**

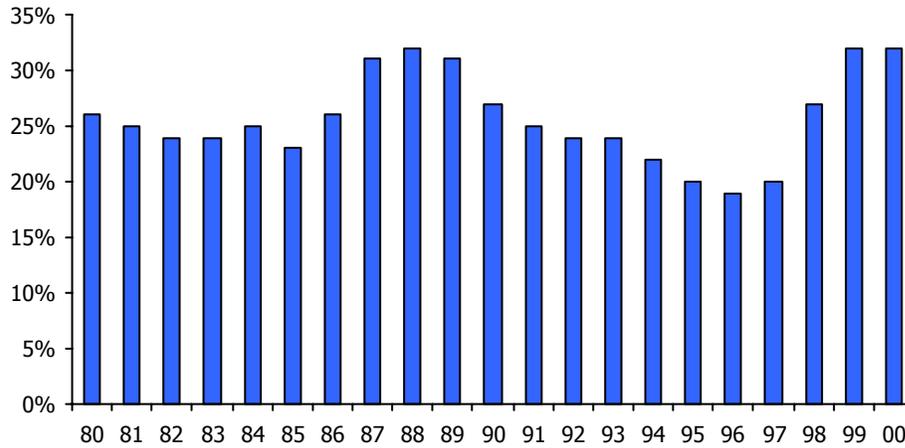


Source: The Lewin Group Analysis of the American Hospital Association Annual Survey data, 1980 - 2000, for community hospitals

⁽¹⁾ An aggregate measure of workload reflecting the number of inpatient admissions, plus an estimate of the volume of outpatient services, expressed in units equivalent to an inpatient admission in terms of level of effort

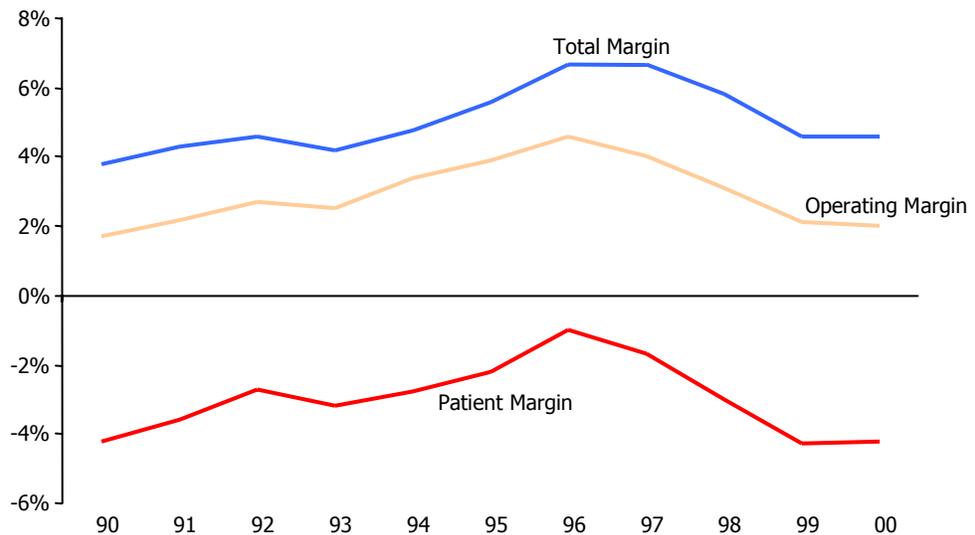


Chart 4.2:
Percentage of Hospitals with Negative Total Margins
 1980 - 2000



Source: The Lewin Group Analysis of the American Hospital Association Annual Survey data, 1980 - 2000, for community hospitals

Chart 4.3:
Aggregate Total Hospital Margins⁽¹⁾, Operating Margins⁽²⁾, and Patient Margins⁽³⁾
 1990 - 2000

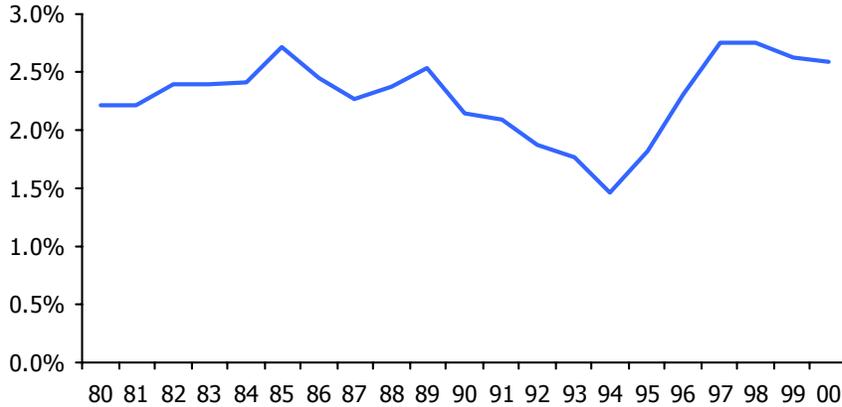


Source: The Lewin Group Analysis of the American Hospital Association Annual Survey data, 1990 - 2000, for community hospitals

- ⁽¹⁾ Total Hospital Margin is calculated as the difference between total net revenue and total expenses divided by total net revenue
- ⁽²⁾ Operating Margin is calculated as the difference between operating revenue and total expenses divided by operating revenue
- ⁽³⁾ Patient Margin is calculated as the difference between net patient revenue and total expenses divided by net patient revenue



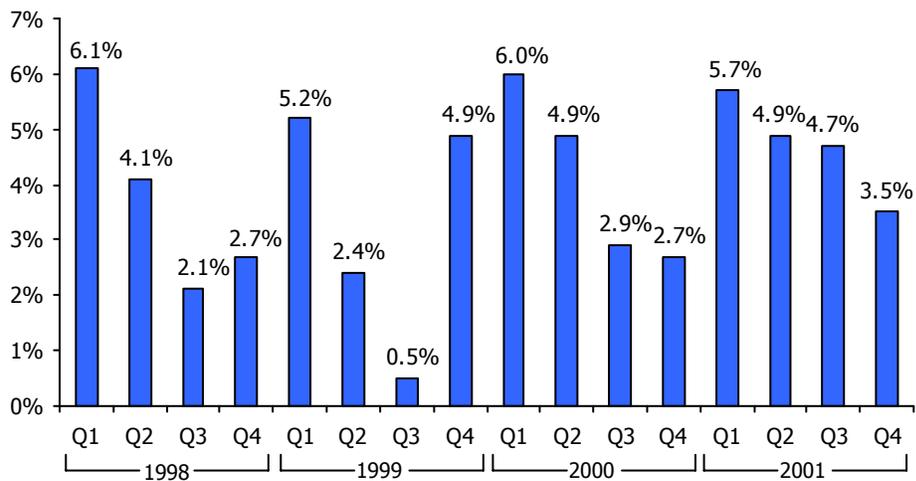
Chart 4.4:
Income from Investments and Other Non-operating Gains⁽¹⁾
as a Percentage of Total Net Revenue
1980 - 2000



Source: The Lewin Group analysis of the American Hospital Association Annual Survey data, 1980 - 2000, for community hospitals

⁽¹⁾ Non-operating gains include income from non-operating activities, including investments, endowments and extraordinary gains, as well as the value of non-realized gains from investments

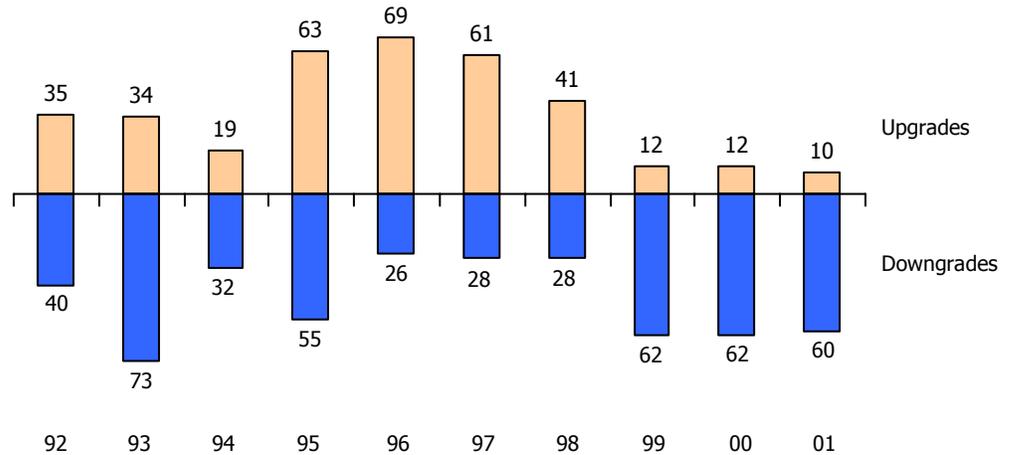
Chart 4.5:
Hospital Total Margin by Calendar Quarter
1998 - 2001



Source: National Hospital Indicator Survey, first quarter 1998 - fourth quarter 2001

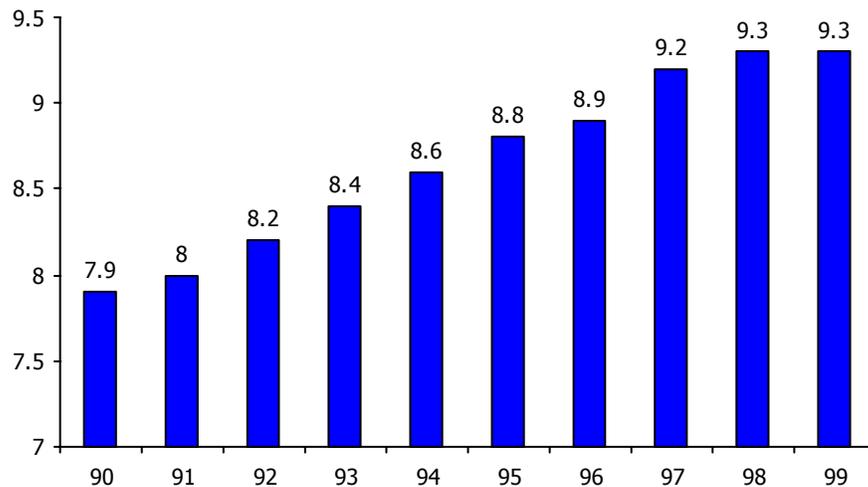


Chart 4.6:
Number of Bond Rating Upgrades and Downgrades
of Non-profit Hospitals
1992 - 2001



Source: Standard & Poor's, 2002

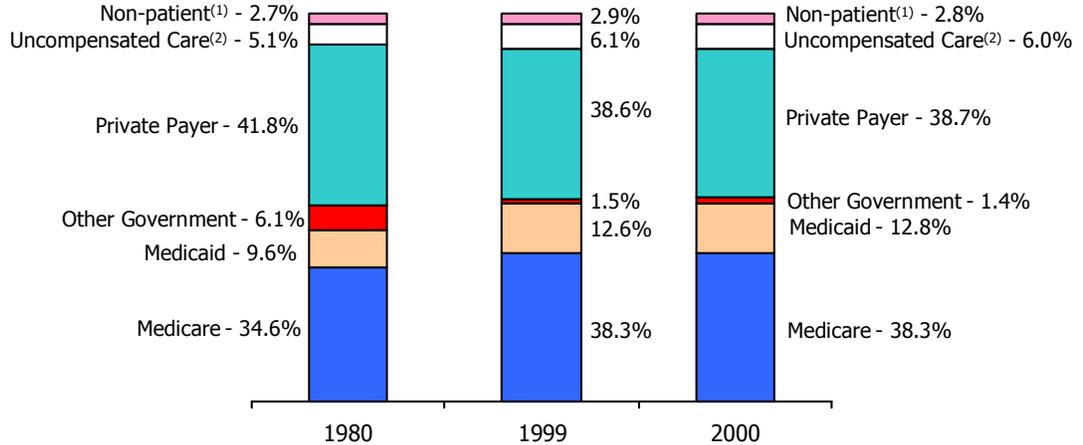
Chart 4.7:
Median Average Age of Plant
1990 - 1999



Source: CHIPS: The 1994 Almanac of Hospital Financial & Operating Indicators and The 1996-7 Almanac of Hospital Financial & Operating Indicators and The 2001 Almanac of Hospital Financial & Operating Indicators



Chart 4.8:
Distribution of Hospital Cost by Payer Type
 1980, 1999, and 2000

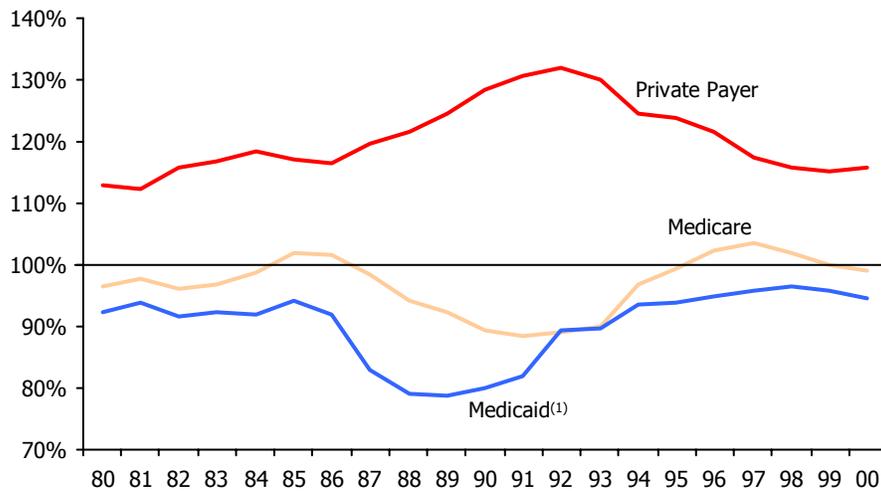


Source: The Lewin Group Analysis of the American Hospital Association Annual Survey data, 1980 - 2000, for community hospitals

⁽¹⁾ Non-patient represents costs for cafeterias, parking lots, gift shops and other non-patient care operating services and are not attributed to any one payer

⁽²⁾ Uncompensated care represents bad debt expense, at cost, and charity care

Chart 4.9:
Aggregate Hospital Payment-to-Cost Ratios
for Private Payers, Medicare and Medicaid
 1980 - 2000

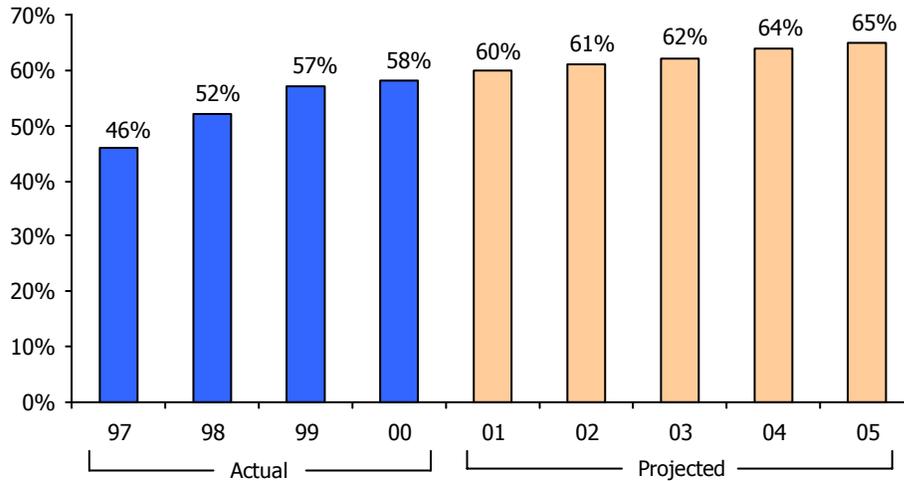


Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1980 - 2000 for community hospitals

⁽¹⁾ Includes Medicaid Disproportionate Share payments



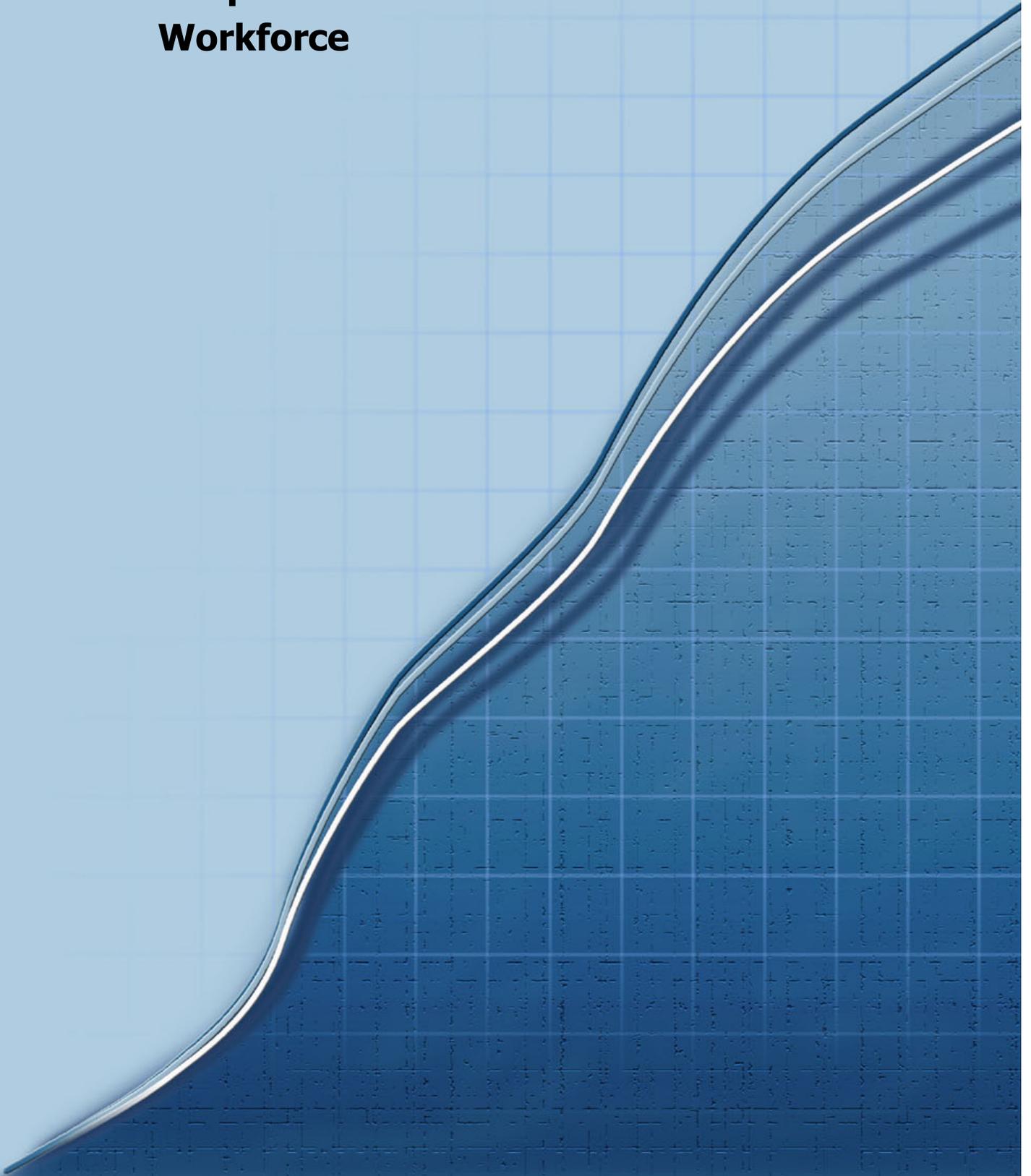
Chart 4.10:
Percentage of Hospitals with Negative Overall Medicare Margins
 1997 – 2000 Actual
 2001 – 2005 Projected



Source: The Lewin Group analysis of the Impact of the BBA, BBRA, and BIPA on Medicare Hospital Payments and Margins.

- Notes: 1) Actual data were results of The Lewin Group analysis of American Hospital Association Annual Survey data 1998 – 2000.
 2) Years 2001 – 2005 were projected using The Lewin Group simulations of the revenue effects of the BBA, BBRA, and BIPA. Costs were increased at market basket.

Chapter 5: Workforce



Chapter 5: Workforce

Physician Workforce

The number of active physicians per thousand population declined slightly after a lengthy period of growth throughout the 1980s and 1990s. The number of physicians per thousand varies by region and is particularly high in the Northeast and Mid-Atlantic and relatively low in parts of the South and West. The decline may be due in part to the leveling of the number of residents in training, physician retirements, and population growth (Charts 5.1 - 5.3).

Hospital Workforce

After declining in the early to mid-1980s, the number of full time equivalent employees (FTEs) working in hospitals has increased, although the rate of increase has moderated since 1993. However, FTEs per adjusted admission⁽¹⁾ has been declining since 1992. The rate of decline was the same in 2000 as in 1999. The number of registered nurse (RN) FTEs has been increasing slowly; however, the number of RN FTEs per adjusted admission is decreasing. RN FTEs as a percent of total hospital FTEs has remained steady between 24 and 25 percent from 1986 through 2000 (Charts 5.4 - 5.7).

Current and Long-term Workforce Shortage

The combined pressures of an aging population, competition from other health care employers, financial constraints, and declining enrollment in health education programs have created critical shortages of health care professionals. Job types particularly affected include nurses, imaging and laboratory technicians, and pharmacists.

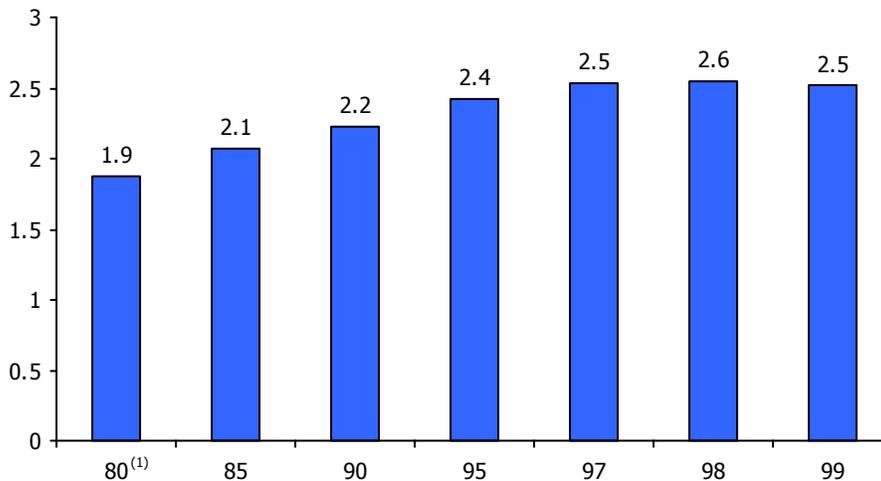
⁽¹⁾ An aggregate measure of workload reflecting the number of inpatient admissions, plus an estimate of the volume of outpatient services, expressed in units equivalent to level of effort for an inpatient admission.



Results from a workforce survey sponsored by the AHA and other hospital organizations in Fall 2001 indicate that a large share of positions remain vacant in hospitals throughout the country. Hospitals reported vacancy rates ranging from 12 to 15 percent among imaging technicians, RNs, LPNs, and pharmacists - and further reported more difficulty in recruiting these same professionals than two years prior. According to survey results, hospitals see the workforce shortage as contributing to ED overcrowding and ED diversion, reduced number of staffed beds, and increased patient wait times (Charts 5.9, 5.10, and 5.12).

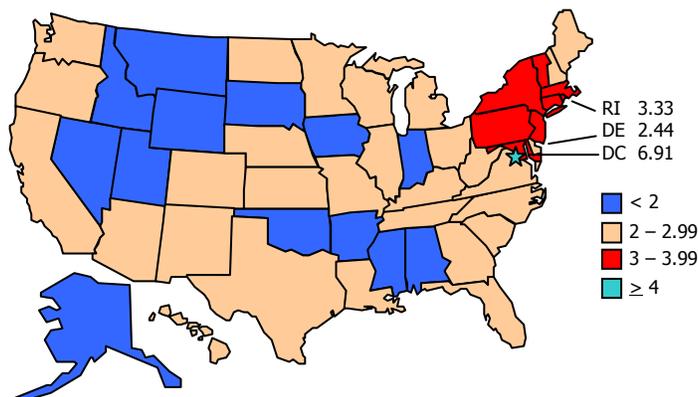
Today's shortage is expected to worsen over the next 20 years. Based on current projections of increasing demand for health care, a shortage of more than 800,000 registered nurses is expected by 2020 (Charts 5.13 - 5.15).

Chart 5.1:
Total Number of Active Physicians
per 1,000 Persons
1980 - 1999



Source: Health United States, 1982, 1996-97, 1999, 2000, 2001
⁽¹⁾ 1980 does not include doctors of osteopathy

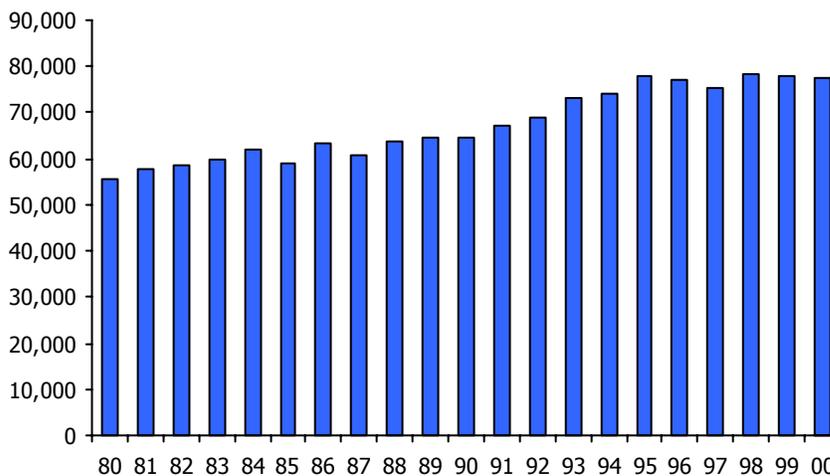
Chart 5.2:
Total Number of Active Physicians⁽¹⁾
per 1,000 Persons by State
1999



Source: Health United States, 2001
⁽¹⁾ Includes active non-federal doctors of medicine and active doctors of osteopathy

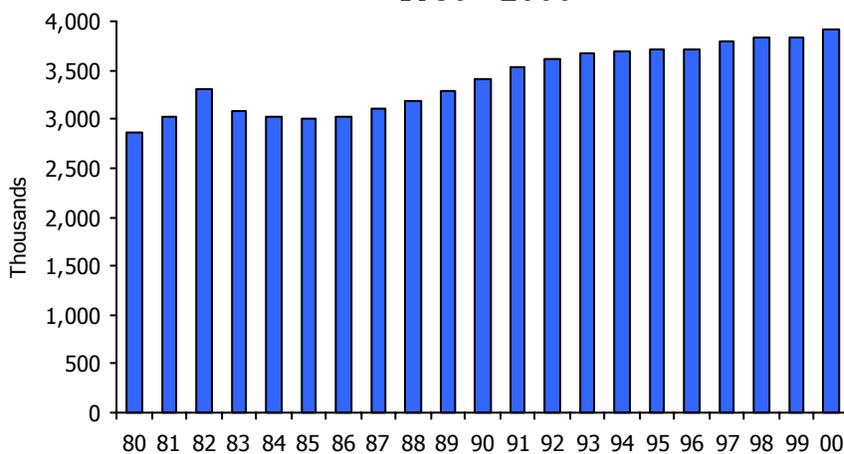


Chart 5.3:
Medical and Dental Residents in Training
in Community Hospitals
1980 - 2000



Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1980 - 2000 for community hospitals

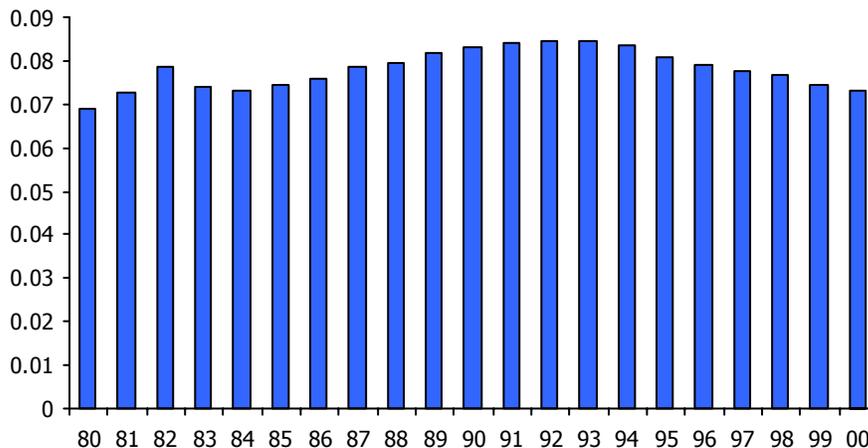
Chart 5.4:
Total Full Time Equivalent Employees
Working in Hospitals
1980 - 2000



Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1980 - 2000 for community hospitals

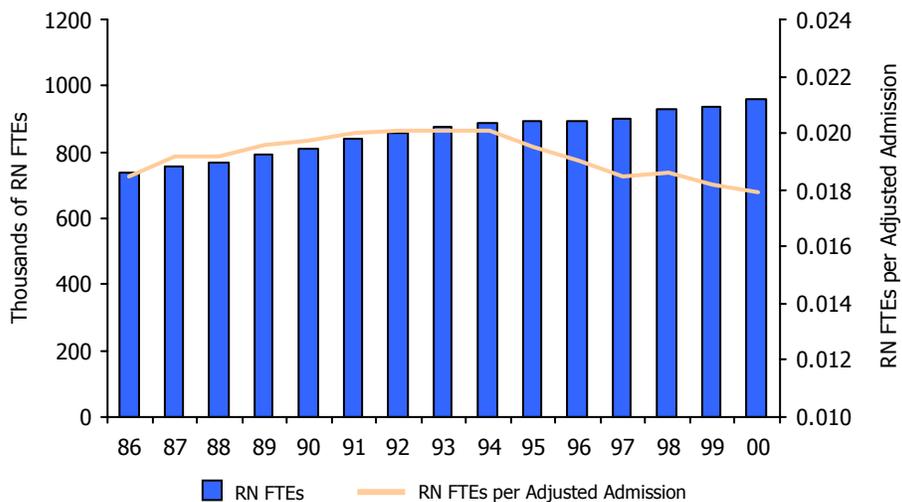


Chart 5.5:
Full Time Equivalent Employees
per Adjusted Admission
1980 - 2000



Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1980 - 2000 for community hospitals

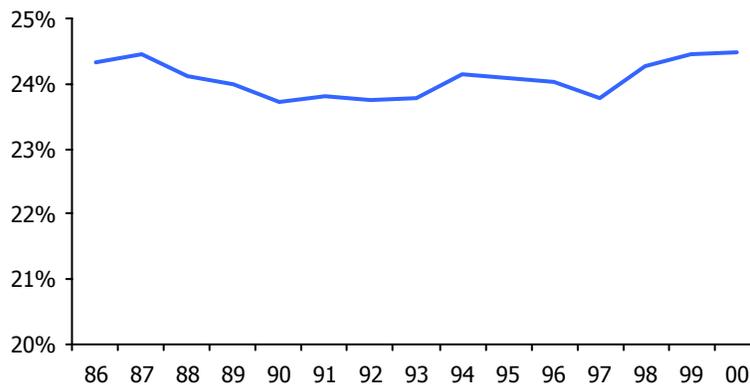
Chart 5.6:
Number of RN Full Time Equivalent Employees
and RN FTEs per Adjusted Admission
1986 - 2000



Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1986 - 2000 for community hospitals

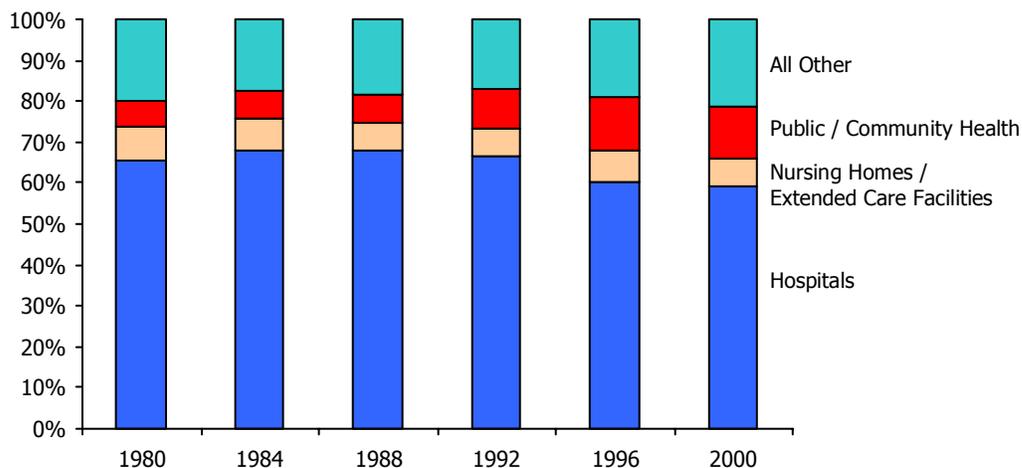


**Chart 5.7:
RN Full Time Equivalents
as a Percentage of Total Hospital Full Time
Equivalents
1986 - 2000**



Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1986 - 2000 for community hospitals

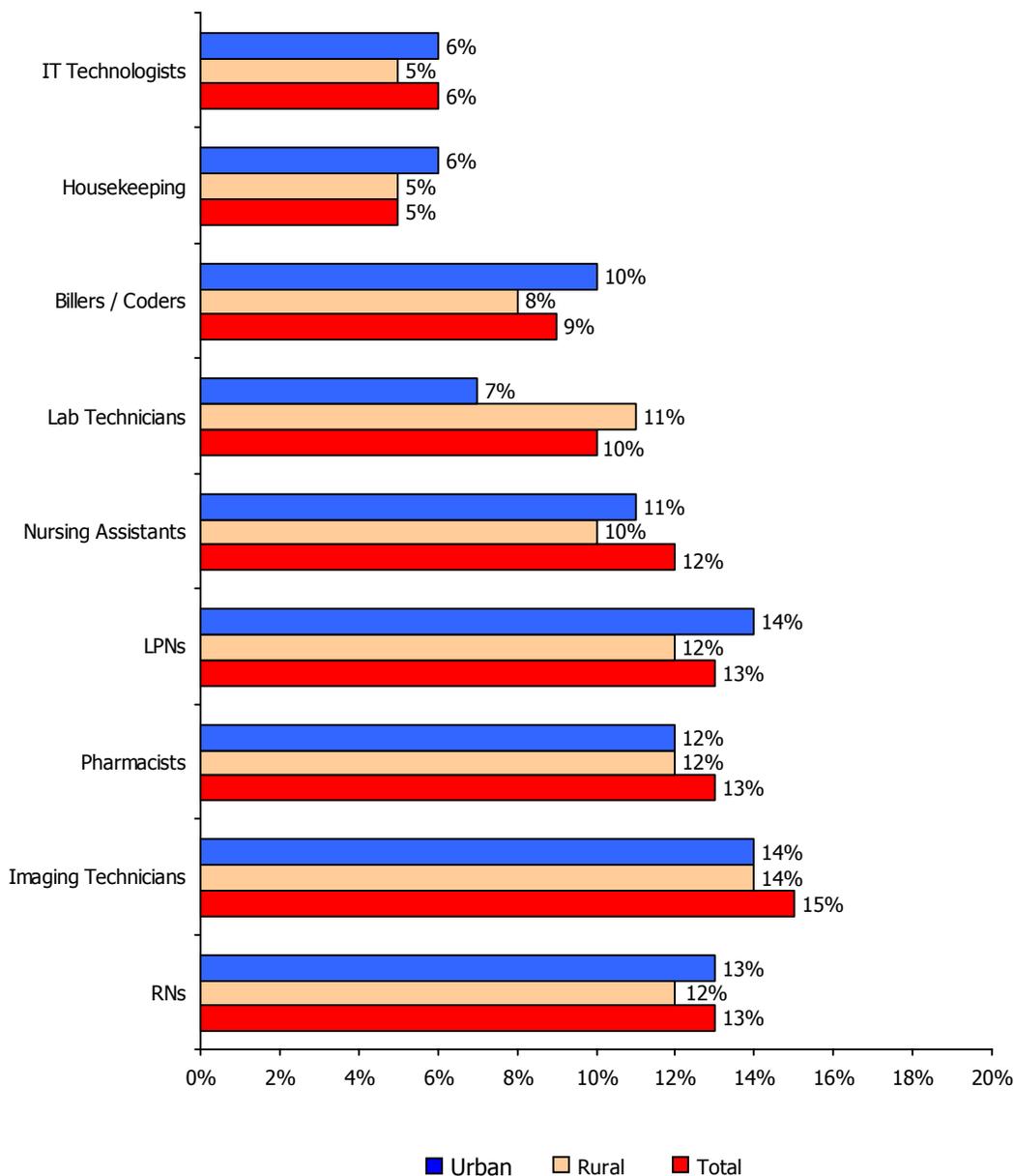
**Chart 5.8:
RN Employment by Type of Provider
1980 - 2000**



Source: Findings from the National Sample Survey of Registered Nurses, 1980-2000, Bureau of Health Professions, Division of Nursing

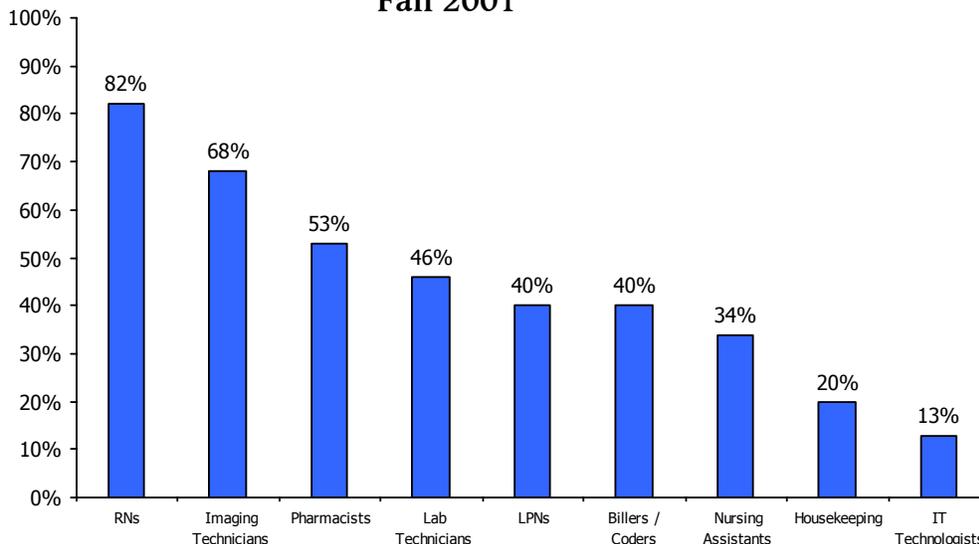


**Chart 5.9:
Mean Vacancy Rates⁽¹⁾ for Selected Hospital Personnel
Urban, Rural, and Total
Fall 2001**



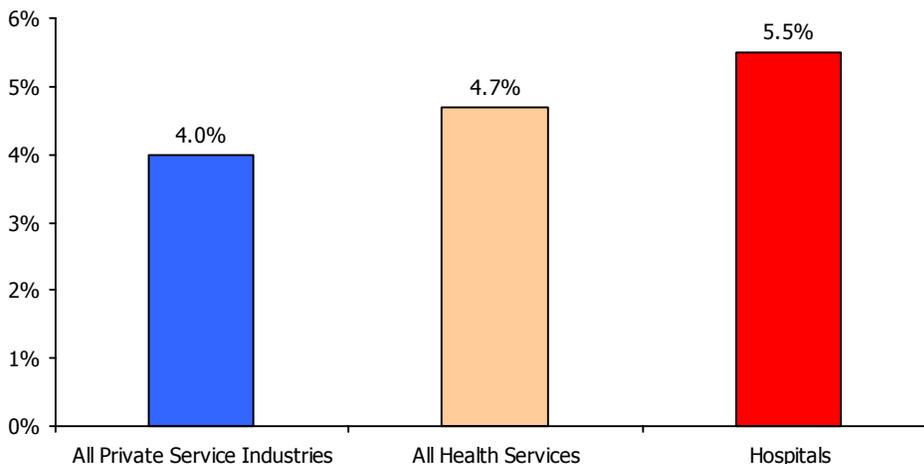
Source: "The Healthcare Workforce Shortage and Its Implications for America's Hospitals" Fall 2001, First Consulting Group
⁽¹⁾ Percent of budgeted positions that are unfilled

Chart 5.10:
Hospitals Reporting More Difficulty Recruiting
Relative to 1999 for Selected Types of Hospital
Workers
Fall 2001



Source: "The Healthcare Workforce Shortage and Its Implications for America's Hospitals" Fall 2001, First Consulting Group

Chart 5.11:
Percent Change in Employment Cost Index⁽¹⁾, All Private
Service Industries, All Health Services, and Hospitals,
12 Months Ending June 2002

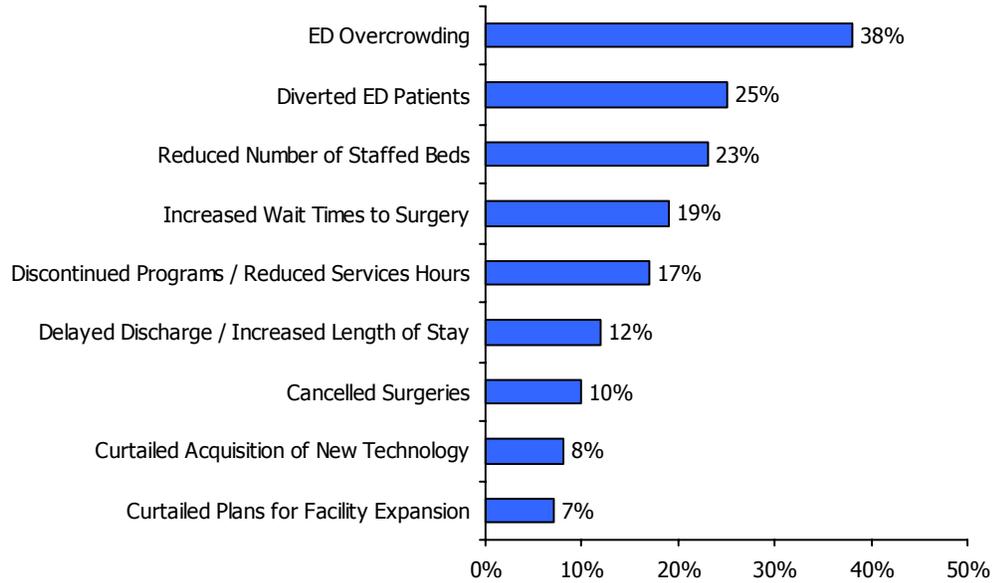


Source: Bureau of Labor Statistics, data released July 25, 2002

⁽¹⁾ Total compensation

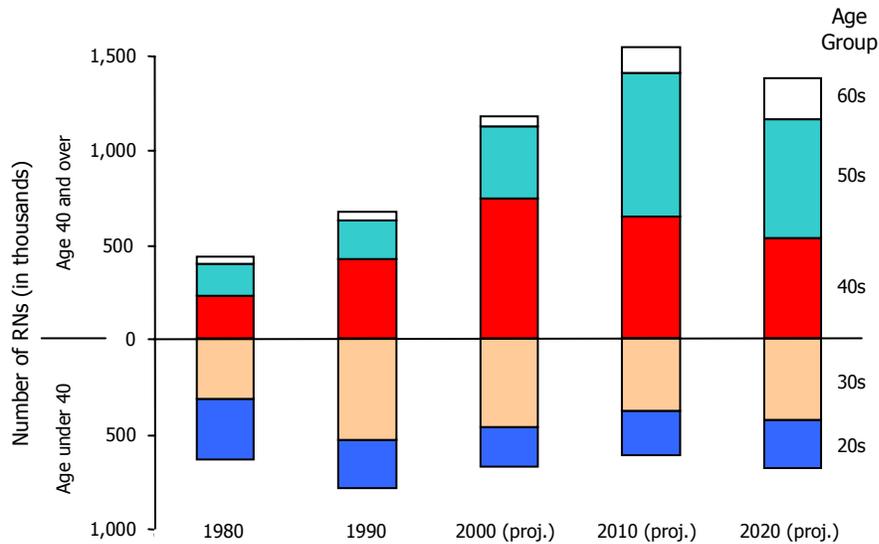


Chart 5.12:
Percentage of Hospitals Reporting Various Types of Workforce Shortage Impacts
Fall 2001



Source: "The Healthcare Workforce Shortage and Its Implications for America's Hospitals" Fall 2001, First Consulting Group

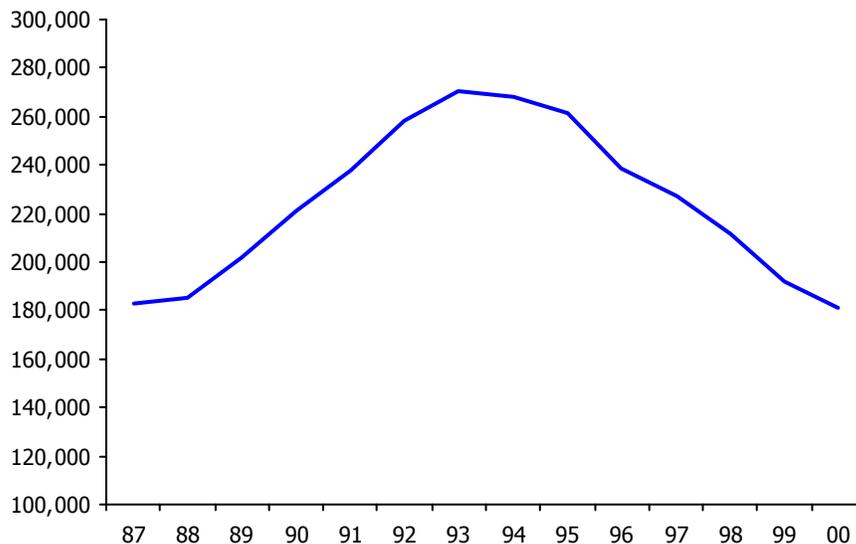
Chart 5.13:
Distribution of RN Workforce by Age Group
1980 - 2020 (Projected)



Source: Buerhaus, P.I. et al. Implications of an Aging Registered Nurse Workforce. JAMA: 2000: 283: 2948-2954

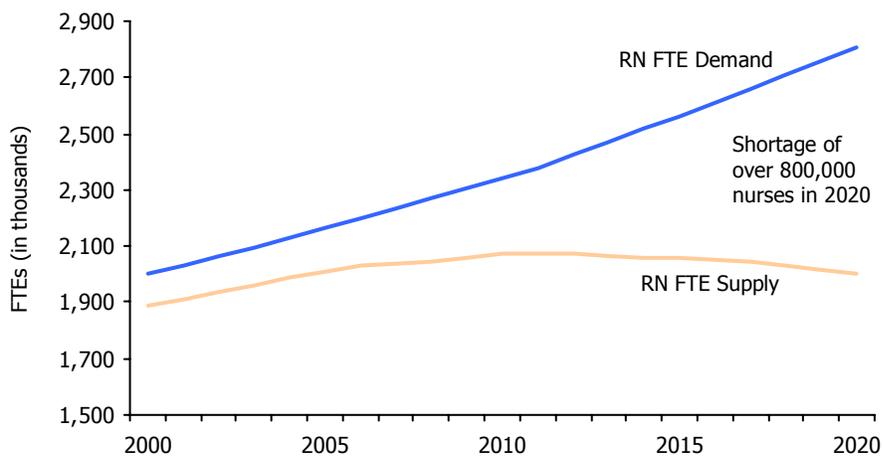


**Chart 5.14:
Annual Enrollment in US RN Education Programs
1987 - 2000**



Source: National League for Nursing; 1997 - 2000 data are unpublished and unofficial

**Chart 5.15:
National Supply and Demand Projections for FTE RNs
2000 - 2020**



Source: National Center For Health Workforce Analysis, Bureau of Health Professions, Health Resources and Services Administration, 2002

Chart 6.3:
Percent Change in Population by State
 1990 - 2000

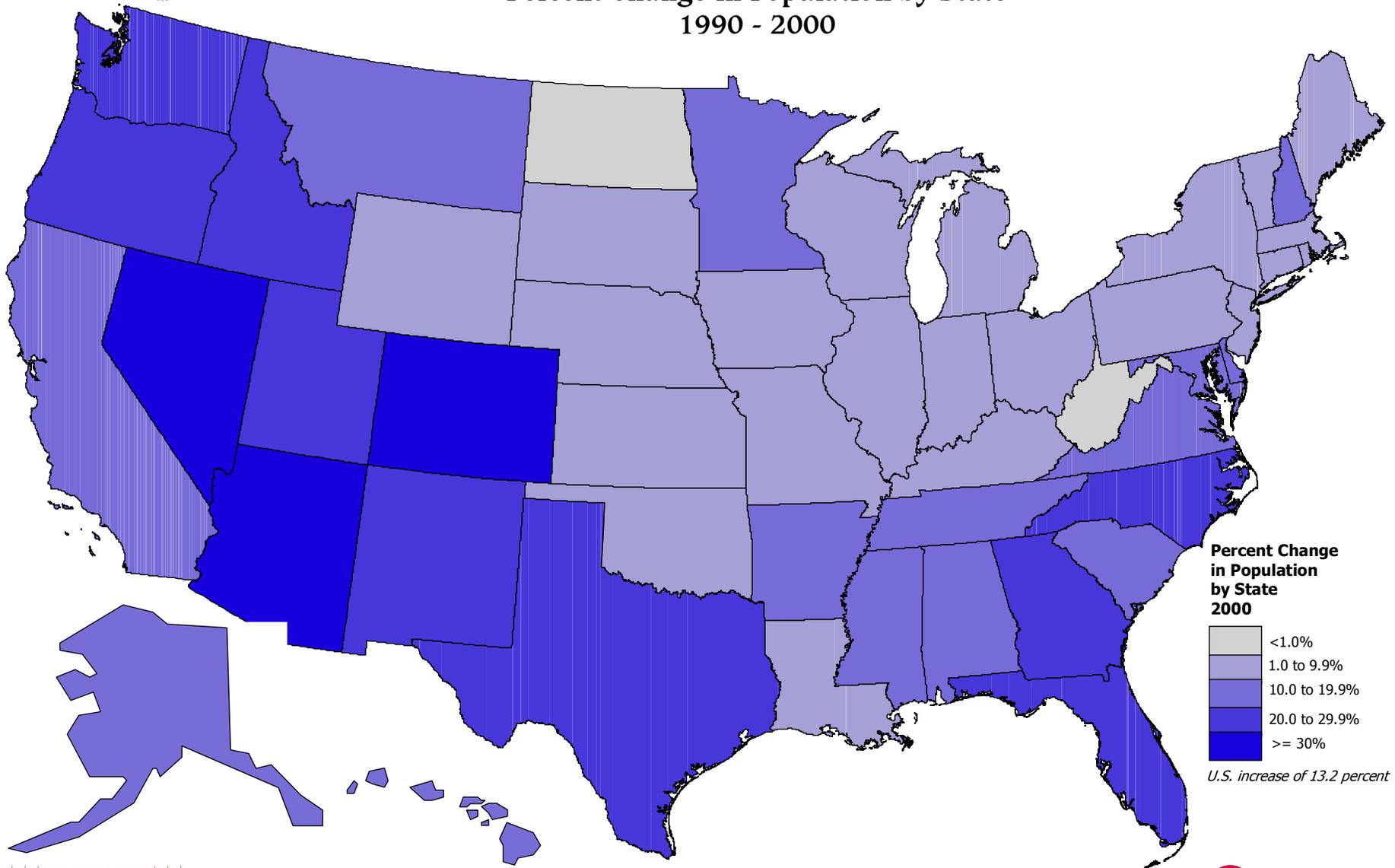


Chart 6.4:
Change in County Urbanization Status
1990 - 2000

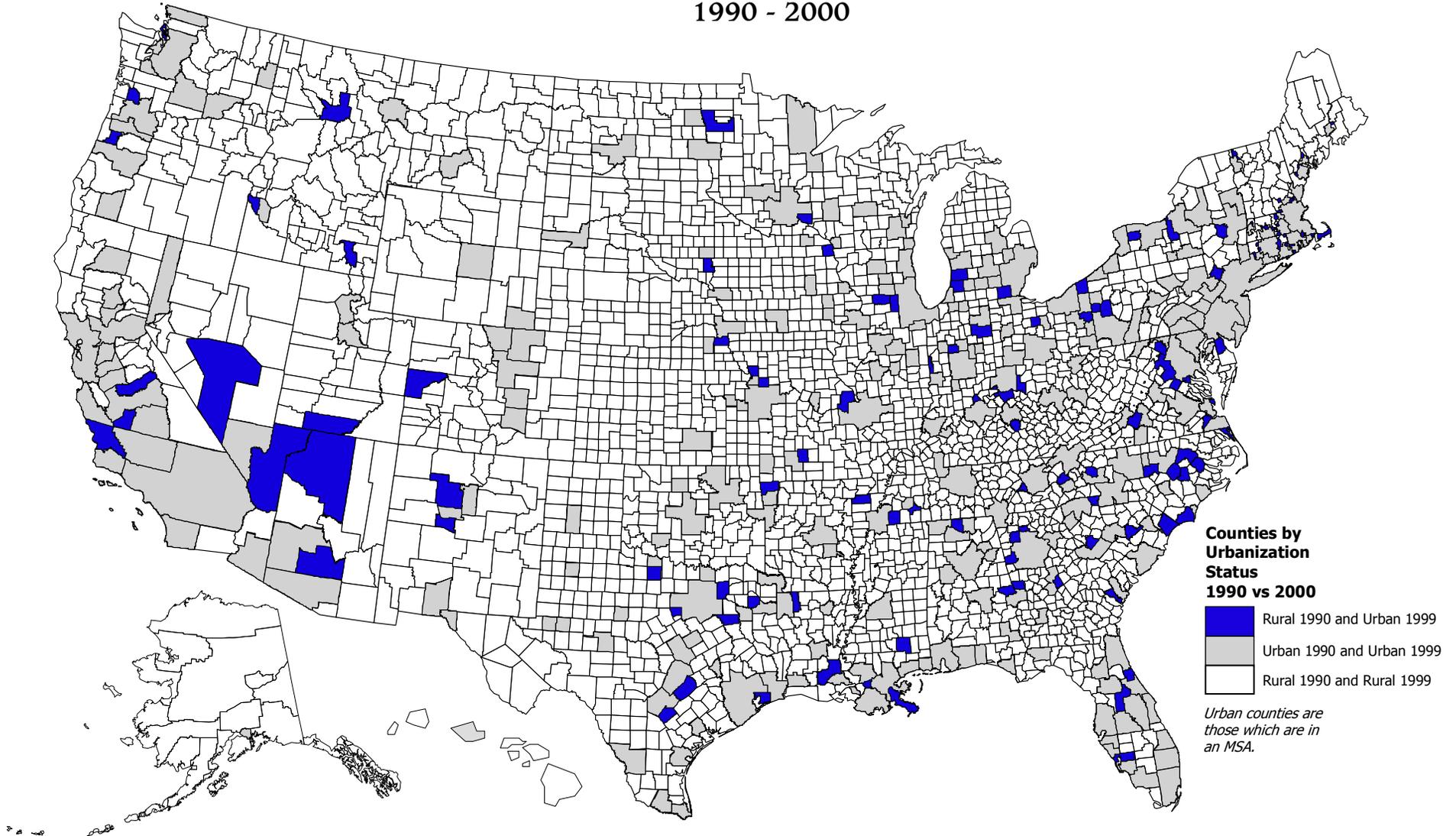
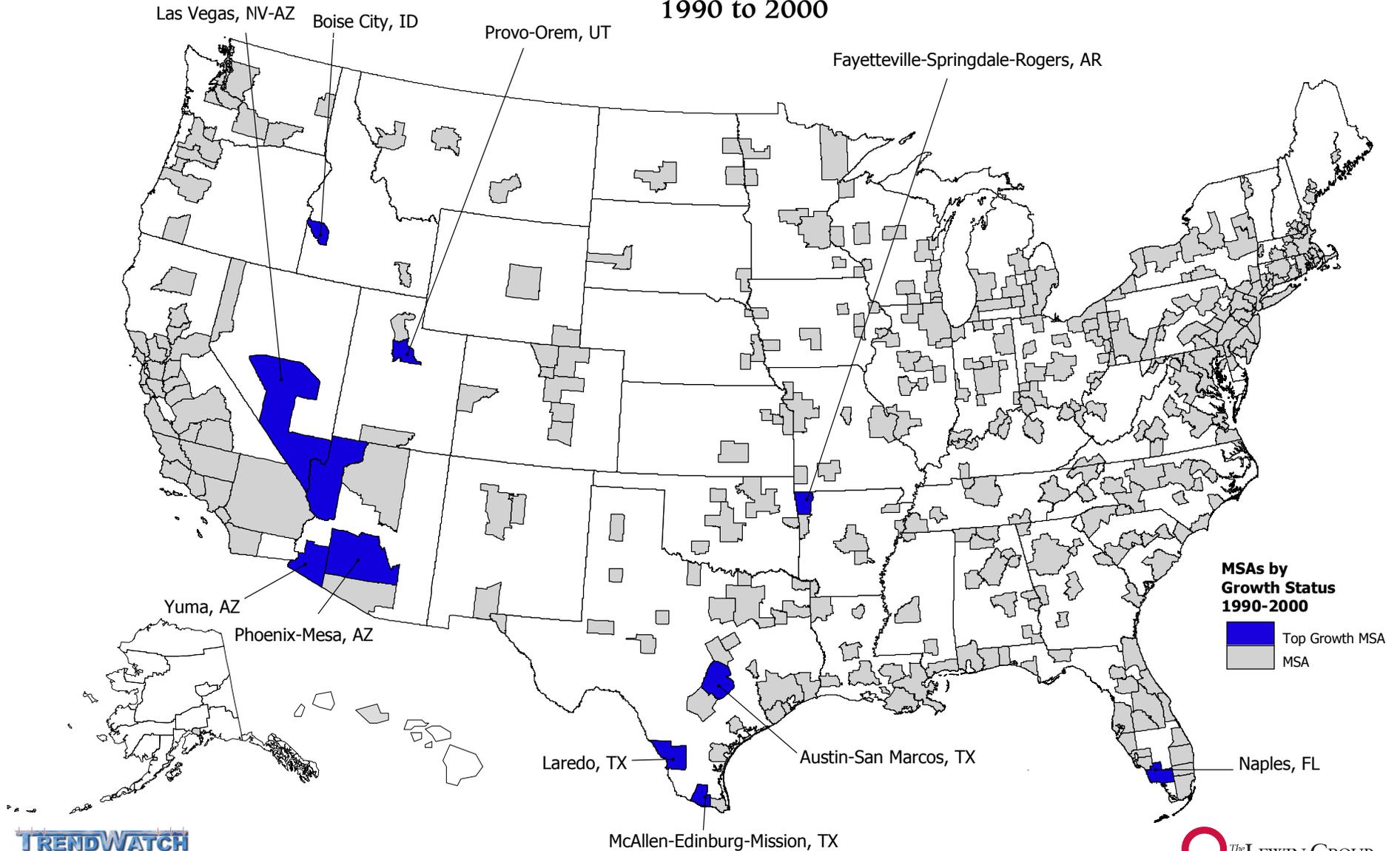
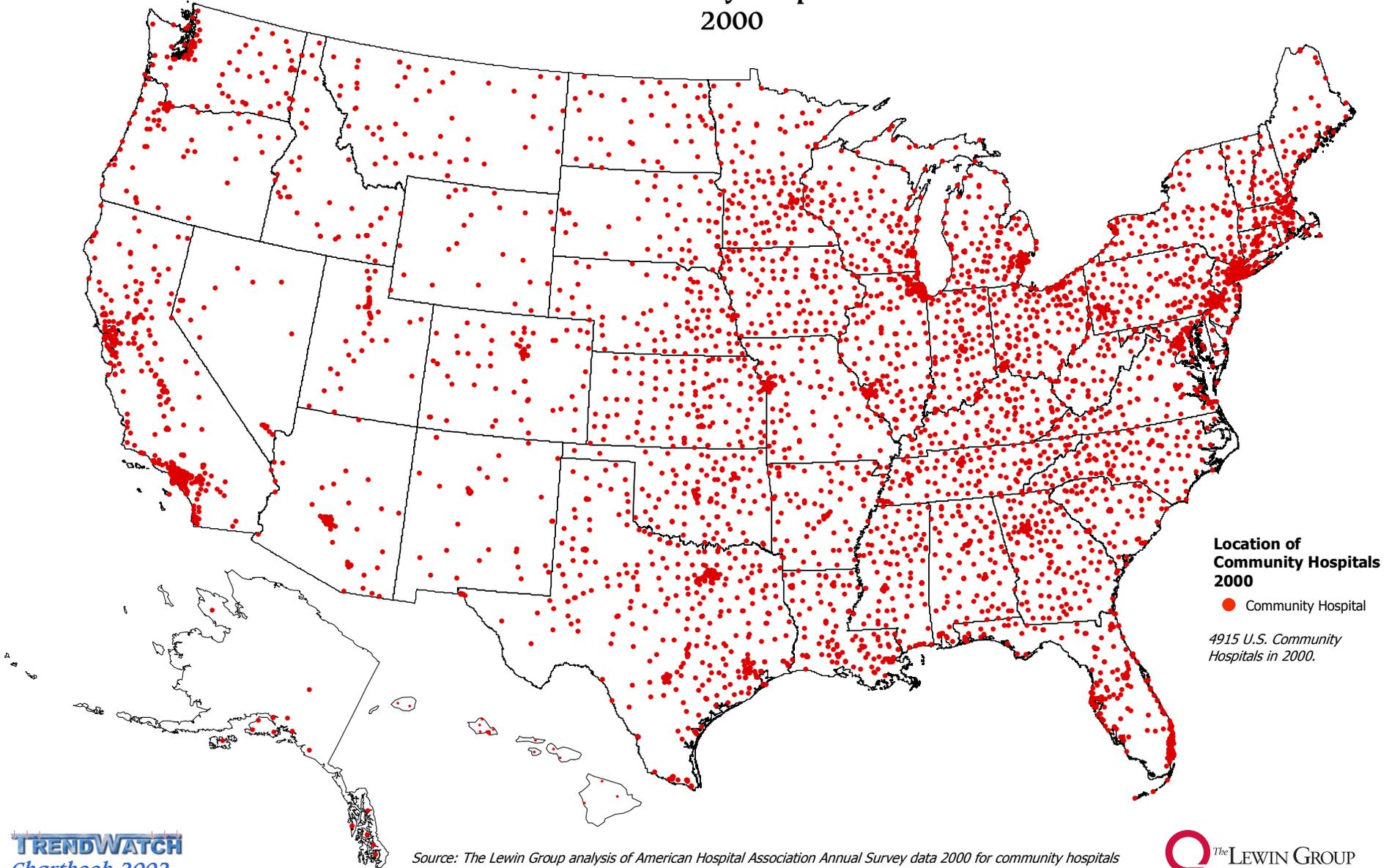


Chart 6.5:
Top Ten Fastest Growing MSAs
1990 to 2000



**Chart 6.6:
Community Hospitals
2000**



Source: The Lewin Group analysis of American Hospital Association Annual Survey data 2000 for community hospitals

Chart 6.7:
Percent Change in Number of Community Hospitals
by State vs. Percent Change in Population by State
1990 - 2000

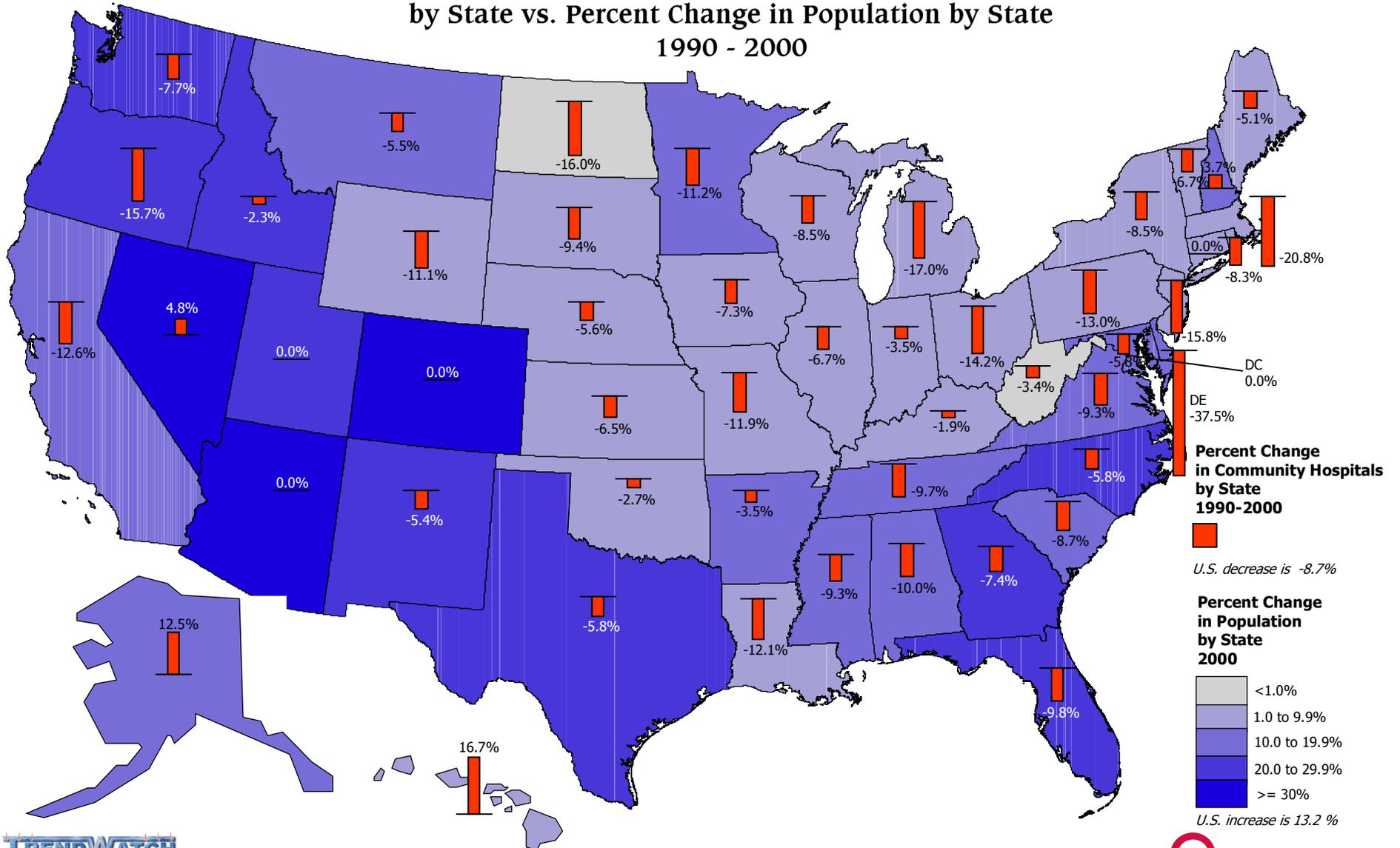




Chart 6.8:
Las Vegas NV-AZ MSA with Community Hospitals

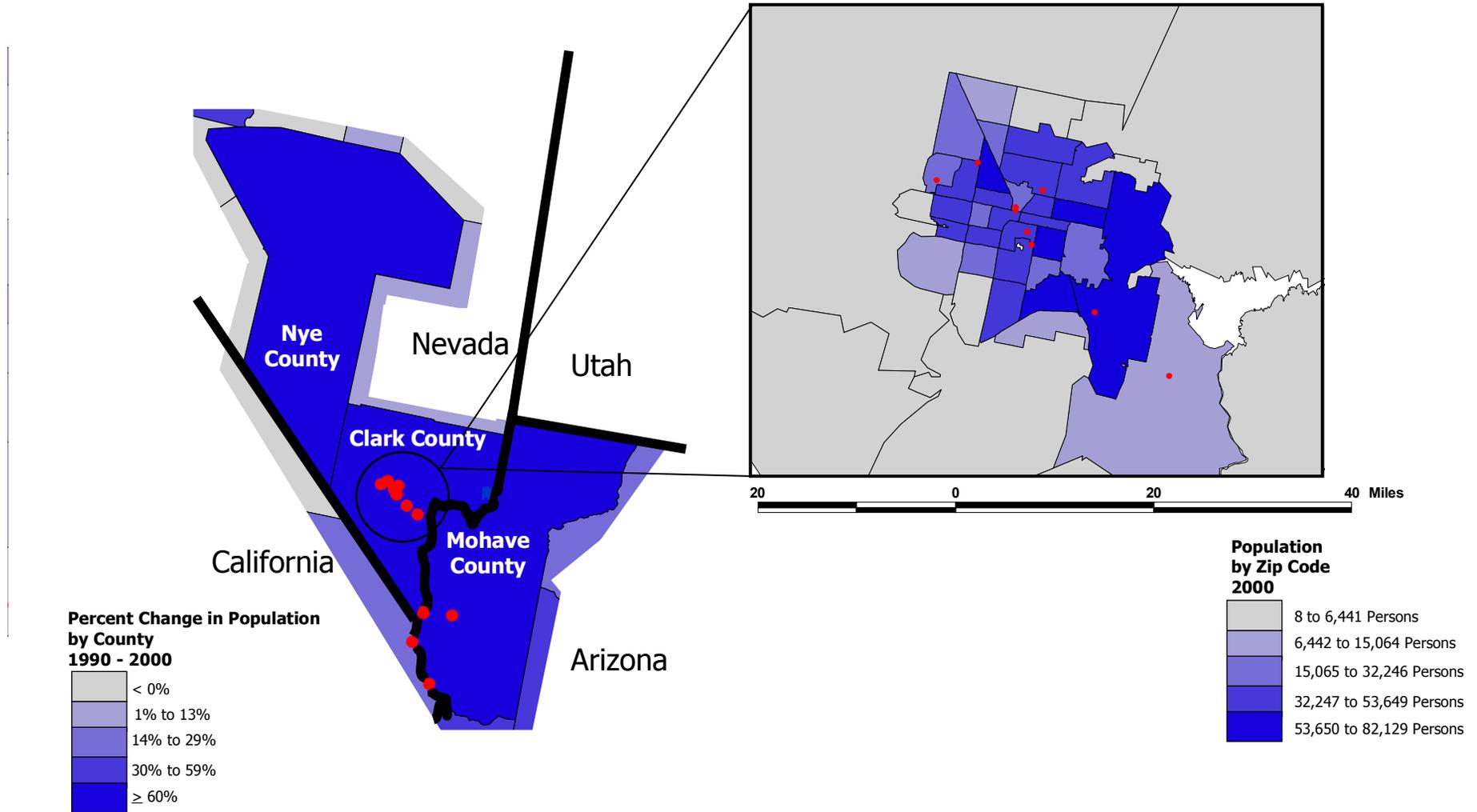
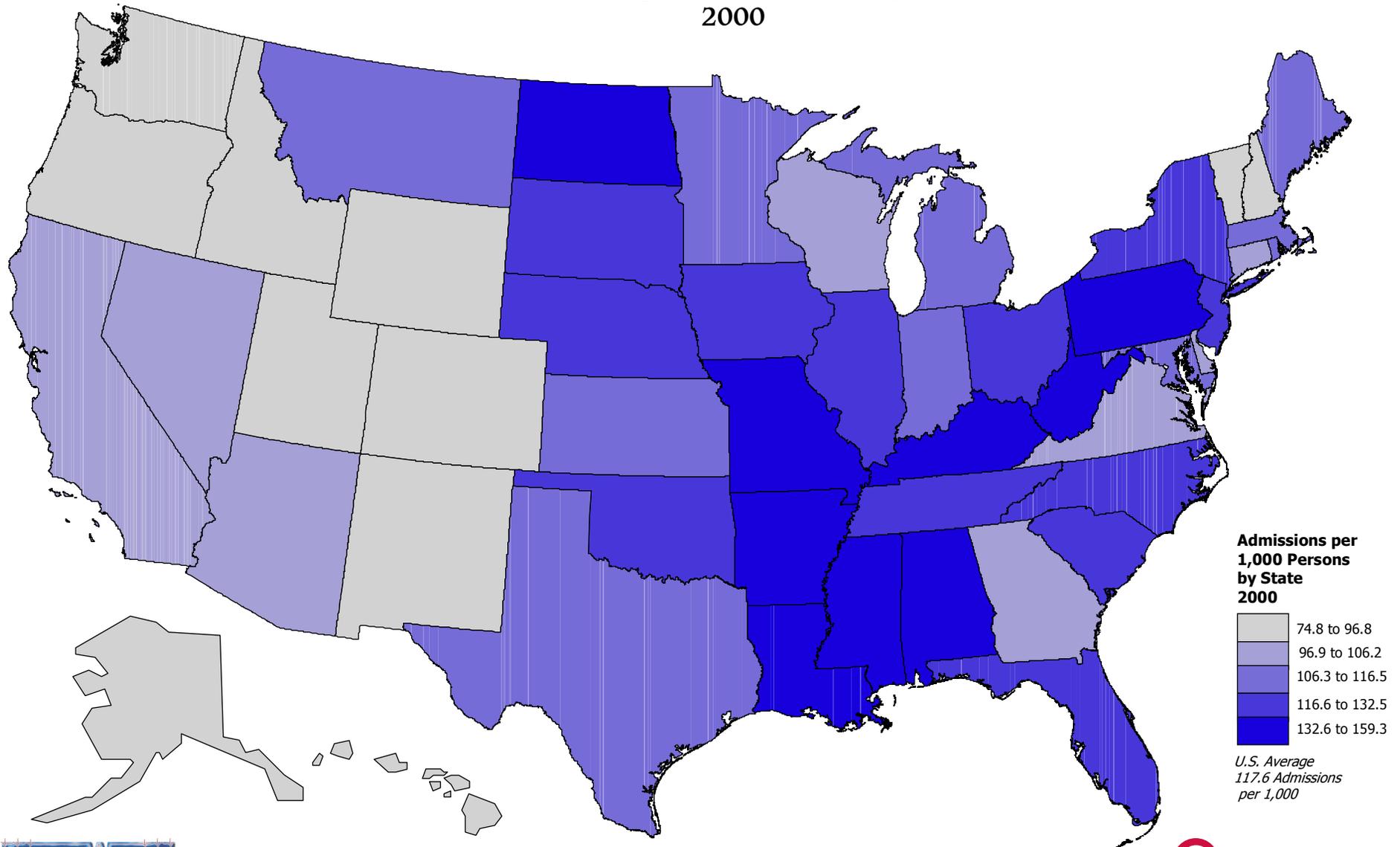




Chart 6.9:
Admissions per 1,000 Persons by State
2000



**Chart 6.10:
 Beds per 1,000 Persons by State
 2000**

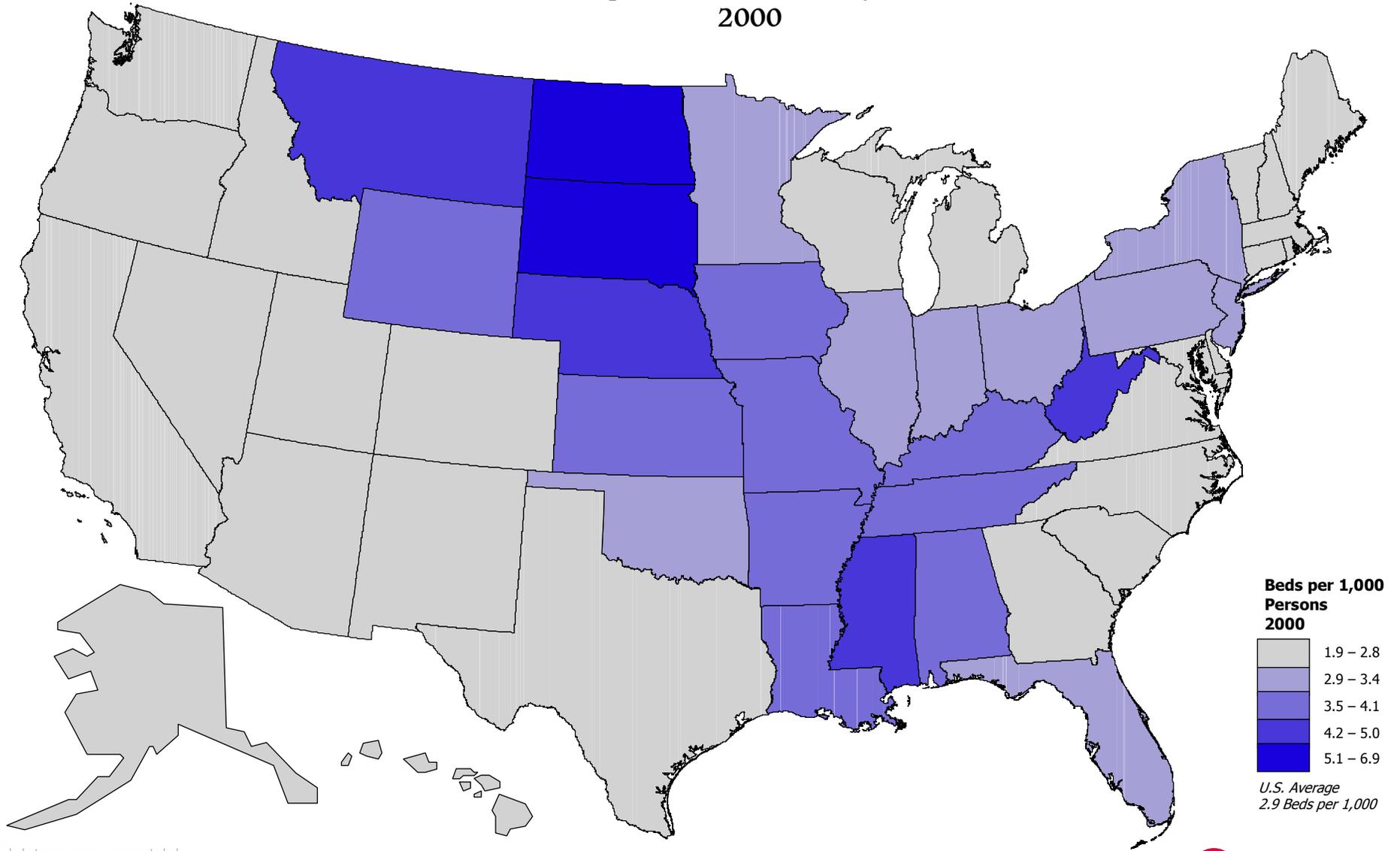
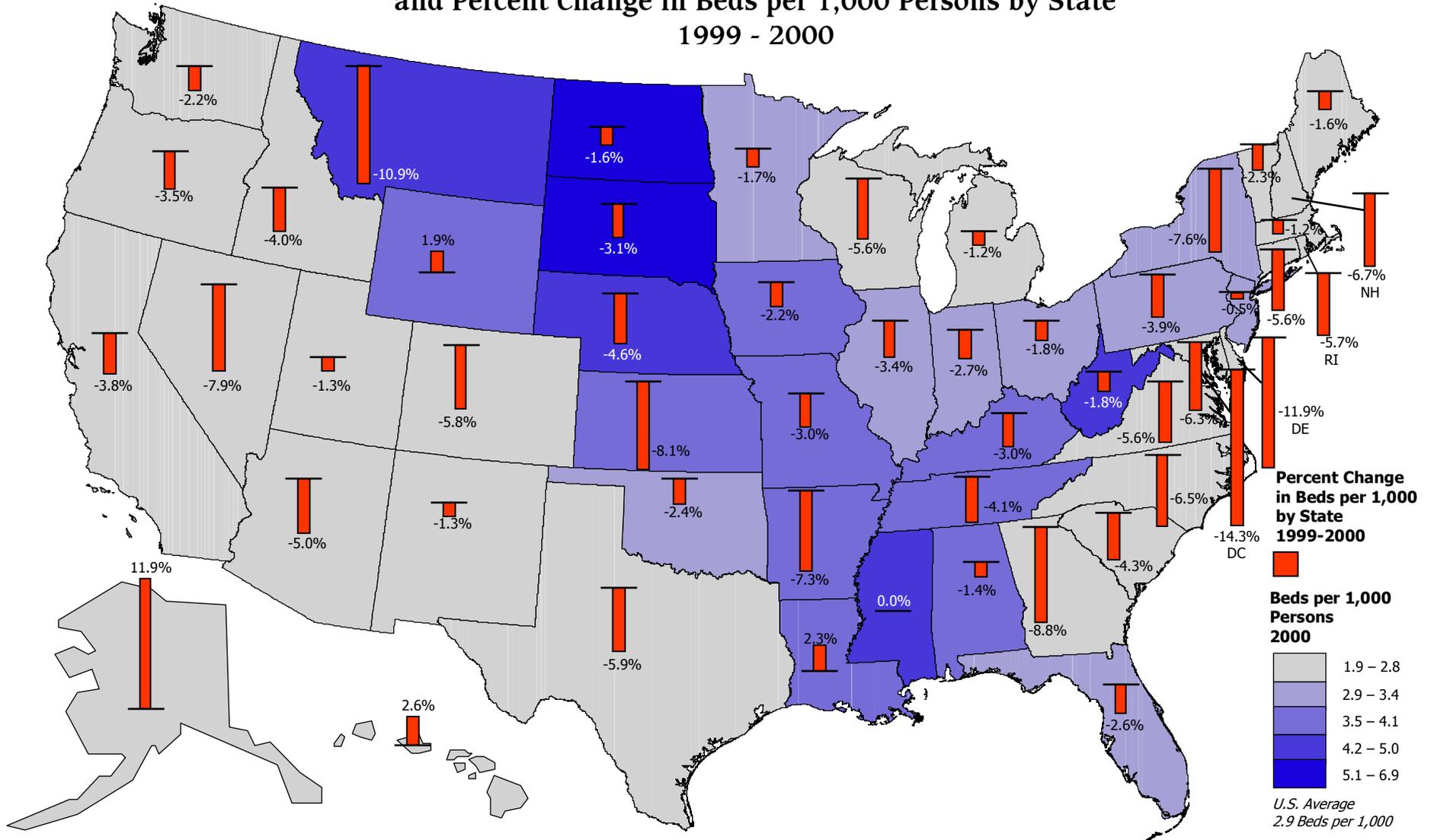




Chart 6.11:
Beds per 1,000 Persons by State, 2000
and Percent Change in Beds per 1,000 Persons by State
1999 - 2000



**Chart 6.12:
Percent of Population Over 65 by County
2000**

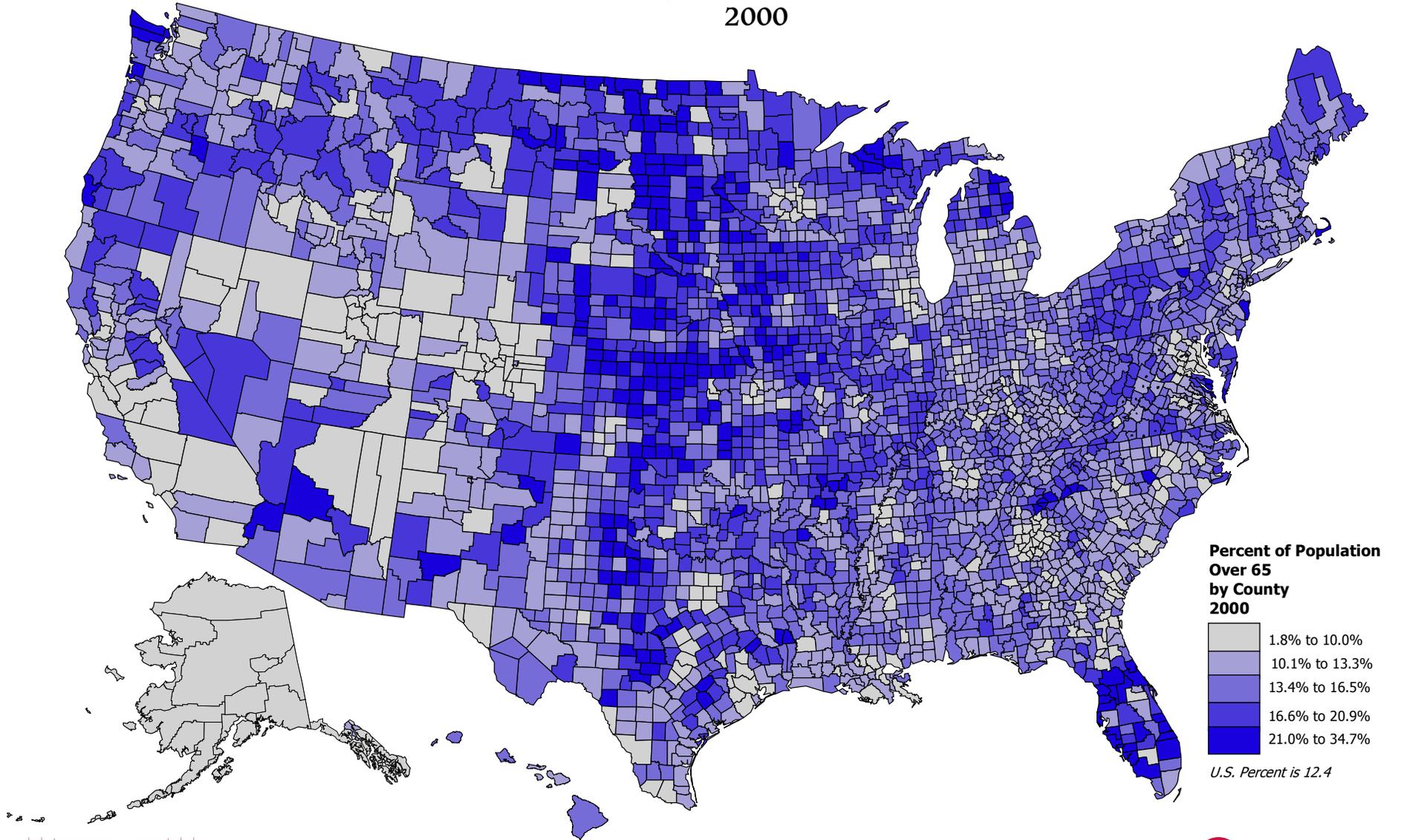
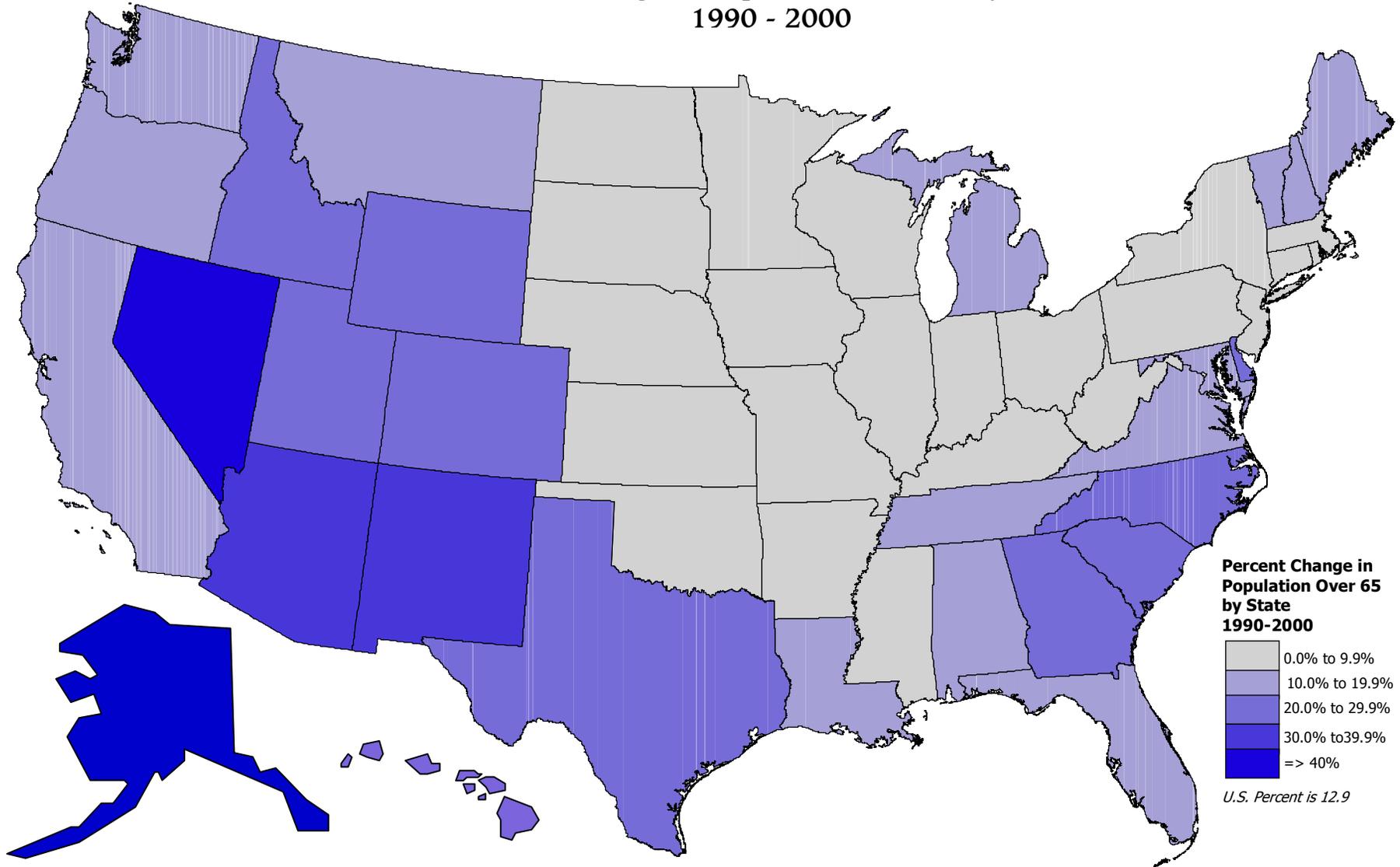


Chart 6.13:
Percent Change in Population Over 65 by State
 1990 - 2000



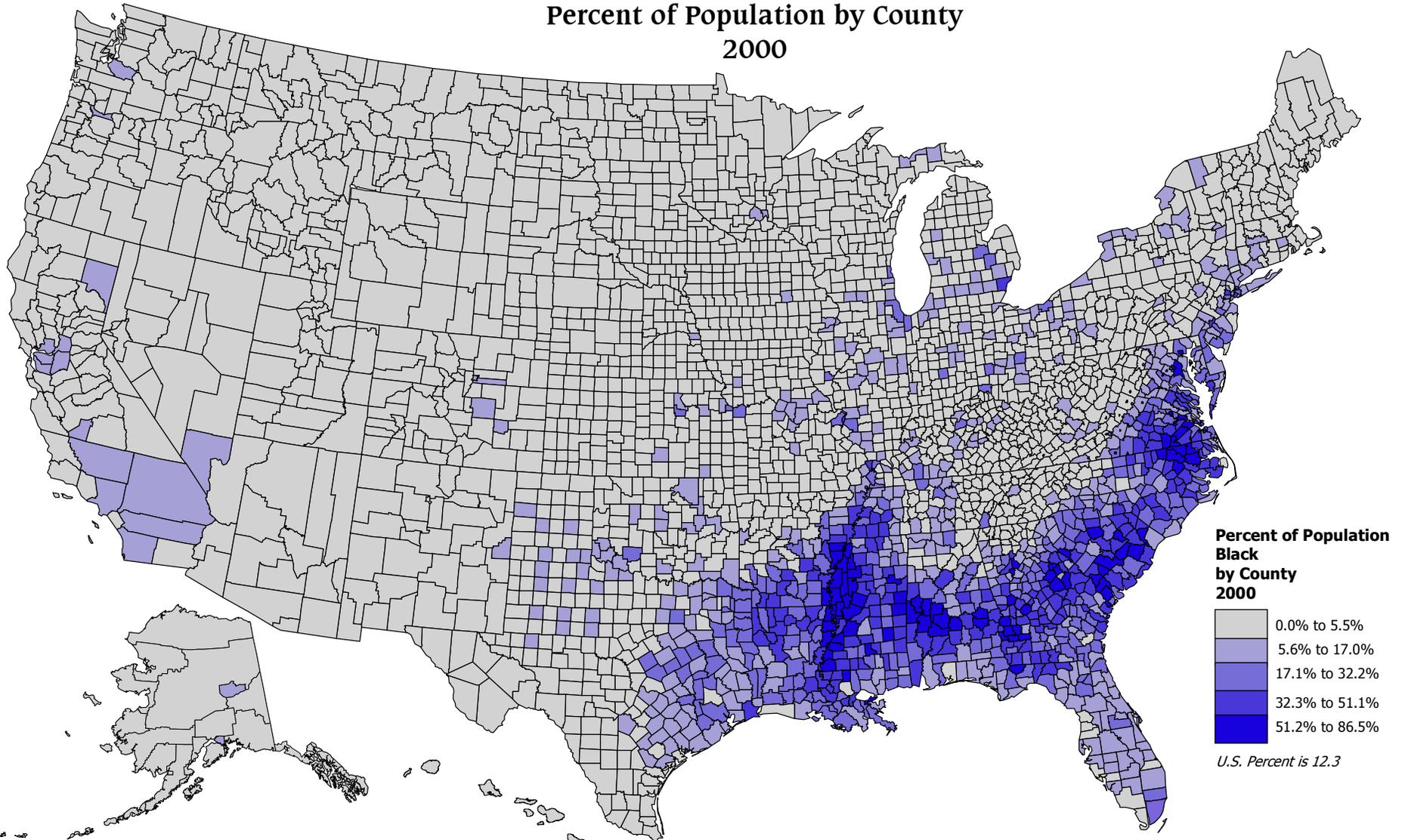
Percent Change in Population Over 65 by State 1990-2000

- 0.0% to 9.9%
- 10.0% to 19.9%
- 20.0% to 29.9%
- 30.0% to 39.9%
- = > 40%

U.S. Percent is 12.9

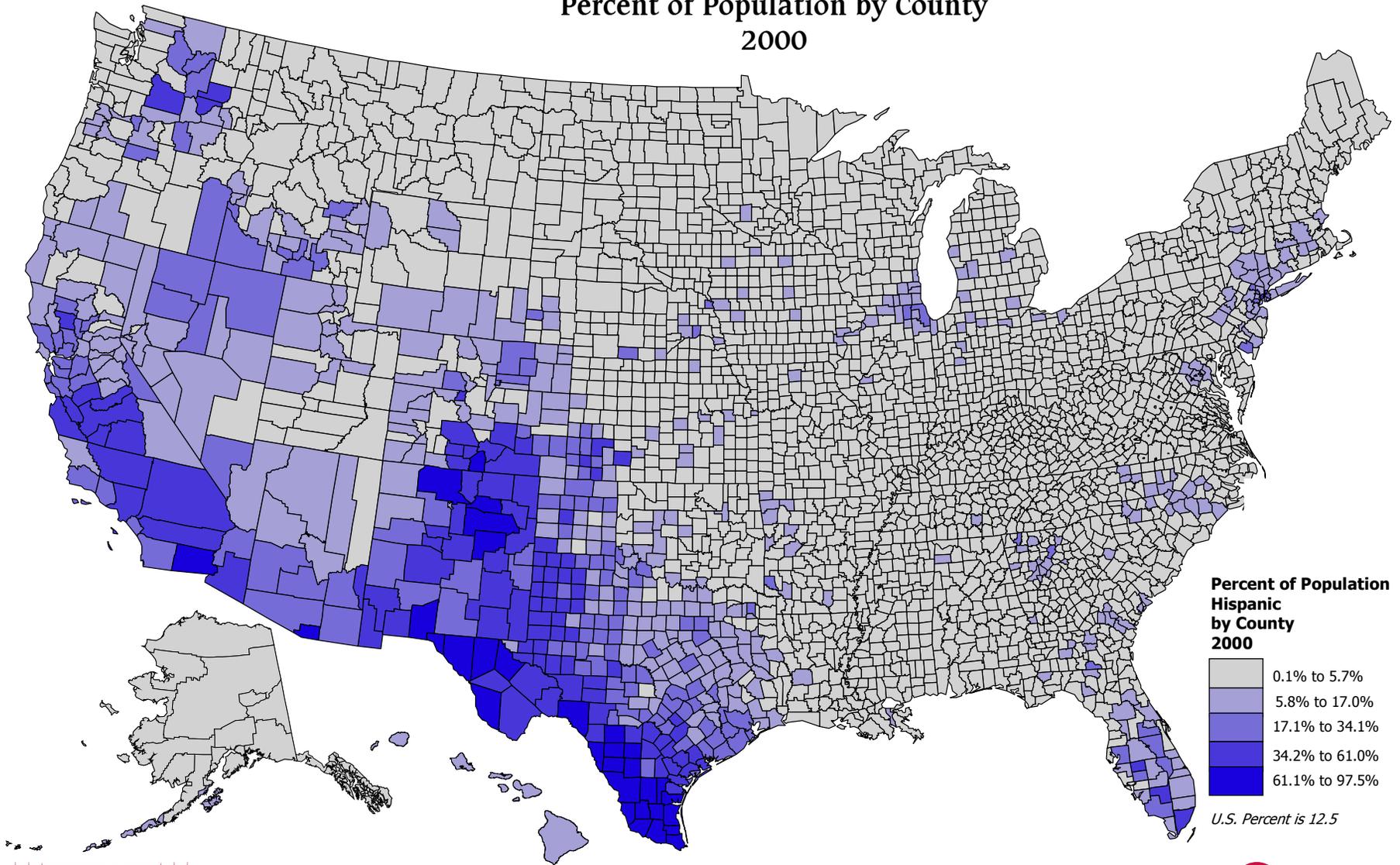


**Chart 6.14:
Race: Black
Percent of Population by County
2000**

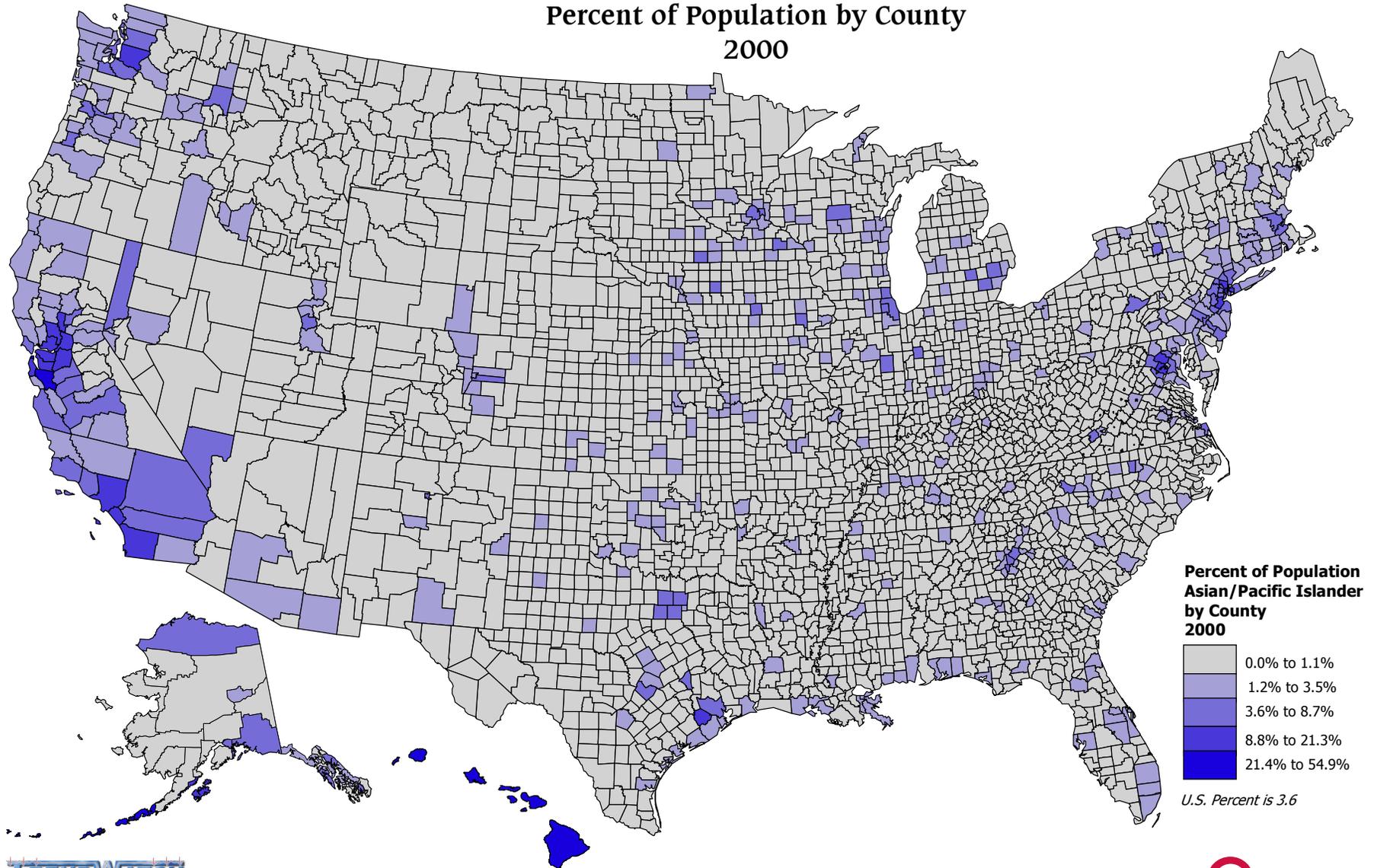




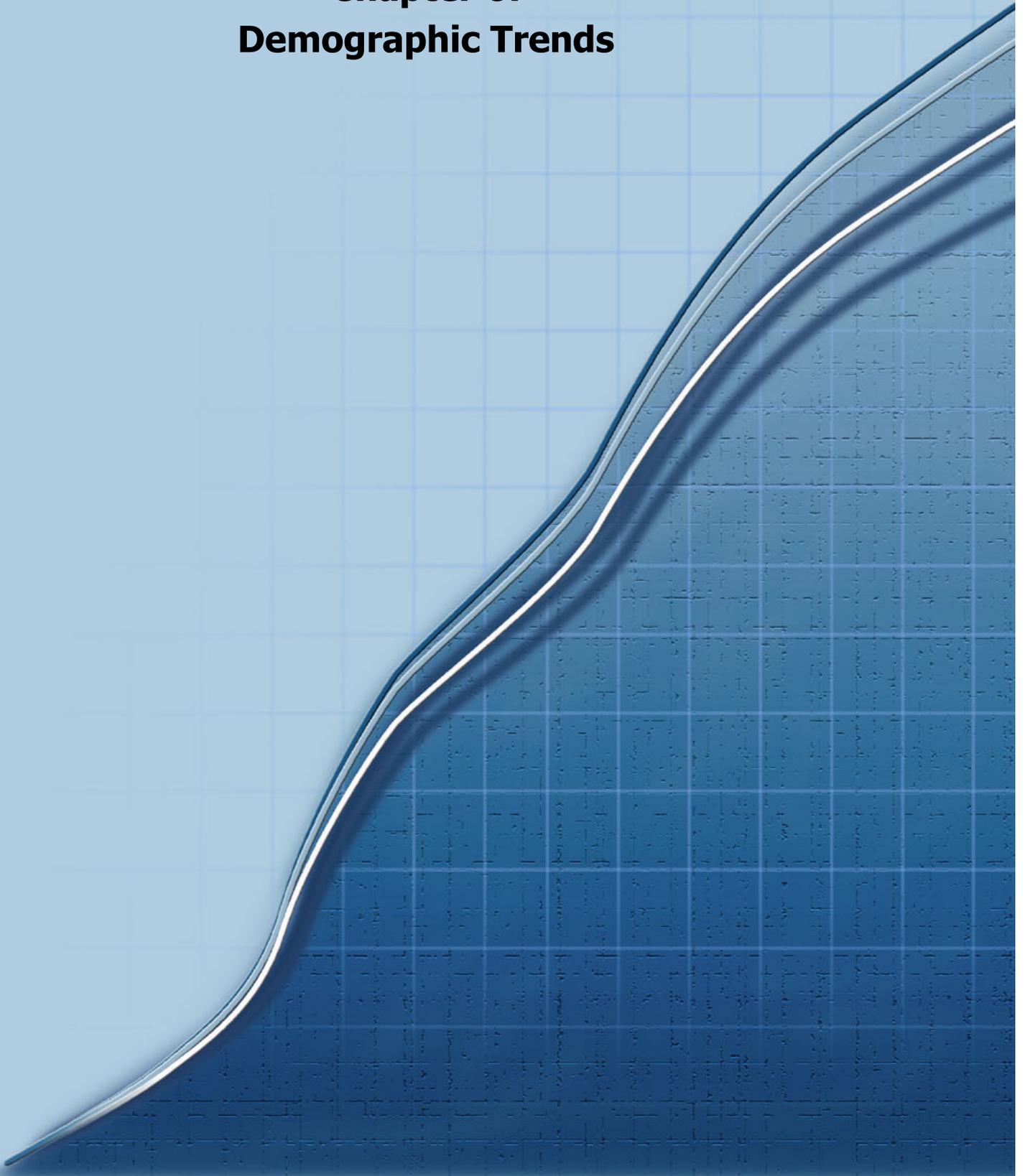
**Chart 6.15:
Hispanic Origin
Percent of Population by County
2000**



**Chart 6.16:
Race: Asian/Pacific Islander
Percent of Population by County
2000**



Chapter 6: Demographic Trends



Chapter 6: Demographic Changes

The population of the United States is growing, aging, and becoming more racially and ethnically diverse. Consequently, hospitals must prepare to meet the increase in demand for health care services in their local communities, as well as the emerging challenges of serving a population with diverse communication styles and beliefs about health care. Between 1990 and 2000, the population of the United States grew 13.2 percent from approximately 249 million to about 281 million. Much of this growth was centered in states in the south (e.g. Florida) and west (e.g. Nevada, Arizona, Colorado) (Chart 6.3). The highest growth can be found in low population density states.

Over the last two decades, the downward pressure of declining utilization rates, as measured by hospital days per thousand population, has outweighed the upward pressure of population growth on demand for inpatient services. Consequently, the need for inpatient capacity nationally has declined and the number of hospitals and hospital beds has decreased. Between 1990 and 2000, the number of community hospitals decreased by 8.7 percent, and in 2000 alone, an estimated 64 hospitals closed, roughly 1.4 percent of all community hospitals.⁽¹⁾ In 1999 and 2000, however, the decline in the inpatient utilization rate leveled off and population growth drove a slight increase in inpatient days. (Charts 6.5 - 6.7, 6.9 - 6.11).

While the overall need for inpatient hospital capacity in the United States has declined, different rates of population growth or decline have created capacity challenges in particular areas. Within many metropolitan areas, growth tends to be higher in the suburbs than in the center cities. While hospital capacity may be sufficient in a metropolitan area overall, it may not be distributed appropriately to meet the needs of outlying areas. Similarly, certain regions of the country are growing much faster than others. High growth states like Nevada, Arizona, and Colorado have not seen a decline in inpatient capacity.

Some high growth areas are working to keep up with the increasing demand for hospital capacity. For example, Las Vegas, Nevada is the fastest growing MSA in the country: between 1990 and 2000, the population of Las Vegas grew 83 percent.⁽²⁾ In order to meet the health care needs of its rapidly increasing population, existing hospitals are undertaking major expansions, new hospitals are being built, and there are plans for more.



Currently, Las Vegas is being served by about 3,400 beds in 15 community hospitals (Chart 6.8).⁽³⁾ Despite the expansion in the number of hospitals and hospital beds, hospitals and emergency rooms continue to be filled to capacity.

It is well documented that the U.S. population is aging. The Census Bureau projects that the population over age 65 will double in the next 30 years. The aging of the baby boom generation and the advent of new life-extending drugs and medical procedures are driving this population growth. As people age, they tend to use more health care services. Not surprisingly, the highest concentration of people over age 65 can be found in Florida, but the population of those 65 and older is dispersed widely across the country (Charts 6.1, 6.12 - 6.13).

As the population has aged, Medicare has become an increasingly important payer to hospitals, accounting for 34.6 percent of costs in 1980 and 38.3 percent of costs in 2000. As the baby boom population reaches retirement age, Medicare beneficiaries will account for an even higher portion of overall hospital volume. Meanwhile, pressures to contain Medicare spending are likely to increase as the ratio of workers to retirees is projected to decline from 3:1 in 2000 to 2:1 in 2044.⁽⁴⁾

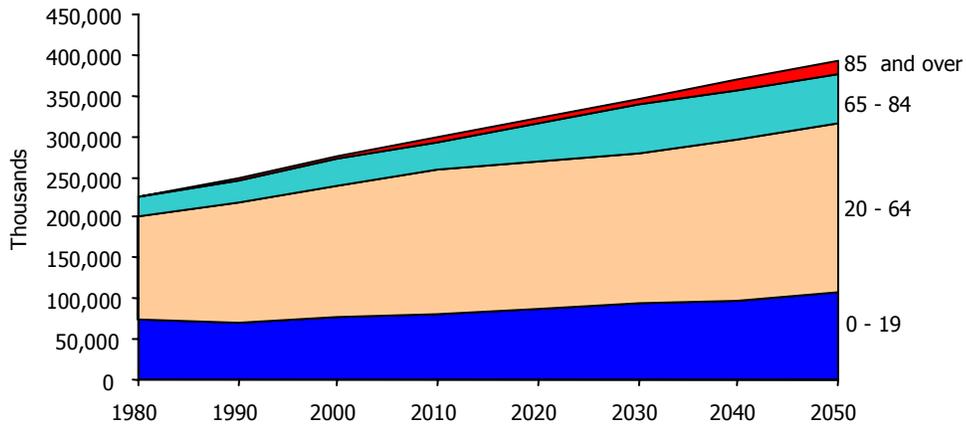
The U.S. is also becoming more diverse. While the population identifying themselves as white is the majority in every state except Hawaii, the non-white population is growing rapidly. The Hispanic population is projected to grow 70 percent in the next 20 years and the population of Asian and Pacific Islanders is projected to grow 75 percent. The percent of the population identifying themselves as black or African American is highest in the southeast, while the percent of the population identifying themselves as Hispanic is highest in the southwest. A more diverse population presents challenges for hospitals and health care providers as they must become more attuned to how cultural differences can influence the provision of care. In an effort to provide better care for everyone, regardless of background, hospitals are offering cultural competence staff training, providing written health material in languages other than English, and trying to recruit workforces that better reflect the populations they serve (Charts 6.2, 6.14 - 6.16).

⁽³⁾ Gartner, October 2001

⁽⁴⁾ Social Security Administration, Office of Policy

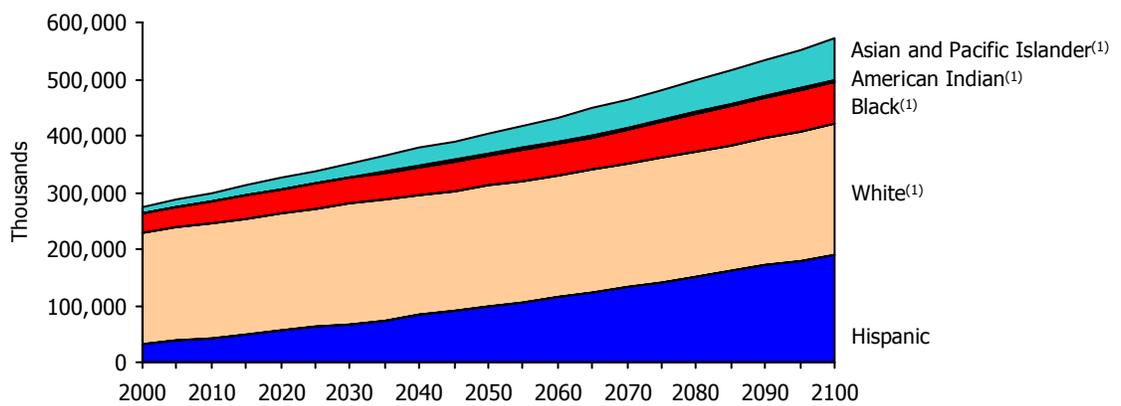


Chart 6.1:
US Population Trends and Projections by Age
 1980 - 2050



Source: US Census Bureau

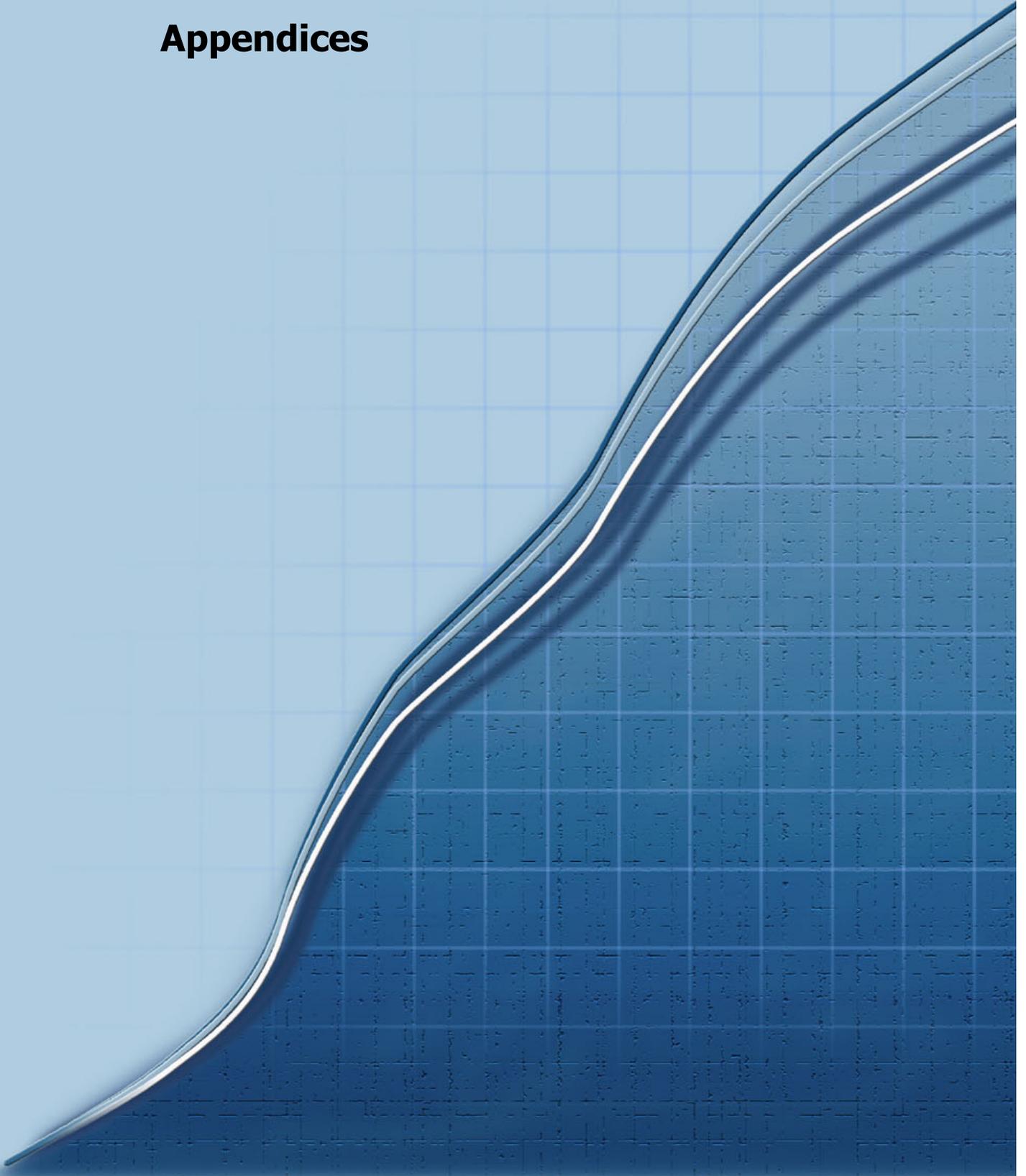
Chart 6.2:
US Population Trends and Projections by Race and Hispanic Origin
 2000 - 2100



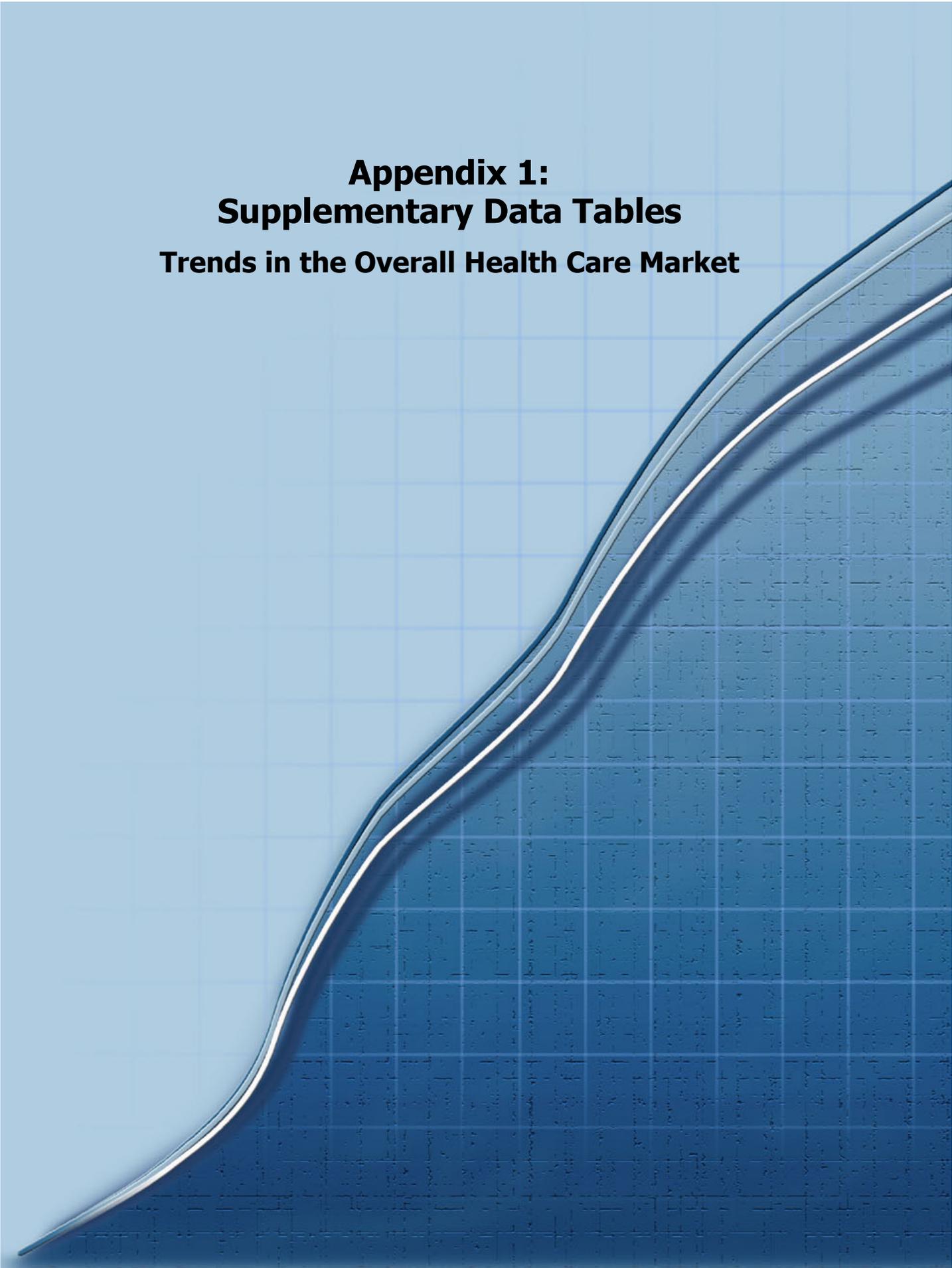
Source: US Census Bureau

(1) Non-Hispanic

Appendices



**Appendix 1:
Supplementary Data Tables
Trends in the Overall Health Care Market**





**Table 1.1:
National Health Expenditures
1980 - 2000**

Year	Total National Health Expenditures				Prescription Drugs Total	
	Total		Per Capita		Nominal Dollars (Billions)	Real Dollars ⁽¹⁾ (Billions)
	Nominal Dollars (Billions)	Real Dollars ⁽¹⁾ (Billions)	Nominal Dollars	Real Dollars ⁽¹⁾		
1980	\$245.8	\$245.8	\$1,067	\$1,067	\$12.0	\$12.0
1981	\$285.1	\$258.4	\$1,225	\$1,110	\$13.4	\$12.1
1982	\$321.0	\$274.1	\$1,366	\$1,166	\$15.0	\$12.8
1983	\$353.5	\$292.5	\$1,489	\$1,232	\$17.3	\$14.3
1984	\$390.1	\$309.4	\$1,628	\$1,291	\$19.6	\$15.6
1985	\$426.8	\$326.9	\$1,765	\$1,352	\$21.8	\$16.7
1986	\$457.2	\$343.8	\$1,872	\$1,407	\$24.3	\$18.3
1987	\$498.0	\$361.2	\$2,020	\$1,465	\$26.9	\$19.5
1988	\$558.1	\$388.7	\$2,243	\$1,562	\$30.6	\$21.3
1989	\$622.6	\$413.8	\$2,477	\$1,646	\$34.8	\$23.1
1990	\$696.0	\$438.8	\$2,738	\$1,726	\$40.3	\$25.4
1991	\$761.8	\$460.9	\$2,966	\$1,794	\$44.9	\$27.2
1992	\$827.0	\$485.7	\$3,184	\$1,870	\$48.2	\$28.3
1993	\$888.1	\$506.4	\$3,381	\$1,928	\$51.2	\$29.2
1994	\$937.2	\$521.1	\$3,534	\$1,965	\$54.6	\$30.4
1995	\$990.3	\$535.4	\$3,698	\$1,999	\$60.8	\$32.9
1996	\$1,040.0	\$546.2	\$3,850	\$2,022	\$67.2	\$35.3
1997	\$1,091.2	\$560.2	\$4,001	\$2,054	\$75.7	\$38.9
1998	\$1,149.8	\$581.2	\$4,177	\$2,112	\$87.2	\$44.1
1999	\$1,215.6	\$601.2	\$4,377	\$2,165	\$103.9	\$51.4
2000	\$1,299.5	\$621.8	\$4,637	\$2,219	\$121.8	\$58.3

Source: Centers for Medicare & Medicaid Services, Office of the Actuary: National Health Statistics Group
⁽¹⁾ Expressed in 1980 dollars; adjusted using the overall consumer price index for urban consumers

Data for Charts 1.1, 1.3, and 1.7



**Table 1.2:
Percent Distribution of
Employer-sponsored Health Insurance Enrollment
by Type of Plan
1988 - 2002**

	1988	1993	1996	1998	1999	2000	2001	2002
POS	N/A ⁽¹⁾	7%	14%	24%	25%	22%	22%	18%
HMO	16%	21%	31%	27%	28%	29%	23%	26%
PPO	11%	26%	28%	35%	38%	41%	48%	52%
Conventional	73%	46%	27%	14%	9%	8%	7%	4%

Source: The Kaiser Family Foundation and Health Research and Educational Trust, *Employer Health Benefits 2002 Annual Survey*

⁽¹⁾ Point-of-service plans not separately identified

Data for Chart 1.19

**Table 1.3:
Number and Percent Uninsured
1985 - 2001**

Year	Number (in millions)	Percent
1985	34.6	14.8%
1986	34.2	14.4%
1987	31.0	12.9%
1988	32.7	13.4%
1989	33.4	13.6%
1990	34.7	13.9%
1991	35.4	14.1%
1992	38.6	15.0%
1993	39.7	15.3%
1994	39.7	15.2%
1995	40.6	15.4%
1996	41.7	15.6%
1997	43.4	16.1%
1998	44.3	16.3%
1999 ⁽¹⁾	39.3	14.3%
2000 ⁽¹⁾	39.8	14.2%
2001 ⁽¹⁾	41.2	14.6%

Source: US Census Bureau

⁽¹⁾ 1999, 2000, and 2001 data use population estimates based on Census 2000.

Data for Chart 1.12



Table 1.4:
Average Percent Uninsured by State
1999 - 2000 and 2000 - 2001

State	Average % Uninsured		State	Average % Uninsured	
	99 - 00	00 - 01		99 - 00	00 - 01
Alabama	13.3%	13.2%	Montana	17.3%	15.2%
Alaska	18.6%	17.3%	Nebraska	9.6%	9.3%
Arizona	18.6%	17.3%	Nevada	17.7%	16.5%
Arkansas	14.4%	15.2%	New Hampshire	8.7%	8.9%
California	19.0%	19.0%	New Jersey	12.1%	12.6%
Colorado	14.9%	14.9%	New Mexico	24.4%	22.4%
Connecticut	9.4%	10.0%	New York	15.9%	15.9%
Delaware	9.6%	9.2%	North Carolina	14.0%	14.0%
District of Columbia	14.1%	13.4%	North Dakota	11.5%	10.5%
Florida	17.9%	17.6%	Ohio	10.7%	11.2%
Georgia	14.7%	15.5%	Oklahoma	17.7%	18.6%
Hawaii	9.8%	9.5%	Oregon	13.3%	12.7%
Idaho	16.8%	15.7%	Pennsylvania	8.5%	9.0%
Illinois	13.6%	13.7%	Rhode Island	6.9%	7.6%
Indiana	10.3%	11.5%	South Carolina	13.8%	12.2%
Iowa	8.2%	8.2%	South Dakota	10.9%	10.2%
Kansas	11.4%	11.1%	Tennessee	10.6%	11.1%
Kentucky	13.4%	13.0%	Texas	22.7%	23.2%
Louisiana	19.9%	18.7%	Utah	13.0%	13.7%
Maine	10.8%	10.6%	Vermont	9.8%	9.1%
Maryland	10.8%	11.3%	Virginia	12.4%	11.3%
Massachusetts	9.0%	8.5%	Washington	13.7%	13.3%
Michigan	9.7%	9.8%	West Virginia	14.7%	13.6%
Minnesota	7.8%	8.1%	Wisconsin	8.9%	7.6%
Mississippi	14.6%	15.0%	Wyoming	15.4%	15.8%
Missouri	8.1%	9.9%			

Source: US Census Bureau

Data for Chart 1.13



**Table 1.5:
Growth in Medicare Spending per Beneficiary
vs. Private Health Insurance Spending
per Enrollee
1980 - 2000**

Year	Growth in Medicare Spending per Beneficiary	Growth in Private Health Insurance Spending per Enrollee
1980	18.7%	15.9%
1981	17.7%	16.3%
1982	15.4%	14.0%
1983	11.9%	9.9%
1984	9.4%	9.4%
1985	6.0%	10.9%
1986	5.0%	5.3%
1987	6.0%	11.9%
1988	4.8%	15.1%
1989	11.6%	12.9%
1990	7.1%	12.7%
1991	7.5%	11.1%
1992	10.7%	8.5%
1993	6.5%	7.4%
1994	10.0%	4.2%
1995	8.5%	5.5%
1996	6.4%	4.0%
1997	4.2%	4.8%
1998	-0.4%	6.3%
1999	0.1%	5.0%
2000	4.7%	5.2%

*Source: Centers for Medicare & Medicaid Services, Office of the Actuary
Data for Chart 1.21*



Table 1.6:
Percentage of Medicaid Beneficiaries Enrolled
in Medicaid Managed Care by State
1999 and 2000

State	% Enrolled		State	% Enrolled	
	99	00		99	00
Alabama	73.6%	59.9%	Montana	100.0%	61.1%
Alaska	0.0%	0.0%	Nebraska	71.0%	76.7%
Arizona	90.7%	92.4%	Nevada	39.7%	39.5%
Arkansas	59.8%	57.1%	New Hampshire	8.1%	5.6%
California	51.1%	50.1%	New Jersey	58.4%	59.2%
Colorado	92.2%	90.2%	New Mexico	73.2%	63.8%
Connecticut	71.5%	71.7%	New York	29.2%	25.1%
Delaware	78.1%	79.4%	North Carolina	82.8%	68.3%
District of Columbia	61.4%	66.2%	North Dakota	55.0%	55.1%
Florida	60.3%	59.8%	Ohio	25.1%	21.4%
Georgia	75.2%	95.7%	Oklahoma	52.0%	69.1%
Hawaii	78.7%	73.9%	Oregon	81.5%	83.1%
Idaho	35.8%	29.9%	Pennsylvania	77.0%	72.6%
Illinois	12.1%	9.9%	Rhode Island	64.1%	68.7%
Indiana	66.2%	66.8%	South Carolina	4.6%	6.0%
Iowa	85.3%	90.3%	South Dakota	73.6%	92.7%
Kansas	53.1%	56.3%	Tennessee	100.0%	100.0%
Kentucky	60.1%	80.7%	Texas	19.7%	33.9%
Louisiana	5.8%	6.3%	Utah	89.5%	89.5%
Maine	14.1%	35.4%	Vermont	57.7%	46.7%
Maryland	69.4%	80.5%	Virginia	63.5%	58.6%
Massachusetts	64.5%	64.0%	Washington	99.8%	100.0%
Michigan	100.0%	100.0%	West Virginia	43.4%	34.6%
Minnesota	61.2%	62.5%	Wisconsin	47.4%	43.9%
Mississippi	41.2%	39.0%	Wyoming	0.0%	0.0%
Missouri	38.7%	40.4%	Nation	55.6%	55.8%

Source: Centers for Medicare & Medicaid Services, Office of the Actuary
 Data for Chart 1.23



Table 1.7:
Percent Change in
SCHIP Enrollment by State
FY 2000 – FY 2001

State	Percent Change FY 00 – FY 01	State	Percent Change FY 00 – FY 01
Alabama ⁽¹⁾	30%	Montana	63%
Alaska	63%	Nebraska	22%
Arizona	43%	Nevada	76%
Arkansas	52%	New Hampshire	40%
California	45%	New Jersey	12%
Colorado	31%	New Mexico	69%
Connecticut	0%	New York	13%
Delaware	24%	North Carolina	-5%
District of Columbia	24%	North Dakota	32%
Florida	31%	Ohio	42%
Georgia	52%	Oklahoma	-33%
Hawaii	216%	Oregon	12%
Idaho	7%	Pennsylvania	18%
Illinois	34%	Rhode Island	51%
Indiana	28%	South Carolina	11%
Iowa	17%	South Dakota	52%
Kansas	30%	Tennessee	-42%
Kentucky	20%	Texas	284%
Louisiana	39%	Utah	37%
Maine	19%	Vermont	-27%
Maryland	18%	Virginia	94%
Massachusetts	-7%	Washington	191%
Michigan	105%	West Virginia	53%
Minnesota	104%	Wisconsin	21%
Mississippi	156%	Wyoming	83%
Missouri	44%		

Source: Center for Medicare and Medicaid Services

⁽¹⁾ Based on Statistical Enrollment Data System (SEDS) data only

Data for Chart 1.17

**Appendix 2:
Supplementary Data Tables
Organizational Trends**





Table 2.1:
Number of Community Hospitals⁽¹⁾
1980 - 2000

Year	All Hospitals	Urban	Rural	In Health System⁽²⁾
1980	5,830	2,955	2,875	-
1981	5,813	3,048	2,765	-
1982	5,801	3,041	2,760	-
1983	5,783	3,070	2,713	-
1984	5,759	3,063	2,696	-
1985	5,732	3,058	2,674	1,579
1986	5,678	3,040	2,638	1,735
1987	5,611	3,012	2,599	1,781
1988	5,533	2,984	2,549	1,857
1989	5,455	2,958	2,497	1,835
1990	5,384	2,924	2,460	1,822
1991	5,342	2,921	2,421	1,827
1992	5,292	3,007	2,285	1,814
1993	5,261	3,012	2,249	1,829
1994	5,229	2,993	2,236	1,956
1995	5,194	2,958	2,236	1,990
1996	5,134	2,908	2,226	2,058
1997	5,057	2,852	2,205	2,222
1998	5,015	2,816	2,199	2,176
1999	4,956	2,767	2,189	2,238
2000	4,915	2,740	2,175	2,217

Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1980-2000, for community hospitals

⁽¹⁾ All nonfederal, short-term general, and special hospitals whose facilities and services are available to the public

⁽²⁾ Hospitals that are part of a corporate body that may own and/or manage health provider facilities or health-related subsidiaries as well as non-health-related facilities including freestanding and/or subsidiary corporations

Data for Charts 2.1 and 2.5



**Table 2.2:
Number of Beds and
Number of Beds per 1,000 Persons
1980 - 2000**

Year	Number of Beds	Beds per 1,000
1980	988,287	4.36
1981	1,001,801	4.37
1982	1,011,989	4.37
1983	1,018,452	4.36
1984	1,016,987	4.31
1985	1,000,598	4.21
1986	978,283	4.07
1987	956,529	3.95
1988	944,276	3.86
1989	932,185	3.78
1990	926,436	3.72
1991	922,822	3.66
1992	919,505	3.61
1993	917,847	3.56
1994	901,056	3.46
1995	871,976	3.32
1996	862,352	3.25
1997	853,287	3.19
1998	839,988	3.11
1999	829,575	3.04
2000	823,560	2.93

Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1980-2000, for community hospitals

Data for Chart 2.2



Table 2.3:
Beds per 1,000 Persons
by State
1999 and 2000

State	Beds per 1,000 Persons		State	Beds per 1,000 Persons	
	99	00		99	00
Alabama	3.73	3.68	Montana	5.29	4.71
Alaska	2.02	2.26	Nebraska	5.00	4.77
Arizona	2.21	2.10	Nevada	2.05	1.89
Arkansas	3.94	3.65	New Hampshire	2.48	2.31
California	2.22	2.14	New Jersey	3.02	3.00
Colorado	2.30	2.17	New Mexico	1.94	1.91
Connecticut	2.40	2.26	New York	3.79	3.50
Delaware	2.65	2.34	North Carolina	3.06	2.86
District of Columbia	6.82	5.85	North Dakota	6.13	6.03
Florida	3.27	3.19	Ohio	3.04	2.98
Georgia	3.18	2.90	Oklahoma	3.30	3.22
Hawaii	2.46	2.52	Oregon	2.00	1.93
Idaho	2.80	2.68	Pennsylvania	3.59	3.44
Illinois	3.10	3.00	Rhode Island	2.42	2.29
Indiana	3.23	3.15	South Carolina	2.99	2.86
Iowa	4.13	4.03	South Dakota	5.93	5.74
Kansas	4.38	4.02	Tennessee	3.76	3.61
Kentucky	3.78	3.66	Texas	2.83	2.67
Louisiana	3.84	3.92	Utah	1.96	1.93
Maine	2.95	2.90	Vermont	2.81	2.75
Maryland	2.25	2.11	Virginia	2.52	2.37
Massachusetts	2.64	2.61	Washington	1.93	1.88
Michigan	2.65	2.62	West Virginia	4.49	4.41
Minnesota	3.45	3.39	Wisconsin	3.02	2.85
Mississippi	4.77	4.77	Wyoming	3.82	3.89
Missouri	3.70	3.59			

Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 2000, for community hospitals
 Data for Chart 2.3



Table 2.4:
Percentage of Hospitals
Offering “Non-hospital”
Products or Services
1994 - 2000

	1994	1995	1996	1997	1998	1999	2000
Health Maintenance Organization	19%	21%	22%	23%	22%	20%	18%
Preferred Provider Indemnity Fee-for-service	30%	31%	31%	31%	26%	23%	21%
Home Health Service	10%	10%	10%	10%	8%	6%	6%
Skilled Nursing Facility		74%	77%	78%	76%	72%	69%
Long-term Care		45%	49%	52%	53%	49%	49%
Assisted Living		13%	14%	15%	12%	11%	11%
Hospice		8%	10%	11%	13%	14%	15%
Meals on Wheels		53%	56%	56%	59%	56%	54%
		23%	24%	25%	26%	25%	26%

*Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1994-2000, for community hospitals
 Data for Charts 2.7 and 2.8*



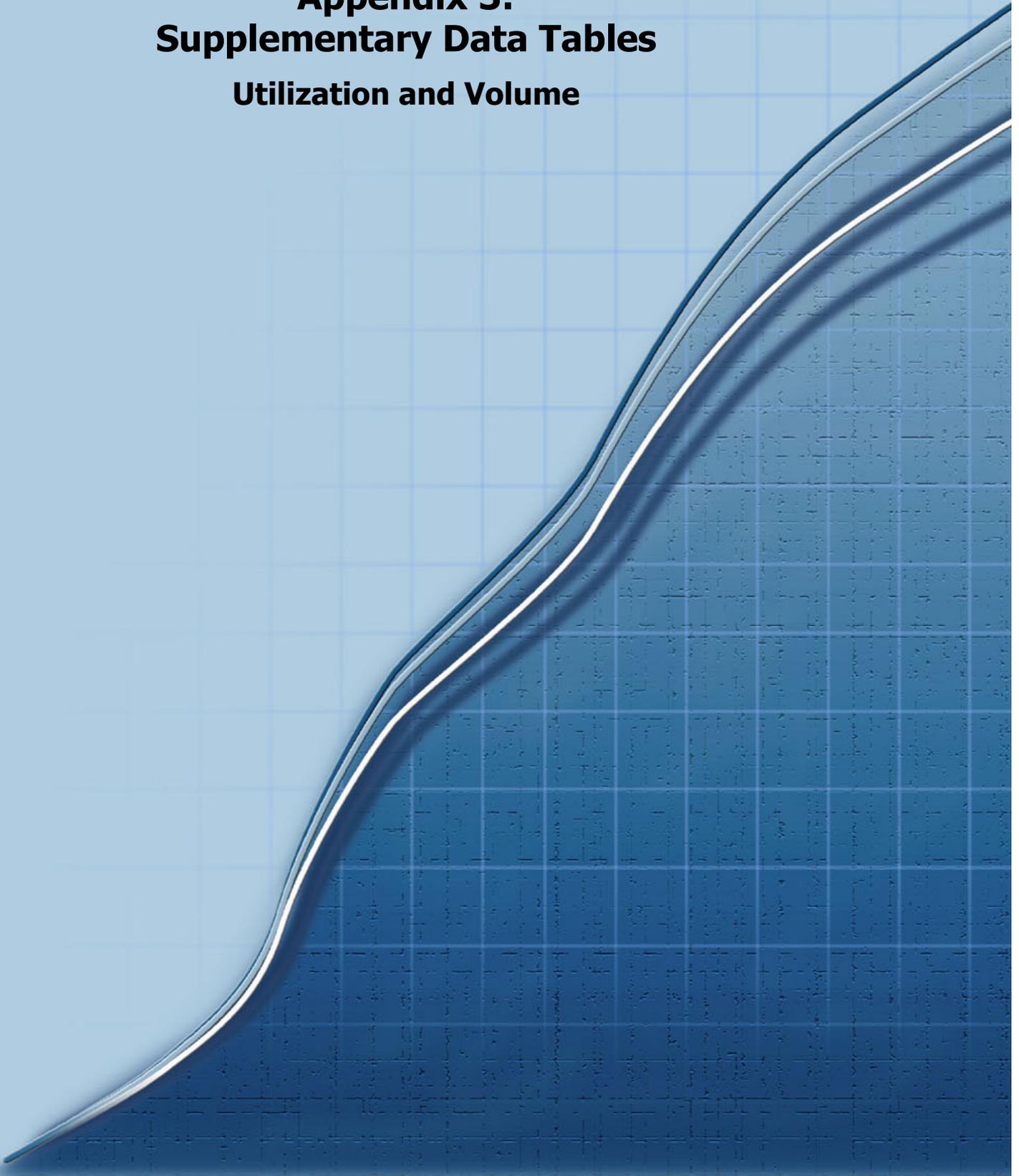
Table 2.5:
Distribution of Inpatient vs. Outpatient Revenues
1980 - 2000

Year	Gross Outpatient Revenue	Gross Inpatient Revenue
1980	13%	87%
1981	13%	87%
1982	13%	87%
1983	13%	87%
1984	14%	86%
1985	16%	84%
1986	18%	82%
1987	19%	81%
1988	21%	79%
1989	21%	79%
1990	23%	77%
1991	24%	76%
1992	25%	75%
1993	27%	73%
1994	28%	72%
1995	30%	70%
1996	31%	69%
1997	33%	67%
1998	33%	67%
1999	34%	66%
2000	35%	65%

Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1980-2000, for community hospitals

Data for Chart 2.4

**Appendix 3:
Supplementary Data Tables
Utilization and Volume**





**Table 3.1:
Trends in Inpatient Utilization
in Community Hospitals
1980 - 2000**

Year	Inpatient Admissions in Community Hospitals	Inpatient Admissions per 1,000	Total Inpatient Days in Community Hospitals	Inpatient Days per 1,000	Inpatient Surgeries	Average Length of Stay
1980	36,143,445	159.5	273,085,130	1,205.4	15,714,062	7.6
1981	36,438,232	158.8	278,405,882	1,213.3	15,674,633	7.6
1982	36,379,446	157.0	278,043,093	1,200.2	15,532,578	7.6
1983	36,151,780	154.6	273,196,906	1,168.5	15,130,404	7.6
1984	35,155,462	149.1	256,603,081	1,088.1	14,378,580	7.3
1985	33,448,631	140.6	236,619,446	994.5	13,161,996	7.1
1986	32,378,796	134.8	229,447,826	955.5	12,222,470	7.1
1987	31,600,817	130.4	227,014,903	937.0	11,691,429	7.2
1988	31,452,835	128.6	226,875,042	927.9	11,383,578	7.2
1989	31,116,048	126.1	225,436,505	913.4	10,989,409	7.2
1990	31,181,046	125.3	225,971,653	908.4	10,844,916	7.2
1991	31,064,283	123.2	222,858,470	883.9	10,693,243	7.2
1992	31,033,557	121.7	221,047,104	866.8	10,552,378	7.1
1993	30,748,051	119.3	215,888,741	837.6	10,181,703	7.0
1994	30,718,136	118.0	207,180,278	796.0	9,833,938	6.7
1995	30,945,357	117.8	199,876,367	760.7	9,700,613	6.5
1996	31,098,959	117.2	193,747,004	730.4	9,545,612	6.2
1997	31,576,960	118.0	192,504,015	719.2	9,509,081	6.1
1998	31,811,673	117.8	191,430,450	709.0	9,735,705	6.0
1999	32,359,042	118.7	191,884,270	703.7	9,539,593	5.9
2000	33,089,467	117.6	192,420,368	683.7	9,729,336	5.8

Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1980-2000, for community hospitals
Data for Charts 3.1, 3.3, 3.5, 3.6, 3.7, and 3.16



Table 3.2:
Average Length of Stay in Community Hospitals
by State
1999 and 2000

State	Average Length of Stay		State	Average Length of Stay	
	99	00		99	00
Alabama	5.4	5.3	Montana	11.9	10.5
Alaska	6.1	6.3	Nebraska	9.1	8.4
Arizona	4.7	4.6	Nevada	5.1	4.9
Arkansas	5.9	5.7	New Hampshire	5.5	5.5
California	5.3	5.3	New Jersey	5.8	5.9
Colorado	5.1	5.0	New Mexico	4.4	4.2
Connecticut	6.1	6.1	New York	8.0	7.9
Delaware	5.6	6.1	North Carolina	6.2	6.0
District of Columbia	7.1	7.0	North Dakota	9.8	9.4
Florida	5.5	5.4	Ohio	5.4	5.4
Georgia	6.8	6.4	Oklahoma	5.5	5.3
Hawaii	7.8	8.5	Oregon	4.4	4.4
Idaho	5.8	5.4	Pennsylvania	6.1	5.9
Illinois	5.5	5.4	Rhode Island	5.3	5.3
Indiana	5.9	5.6	South Carolina	5.9	5.9
Iowa	7.0	6.9	South Dakota	10.8	10.5
Kansas	6.8	6.7	Tennessee	5.7	5.7
Kentucky	5.8	5.7	Texas	5.2	5.1
Louisiana	5.5	5.5	Utah	4.6	4.6
Maine	6.0	5.9	Vermont	7.8	7.8
Maryland	5.2	5.1	Virginia	5.7	5.7
Massachusetts	5.7	5.8	Washington	4.8	4.8
Michigan	5.8	5.6	West Virginia	6.2	6.2
Minnesota	7.6	7.2	Wisconsin	6.1	6.0
Mississippi	7.0	6.9	Wyoming	7.7	8.2
Missouri	5.7	5.5			

Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 2000, for community hospitals
 Data for Chart 3.8



Table 3.3:
Outpatient Utilization in Community Hospitals
1980 - 2000

Year	Total Outpatient Visits	Outpatient Visits per 1,000	Outpatient Surgeries
1980	202,274,528	892.9	3,053,604
1981	202,554,317	882.7	3,561,573
1982	247,930,332	1,070.2	4,061,061
1983	210,038,878	898.4	4,714,504
1984	211,941,487	898.7	5,529,661
1985	218,694,236	919.2	6,951,359
1986	231,853,914	965.5	8,246,665
1987	244,495,134	1,009.1	9,126,205
1988	268,290,801	1,097.3	10,027,560
1989	284,815,681	1,153.9	10,350,871
1990	300,514,516	1,208.0	11,069,952
1991	321,044,324	1,273.4	11,711,808
1992	347,847,202	1,364.1	12,307,594
1993	366,533,432	1,422.0	12,624,292
1994	382,780,358	1,470.6	13,154,838
1995	413,748,403	1,574.6	13,462,304
1996	439,863,107	1,658.3	14,023,651
1997	450,140,010	1,681.8	14,678,290
1998	474,193,468	1,756.3	15,593,614
1999	495,346,286	1,816.5	15,845,492
2000	521,404,976	1,852.8	16,383,374

Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1980-2000, for community hospitals

Data for Charts 3.14, 3.15, and 3.16

Table 3.4:
**Emergency Department Visits, Emergency Department
 Visits per 1,000, and Number of Emergency Departments
 1990 - 2000**

Year	ED Visits (in millions)	ED Visits per 1,000	Hospitals with ED Visits
1990	86.7	349	5,172
1991	88.5	351	5,108
1992	90.8	356	5,035
1993	92.6	359	4,998
1994	90.5	348	4,960
1995	94.7	360	4,923
1996	93.1	351	4,884
1997	92.8	347	4,813
1998	94.8	351	4,771
1999	99.5	365	4,679
2000	103.1	366	4,650

Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1990-2000, for community hospitals
Data for Charts 3.9 and 3.10

**Appendix 4:
Supplementary Data Tables
Trends in Hospital Financing**

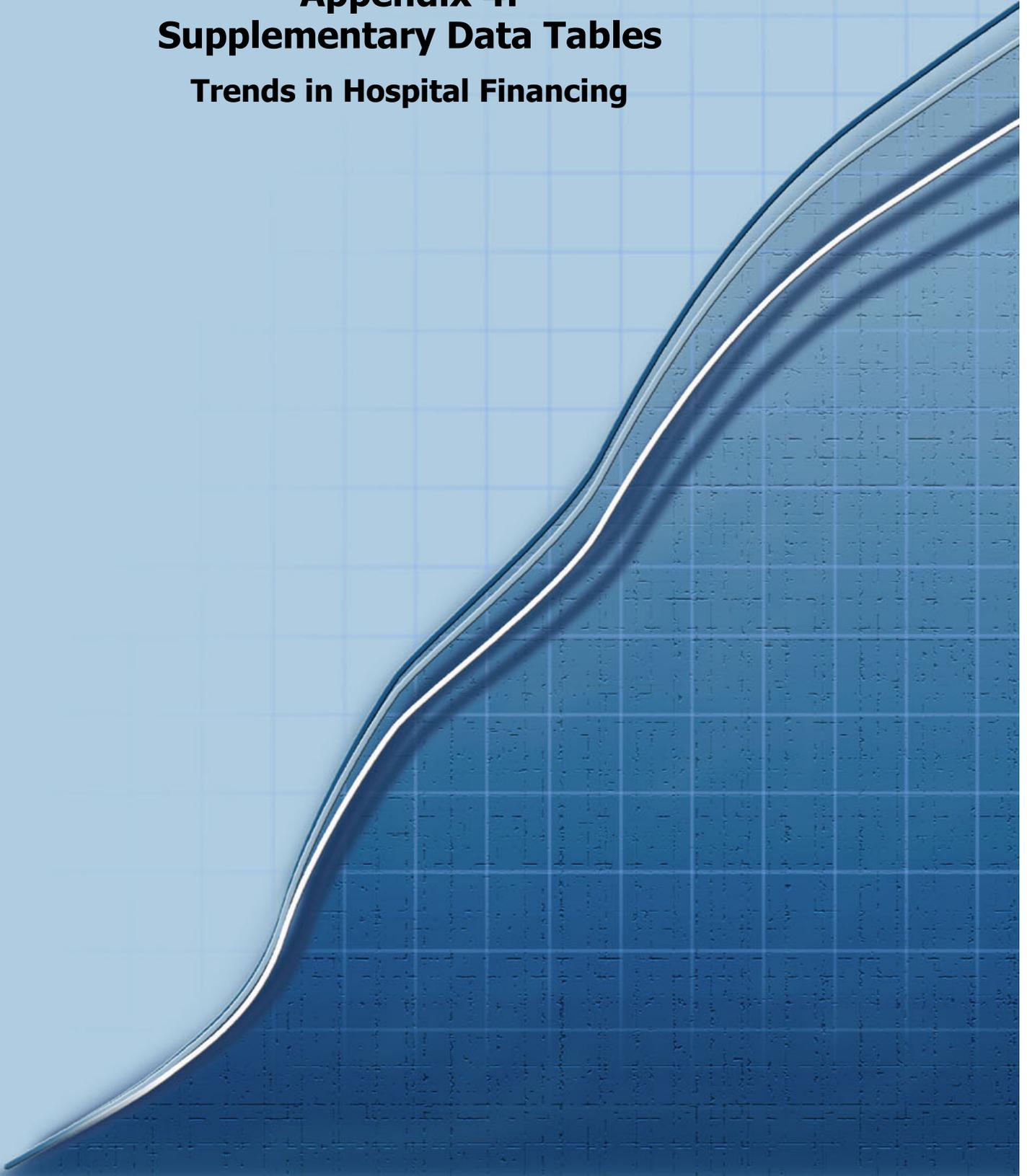




Table 4.1:
Annual Change in Hospital Operating Revenue and Expenses
per Adjusted Admission⁽¹⁾
1980 - 2000

Year	Expenses per Adjusted Admission	Operating Revenue per Adjusted Admission	Percent Change Expenses	Percent Change Operating Revenue
1980	\$1,851	\$1,878		
1981	\$2,171	\$2,203	17.3%	17.3%
1982	\$2,501	\$2,547	15.2%	15.6%
1983	\$2,789	\$2,841	11.5%	11.5%
1984	\$2,995	\$3,080	7.4%	8.4%
1985	\$3,245	\$3,359	8.3%	9.1%
1986	\$3,533	\$3,639	8.9%	8.3%
1987	\$3,850	\$3,929	9.0%	8.0%
1988	\$4,207	\$4,245	9.3%	8.1%
1989	\$4,588	\$4,628	9.1%	9.0%
1990	\$4,947	\$5,034	7.8%	8.8%
1991	\$5,360	\$5,481	8.3%	8.9%
1992	\$5,794	\$5,958	8.1%	8.7%
1993	\$6,132	\$6,290	5.8%	5.6%
1994	\$6,230	\$6,446	1.6%	2.5%
1995	\$6,216	\$6,466	-0.2%	0.3%
1996	\$6,225	\$6,522	0.2%	0.9%
1997	\$6,262	\$6,526	0.6%	0.1%
1998	\$6,386	\$6,589	2.0%	1.0%
1999	\$6,509	\$6,647	1.9%	0.9%
2000	\$6,668	\$6,806	2.5%	2.4%

Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1980-2000, for community hospitals

⁽¹⁾ An aggregate measure of workload reflecting the number of inpatient admissions, plus an estimate of the volume of outpatient services, expressed in units equivalent to an inpatient admission in terms of level of effort

Data for Chart 4.1



**Table 4.2:
Aggregate Operating⁽¹⁾, Patient⁽²⁾, and Total Hospital⁽³⁾
Margins, Percentage of Hospitals with Negative Total
Margins, and Aggregate Non-operating Gains
as a Percentage of Total Net Revenue
1980-2000**

Year	Aggregate Operating Margins	Aggregate Patient Margins	Aggregate Total Hospital Margins	Percent of Hospitals with Negative Total Margins	Aggregate Non-Operating Gains as a Percentage of Total Net Revenue
1980			3.6%	25.7%	2.2%
1981			3.6%	25.4%	2.2%
1982			4.2%	24.0%	2.4%
1983			4.2%	24.1%	2.4%
1984			5.1%	24.6%	2.4%
1985			6.0%	23.3%	2.7%
1986			5.3%	25.7%	2.4%
1987			4.2%	31.4%	2.3%
1988			3.3%	32.5%	2.4%
1989			3.4%	30.8%	2.5%
1990	1.7%	-4.2%	3.9%	27.1%	2.1%
1991	2.2%	-3.6%	4.3%	24.7%	2.1%
1992	2.7%	-2.7%	4.6%	23.8%	1.9%
1993	2.5%	-3.2%	4.2%	24.2%	1.8%
1994	3.4%	-2.8%	4.8%	22.4%	1.5%
1995	3.9%	-2.2%	5.6%	20.4%	1.8%
1996	4.6%	-1.0%	6.7%	19.4%	2.3%
1997	4.0%	-1.7%	6.7%	20.4%	2.7%
1998	3.1%	-3.0%	5.8%	26.6%	2.8%
1999	2.1%	-4.3%	4.6%	32.5%	2.6%
2000	2.0%	-4.2%	4.6%	32.0%	2.6%

Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1980-2000, for community hospitals

⁽¹⁾ Operating Margin is calculated as the difference between operating revenue and total expenses divided by operating revenue

⁽²⁾ Patient Margin is calculated as the difference between net patient revenue and total expenses divided by net patient revenue

⁽³⁾ Total Hospital Margin is calculated as the difference between total net revenue and total expenses divided by total net revenue

Data for Charts 4.2, 4.3, and 4.4



Table 4.3:
Aggregate Hospital Payment-to-Cost Ratios
for Private Payers, Medicare and Medicaid
1980 - 2000

Year	Medicare	Medicaid	Private Payer
1980	96.5%	92.3%	112.9%
1981	97.8%	94.0%	112.2%
1982	96.1%	91.5%	115.8%
1983	96.8%	92.1%	116.8%
1984	98.7%	91.9%	118.5%
1985	102.0%	94.3%	117.1%
1986	101.7%	91.8%	116.3%
1987	98.3%	83.0%	119.8%
1988	94.2%	79.0%	121.7%
1989	92.1%	78.8%	124.4%
1990	89.4%	80.0%	128.3%
1991	88.5%	81.9%	130.8%
1992	89.0%	89.5%	131.8%
1993	89.9%	89.6%	130.1%
1994	96.9%	93.7%	124.4%
1995	99.3%	93.8%	123.9%
1996	102.4%	94.8%	121.6%
1997	103.6%	95.9%	117.5%
1998	101.8%	96.6%	115.8%
1999	99.9%	95.7%	115.1%
2000	99.1%	94.5%	115.7%

Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1980-2000, for community hospitals

Data for Chart 4.9

**Appendix 5:
Supplementary Data Tables
Workforce**

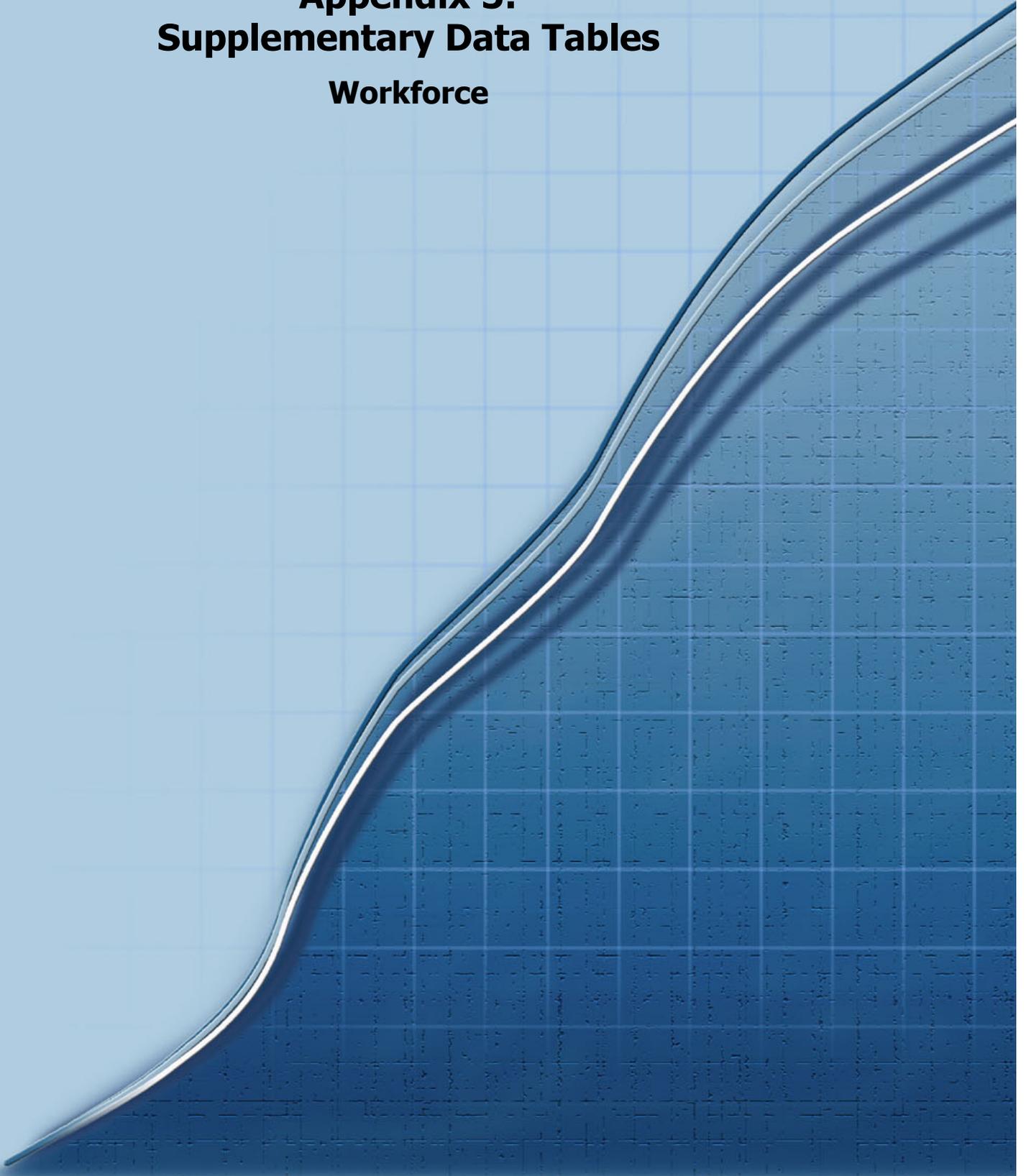




Table 5.1:
Total Number of Active Physicians per 1,000 Persons
by State
1998 and 1999

State	Physicians per 1,000 Persons		State	Physicians per 1,000 Persons	
	98	99		98	99
Alabama	1.94	1.95	Montana	1.91	1.93
Alaska	1.68	1.74	Nebraska	2.12	2.13
Arizona	2.13	2.15	Nevada	1.79	1.83
Arkansas	1.89	1.90	New Hampshire	2.36	2.33
California	2.37	2.35	New Jersey	3.06	3.10
Colorado	2.43	2.48	New Mexico	2.10	2.11
Connecticut	3.40	3.43	New York	3.71	3.69
Delaware	2.42	2.44	North Carolina	2.23	2.26
District of Columbia	6.85	6.91	North Dakota	2.20	2.19
Florida	2.43	2.47	Ohio	2.51	2.51
Georgia	2.06	2.06	Oklahoma	1.96	1.96
Hawaii	2.61	2.65	Oregon	2.24	2.26
Idaho	1.56	1.56	Pennsylvania	3.15	3.14
Illinois	2.58	2.59	Rhode Island	3.36	3.33
Indiana	1.96	1.98	South Carolina	2.01	2.07
Iowa	1.96	1.97	South Dakota	1.84	1.88
Kansas	2.14	2.14	Tennessee	2.39	2.39
Kentucky	2.04	2.06	Texas	2.04	2.04
Louisiana	2.36	2.35	Utah	1.96	1.97
Maine	2.47	2.55	Vermont	2.99	3.01
Maryland	3.54	3.52	Virginia	2.34	2.34
Massachusetts	3.84	3.84	Washington	2.32	2.32
Michigan	2.59	2.58	West Virginia	2.29	2.32
Minnesota	2.41	2.44	Wisconsin	2.25	2.28
Mississippi	1.62	1.63	Wyoming	1.69	1.72
Missouri	2.47	2.47			

Source: Health United States, 2000 and 2001; includes active non-federal doctors of medicine and active doctors of osteopathy
 Data for Chart 5.2



Table 5.2:
Medical and Dental Residents in Training
in Community Hospitals
1980 - 2000

Year	Residents
1980	55,572
1981	57,776
1982	58,439
1983	59,990
1984	61,888
1985	59,171
1986	63,200
1987	60,909
1988	63,608
1989	64,478
1990	64,530
1991	67,189
1992	69,111
1993	73,377
1994	74,027
1995	78,137
1996	77,160
1997	75,398
1998	78,345
1999	77,796
2000	77,411

*Source: The Lewin Group
 analysis of American Hospital
 Association Annual Survey data,
 1980-2000, for community
 hospitals*

Data for Chart 5.3



Table 5.3:
Total Full Time Equivalent Employees Working in Hospitals
and Full Time Equivalents per Adjusted Admission⁽¹⁾
1980 - 2000

Year	FTE Personnel	FTE per Adjusted Admission
1980	2,872,772	0.069
1981	3,028,154	0.073
1982	3,305,136	0.079
1983	3,095,579	0.074
1984	3,016,665	0.073
1985	2,996,846	0.075
1986	3,024,320	0.076
1987	3,106,082	0.078
1988	3,195,168	0.080
1989	3,297,947	0.082
1990	3,415,622	0.083
1991	3,530,623	0.084
1992	3,615,145	0.084
1993	3,674,250	0.085
1994	3,690,905	0.083
1995	3,707,958	0.081
1996	3,724,843	0.079
1997	3,789,752	0.078
1998	3,831,068	0.077
1999	3,837,964	0.075
2000	3,911,412	0.073

Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1980-2000, for community hospitals

⁽¹⁾ *An aggregate measure of workload reflecting the number of inpatient admissions, plus an estimate of the volume of outpatient services, expressed in units equivalent to an inpatient admission in terms of level of effort*

Data for Charts 5.4 and 5.5



Table 5.4:
**Number of RN Full Time Equivalent Employees,
 RN Full Time Equivalent Employees per Adjusted Admission,
 and RN Full Time Equivalents as a Percentage of Total FTEs
 1986 - 2000**

Year	RN FTEs (thousands)	RN FTEs per Adjusted Admission	RN FTEs as a Percent of Total FTEs
1986	736.3	0.0185	24.3%
1987	759.0	0.0192	24.4%
1988	770.6	0.0192	24.0%
1989	791.5	0.0196	24.0%
1990	809.9	0.0197	23.7%
1991	840.5	0.0200	23.8%
1992	858.9	0.0201	23.7%
1993	874.1	0.0201	23.8%
1994	890.9	0.0201	24.1%
1995	893.7	0.0195	24.1%
1996	895.1	0.0190	24.0%
1997	901.2	0.0185	23.8%
1998	929.6	0.0186	24.3%
1999	938.0	0.0182	24.4%
2000	957.6	0.0179	24.5%

Source: The Lewin Group analysis of American Hospital Association Annual Survey data, 1986-2000, for community hospitals

Data for Charts 5.6 and 5.7

Table 5.5:
**RN Employment by Type of Provider
 1980 - 2000**

	1980	1984	1988	1992	1996	2000
Percent Employed by Hospitals	65.7%	68.1%	67.9%	66.5%	60.1%	59.1%
Percent Employed by Nursing Homes/Extended Care Facilities	8.0%	7.7%	6.6%	7.0%	8.1%	6.9%
Percent Employed by Public/Community Health	6.6%	6.8%	6.8%	9.7%	13.1%	12.8%
All Other	19.8%	17.3%	18.6%	16.8%	18.7%	21.2%

Source: Findings from the National Sample Survey of Registered Nurses, 1980 - 2000; Bureau of Health Professionals, Division of Nursing
 Data for Chart 5.8



Table 5.6:
Annual Enrollment in US RN Education Programs
1987 - 2000

Year	Total Enrollment
1987	182,947
1988	184,924
1989	201,458
1990	221,170
1991	237,598
1992	257,983
1993	270,228
1994	268,350
1995	261,219
1996	238,244
1997	227,327
1998	211,694
1999	192,202
2000	181,415

*Source: National League for Nursing;
 1997 - 2000 data are unpublished and
 unofficial*

Data for Chart 5.14



**Table 5.7:
National Supply and Demand Projections for FTE RNs
2000 - 2020**

Year	RN FTE Supply	RN FTE Demand
2000	1,889,243	1,999,950
2001	1,912,667	2,030,971
2002	1,937,336	2,062,556
2003	1,959,192	2,095,514
2004	1,989,329	2,128,142
2005	2,012,444	2,161,831
2006	2,028,548	2,196,904
2007	2,039,772	2,232,516
2008	2,047,729	2,270,890
2009	2,059,099	2,307,236
2010	2,069,369	2,344,584
2011	2,075,891	2,379,719
2012	2,075,218	2,426,741
2013	2,068,256	2,472,072
2014	2,061,348	2,516,827
2015	2,055,491	2,562,554
2016	2,049,318	2,609,081
2017	2,041,321	2,656,886
2018	2,032,230	2,708,241
2019	2,017,100	2,758,089
2020	2,001,998	2,810,414

*Source: National Center For Health Workforce Analysis,
Bureau of Health Professions, Health Resources and Services
Administration, 2002*

Data for Chart 5.15

**Appendix 6:
Supplementary Data Tables
Demographic Trends**

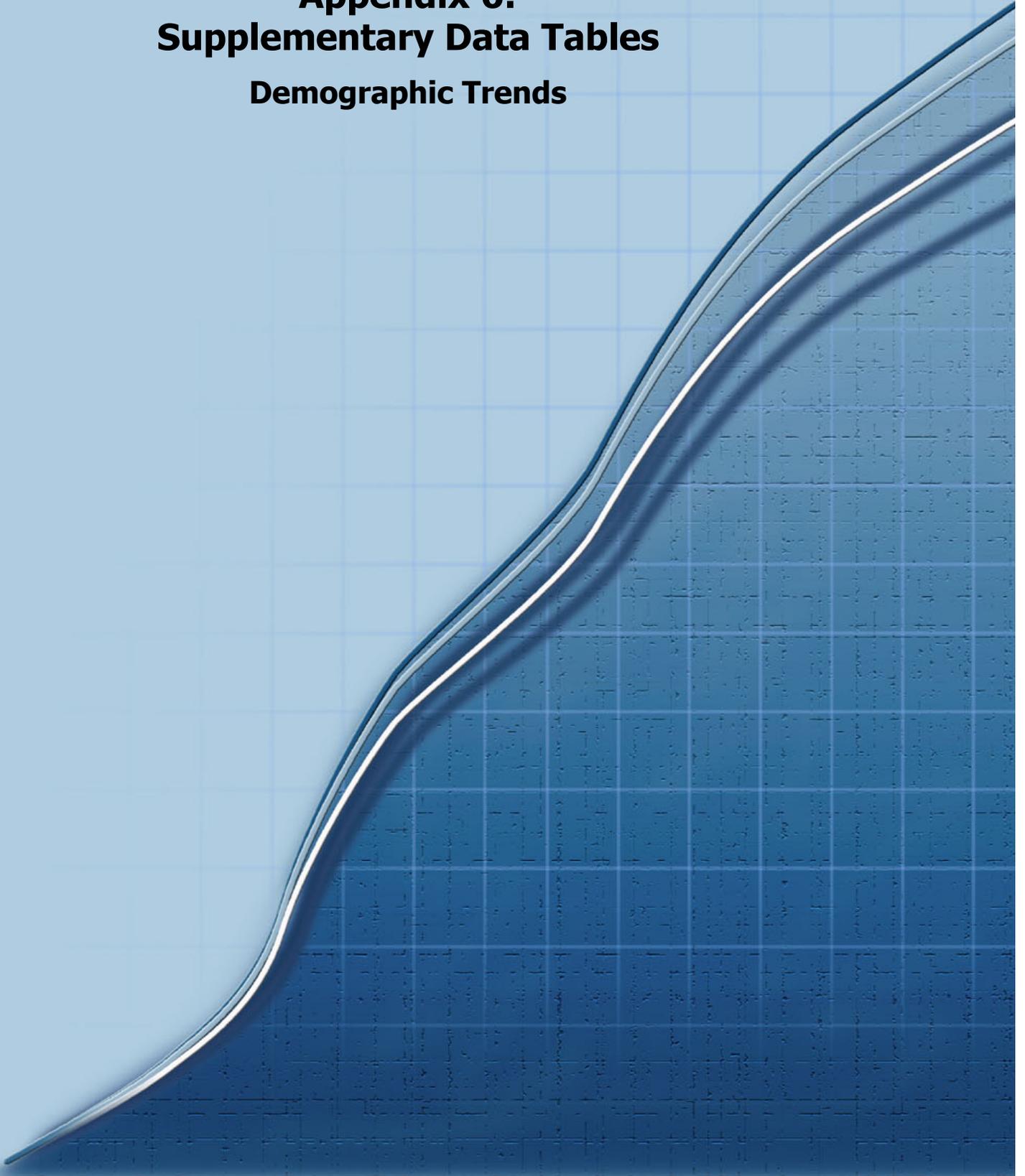




Table 6.1:
US Population Trends and Projections By Age
1980 - 2050

Year	Ages 0-19 (in Thousands)	Ages 20-64 (in Thousands)	Ages 65-84 (in Thousands)	Ages 85 and over (in Thousands)
1980	72,458	128,538	23,310	2,240
1990	71,758	145,925	28,059	3,022
2000	80,474	165,956	30,752	4,240
2010	81,514	176,794	33,738	5,671
2020	86,225	183,297	46,760	6,460
2030	92,867	184,653	60,924	8,455
2040	98,902	195,846	61,681	13,552
2050	106,763	208,309	60,635	18,223

Source: US Census Bureau; 2000 numbers updated from Census 2000
Data for Chart 6.1

Table 6.2:
US Population Trends and Projections By Age
1980 - 2050

Year	Hispanic (in Thousands)	White Non-Hispanic (in Thousands)	Black Non-Hispanic (in Thousands)	American Indian Non-Hispanic (in Thousands)	Asian/Pacific Islander Non-Hispanic (in Thousands)
2000	32,478	196,669	33,490	2,047	10,619
2010	43,687	201,956	37,482	2,299	14,435
2020	55,156	207,145	41,548	2,549	18,527
2030	68,167	210,983	45,567	2,787	23,563
2040	82,691	212,474	49,617	3,023	29,542
2050	98,228	212,990	53,466	3,241	35,759
2060	114,796	214,190	57,297	3,448	42,277
2070	132,492	217,028	61,286	3,652	49,179
2080	151,154	220,954	65,452	3,852	56,416
2090	170,514	225,300	69,795	4,045	63,948
2100	190,330	230,236	74,360	4,237	71,789

Source: US Census Bureau
Data for Chart 6.2



**Table 6.3:
Percent Change in
Population by State
1990-2000**

State	Percent Change 90 - 00	State	Percent Change 90 - 00
Alabama	10.1%	Montana	12.9%
Alaska	14.0%	Nebraska	8.4%
Arizona	40.0%	Nevada	66.3%
Arkansas	13.7%	New Hampshire	11.4%
California	13.8%	New Jersey	8.9%
Colorado	30.6%	New Mexico	20.1%
Connecticut	3.6%	New York	5.5%
Delaware	17.6%	North Carolina	21.4%
District of Columbia	-5.7%	North Dakota	0.5%
Florida	23.5%	Ohio	4.7%
Georgia	26.4%	Oklahoma	9.7%
Hawaii	9.3%	Oregon	20.4%
Idaho	28.5%	Pennsylvania	3.4%
Illinois	8.6%	Rhode Island	4.5%
Indiana	9.7%	South Carolina	15.1%
Iowa	5.4%	South Dakota	8.5%
Kansas	8.5%	Tennessee	16.7%
Kentucky	9.7%	Texas	22.8%
Louisiana	5.9%	Utah	29.6%
Maine	3.8%	Vermont	8.2%
Maryland	10.8%	Virginia	14.4%
Massachusetts	5.5%	Washington	21.1%
Michigan	6.9%	West Virginia	0.8%
Minnesota	12.4%	Wisconsin	9.6%
Mississippi	10.5%	Wyoming	8.9%
Missouri	9.3%		

Source: US Census Bureau
Data for Charts 6.3 and 6.7



Table 6.4:
Ten Fastest Growing MSAs
1990 - 2000

MSA	Population 1990	Population 2000	Percent Change in Population 90 - 00
Las Vegas, NV-AZ	852,737	1,563,282	83.3%
Naples, FL	152,099	251,377	65.3%
Yuma, AZ	106,895	160,026	49.7%
McAllen-Edinburg-Mission, TX	383,545	569,463	48.5%
Austin-San Marcos, TX	846,227	1,249,763	47.7%
Fayetteville-Springdale-Rogers, AR	210,908	311,121	47.5%
Boise City, ID	295,851	432,345	46.1%
Phoenix-Mesa, AZ	2,238,480	3,251,876	45.3%
Laredo, TX	133,239	193,117	44.9%
Provo-Orem, UT	263,590	368,536	39.8%

Source: US Census Bureau
 Data for Chart 6.5



Table 6.5:
Admissions per 1,000 Persons
by State
2000

State	Admissions per 1,000 Persons 2000	State	Admissions per 1,000 Persons 2000
Alabama	153	Montana	110
Alaska	75	Nebraska	122
Arizona	105	Nevada	100
Arkansas	138	New Hampshire	90
California	98	New Jersey	128
Colorado	92	New Mexico	95
Connecticut	102	New York	127
Delaware	106	North Carolina	121
District of Columbia	226	North Dakota	139
Florida	133	Ohio	124
Georgia	105	Oklahoma	124
Hawaii	82	Oregon	96
Idaho	95	Pennsylvania	146
Illinois	123	Rhode Island	114
Indiana	115	South Carolina	123
Iowa	123	South Dakota	131
Kansas	115	Tennessee	130
Kentucky	144	Texas	113
Louisiana	146	Utah	87
Maine	115	Vermont	86
Maryland	111	Virginia	103
Massachusetts	117	Washington	86
Michigan	111	West Virginia	159
Minnesota	116	Wisconsin	104
Mississippi	149	Wyoming	97
Missouri	138		

Source: US Census Bureau

Data for Chart 6.9



Table 6.6:
Percent Change in Population Over 65
by State
1990 - 2000

State	Percent Change in Population 65 and Over 90 - 00	State	Percent Change in Population 65 and Over 90 - 00
Alabama	10.9%	Montana	13.6%
Alaska	59.6%	Nebraska	4.1%
Arizona	39.5%	Nevada	71.5%
Arkansas	6.8%	New Hampshire	18.3%
California	14.7%	New Jersey	7.9%
Colorado	26.3%	New Mexico	30.1%
Connecticut	5.4%	New York	3.6%
Delaware	26.0%	North Carolina	20.5%
District of Columbia	-10.2%	North Dakota	3.8%
Florida	18.5%	Ohio	7.2%
Georgia	20.0%	Oklahoma	7.5%
Hawaii	28.5%	Oregon	12.0%
Idaho	20.3%	Pennsylvania	4.9%
Illinois	4.4%	Rhode Island	1.2%
Indiana	8.1%	South Carolina	22.3%
Iowa	2.4%	South Dakota	5.7%
Kansas	4.0%	Tennessee	13.7%
Kentucky	8.1%	Texas	20.7%
Louisiana	10.2%	Utah	26.9%
Maine	12.3%	Vermont	17.2%
Maryland	15.8%	Virginia	19.2%
Massachusetts	5.0%	Washington	15.1%
Michigan	10.0%	West Virginia	3.0%
Minnesota	8.7%	Wisconsin	7.9%
Mississippi	6.9%	Wyoming	22.2%
Missouri	5.3%		

Source: US Census Bureau
 Data for Chart 6.13