Rural Hospitals: New Millennium and New Challenges

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Introduction

Chapter One

The decade of the 1990s was a period of significant change and substantial challenge for rural hospitals in America. Legislation passed during the last half of this decade—the Balanced Budget Act of 1997 (BBA), the Balanced Budget Refinement Act of 1999 (BBRA), and the Medicare, Medicaid and SCHIP Benefits Improvement Act of 2000 (BIPA)—changed in fundamental ways how Medicare pays hospitals for its services. Rural hospitals also experienced increased competition from managed care organizations, demographic shifts with important implications for patient volume and mix of services, continued technological advances, and changes in medical practice.

Rural hospitals have faced these challenges with various strategies, among the more dramatic the rapid increase in participation in the Critical Access Hospital program (CAH). The net result of these challenges—and responses to them—has been significant changes in the financial performance of rural hospitals—steady improvement through 1996 and declines since.

This chart book documents the changes in rural hospitals that took place in the decade of the 1990's and discusses some of the challenges that face rural hospitals currently. We have used data from the Centers for Medicare and Medicaid Services (CMS), the American Hospital Association (AHA), the Health Resources and Services Administration, the Office of Inspector General of DHHS and special computations of CMS data by the Medicare Payment Advisory Commission (MedPAC).

Chapter 2 provides an overview of the organizational structure of rural hospitals. Rural hospital structure is discussed in terms of ownership, staffing, bed size, and linkages with other organizations.

Chapter 3 outlines the health care services offered by rural hospitals and reviews the changes in the breadth and sophistication of those services over this period. Recent data on the effect of inter-organizational linkages on the range of services offered in rural communities is also presented.

Chapter 4 describes trends in the payment of rural hospitals with a focus on the growing importance of Medicare and of outpatient services.

Chapter 5 highlights the significant reversal in the financial performance of rural hospitals that occurred during the decade of the 1990's.

Chapter 6 presents conclusions about the performance of rural hospitals.

Data Sources

The American Hospital Association Annual Surveys from 1990 to 2000 were used to obtain information on rural hospital organizational structure and provision of services. The data are collected by the AHA through a national survey of American hospitals.

The Prospective Payment System's Minimum Data Set for 1990 to 1999 was used to obtain information on rural hospital financial performance. The Centers for Medicare and Medicaid Services (CMS) requires hospitals to file annual data with their Medicare financial reports.

The 2001 Area Resource File (ARF) was used to obtain information on the geographical proximity of hospitals to metropolitan areas. The ARF is produced by the Office of Research and Planning, Bureau of Health Professions, Health Resources and Services Administration, Department of Health and Human Services.

The Office of the Inspector General for the Department of Health and Human Services produced a report titled *Hospital Closures: 1990-1999*(December 2001) and additional annual reports entitled *Hospital Closures: 1998* (July, 2000), *Hospital Closures: 1999* (March 2001) and *Hospital Closures: 2000* (June, 2002).

The Medicare Payment Advisory Committee (MedPAC) compiled several sets of financial statistics used in this chart book using specially prepared data from CMS. Statistics from MedPAC's *Report to the Congress: Medicare in Rural America* (June 2001) and *Report to the Congress: Medicare Payment Policy* (March 2002) were also used. MedPAC is an independent federal body established by the Balanced Budget Act of 1997 to advise the U.S. Congress on issues affecting the Medicare program.

The AHA, CMS, and ARF data files were merged for the analysis. The most recent data available across the files were for hospital fiscal years ending in calendar year 1999. When only AHA data were used in an analysis, we used the 2000 AHA data.

Depending on the table, the sample size of rural hospitals varies. The sample sizes are smaller for more recent years due to closures of hospitals. Also, the sample size within a given year varies from table to table depending on the subject matter of the table and the amount of non-response for specific data items.

The Organizational Structure of Rural Hospitals

This chapter provides an overview of the organizational structure of rural hospitals. Rural hospital structure is discussed in terms of ownership, staffing, bed size, and linkages with other organizations.

Chapter Two

Key Facts

Throughout the decade of the 1990's, rural hospitals played a critical role in the delivery of health care services in many states.

- There were approximately 2,200 rural hospitals in the United States in 2000, representing 44% of all hospitals in the country and accounting for 21% of all hospital beds *(Table 2-1)*. Both as a percent of the total number of the country's hospitals and as a percent of the country's total beds, rural hospitals have maintained their shares.

Nonprofit agencies and governmental organizations operate the vast majority of rural hospitals.

- Fifty-two percent of all rural hospitals were owned by nonprofit entities (community and church), while 39% were owned by state or local governments and 9% by for-profit firms *(Figure 2-1)*
- The prevalence of for-profit rural hospitals continues to be very concentrated in the Southern region. By 2000, 18% of Southern rural hospitals were run by for-profit firms, with the next highest prevalence found in the Western states (5%). The Northeastern region no longer has any for-profit rural hospitals. *(Figure 2-1)*

As measured by bed size, rural hospitals have become smaller over the period 1990 to 1999.

- From 1990 to 1999, 58% of all rural hospitals reduced their number of acute care beds. Over all size categories of rural hospitals, the average reduction in the number of beds during this period was 10 beds *(Table 2-2)*
- This significant reduction in bed size has resulted in an increasing proportion of small rural hospitals, a trend that has accelerated from 1996 to 1999. *(Table 2-2)*

Rural hospitals expanded their linkages with other health care providers throughout the decade of the 1990's.

- Since 1990, significant increases in linkages occurred as rural hospitals joined systems, networks and alliances; however, from 1990 to 1999 there was little change in the proportion of rural hospitals that were contract managed. *(Figure 2-3)*

- From 1996 to 1999, the increase in the number of hospitals in systems has been the only significant change in linkages among all rural hospitals *(Figure 2-3)*

- In 1999, 75% of rural hospitals participated in one or more organizational linkage, up from 73% in 1996 *(Figure 2-3)*

- There is a clear difference between larger and smaller rural hospitals in their linkages. Larger rural hospitals are more likely to participate in alliances and systems, and smaller hospitals are more likely to be contract managed *(Figure 2-4)*

- Rural hospitals increased the number of physicians they employ. From 1996 to 1999, the average full-time physicians and dentists employed by hospitals has increased by similar percentage amounts for each of the four hospital-size categories *(Figure 2-5 and 2-6)*

Definitions and Data Sources

Rural Areas: Rural areas are defined as counties located outside of metropolitan statistical areas (MSAs). The Office of Management and Budget defines a county as being in an MSA if it has a city of at least 50,000 people or an urbanized area of at least 50,000 with a total metropolitan population of at least 100,000.

Beds: In general, beds refer to the number of hospital beds available for patient use. This figure does not include nursing home beds. The number of beds is reported on the Medicare hospital cost reports.

Regions: For the purposes of this study, the country is divided into the following regions:

Northeastern: Maine, New Hampshire, Vermont, Massachusetts, New York, Pennsylvania

Southern: Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, Texas

Central: Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas

Western: Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California, Hawaii, Alaska

Non-rural: The study does not include states with no rural areas—Connecticut, Rhode Island, and New Jersey.

The Implications of Rural Hospital Organizational Change

Chapter Two

Rural hospitals continue to play a critical role in providing health care services to the 55 million residents of rural America. Since 1990, rural hospitals have become smaller in terms of staffed inpatient beds, and on net there are fewer of them. By 1999, 51% of all rural hospitals had less than 50 beds, while in 1990 the share of these smallest rural hospitals was significantly less, at 44%. The federal Critical Access Hospital (CAH) program and its requirement that hospitals have no more than 15 acute-beds may have had some impact on this reduction in staffed beds, but through the end of 1999 there were only 120 CAHs.

In spite of the clear reduction in their bed size and number, rural hospitals have a slightly higher share of the nation's total short-term general hospitals and of the total short-term general hospital beds. Clearly, the forces operating on rural hospitals that are inducing these reductions—shifts to outpatient procedures, eligibility for special payment programs, competition—are also important for urban hospitals.

During the decade of the 1990's there also have been a number of trends that have increased rural hospitals' influence on the provision of health care in local

Definitions and Data Notes

Information on organizational linkages comes from the AHA's Annual Survey of Hospitals. The AHA definitions of the categories of linkages are as follows:

Network: Hospitals participating in a group that may include other hospitals, physicians, other providers, insurers and/or community agencies that work together to coordinate and deliver a broad spectrum of services to the community.

Health Care System: Hospitals belonging to a corporate body that owns and/or manages health provider facilities or health-related subsidiaries; the system may also own non-health-related facilities.

Contract Managed: General day-to-day management of an entire organization by another organization under a formal contract. Managing organization reports directly to the board of trustees or owners of the managed organization; managed organization retains total legal responsibility and ownership of the facility's assets and liabilities.

Alliance: A formal organization, usually owned by shareholder/members, that works on behalf of its individual members in the provision of services and products and in the promotion of activities and ventures. Examples of alliances: Voluntary Hospitals of America, Consolidated Catholic Health Care, and American HealthCare System.

communities, including increased affiliations with other health care organizations, increased physician staffing and an expansion in the volume and types of outpatient services they provide.

There have been notable changes in ownership of rural hospitals. From 1996 to 2000, the share of rural hospitals owned by non-profit entities increased from 49% to 52%, while the governmental share declined to 39% from 43%. The share of for-profit hospitals in rural areas has shown no real change since 1990.

In 1999, 56% of all rural hospitals were members of a network, an alliance or a system, a share that has grown from 53% in 1996. The share of rural hospitals that were contract managed fell slightly from 1996 to 1999, and the share of hospitals with no affiliation dropped by one percentage point. These trends suggest that the collaboration afforded by these affiliations is seen as beneficial by rural hospitals.

There appear to be clear differences in the perceived benefits of these types of organizational linkages depending on the size of the rural hospital. In 1999, the largest rural hospitals were almost three times more likely to participate in an alliance, and almost twice as likely to participate in a health care system than the smallest rural hospitals. But the largest rural hospitals were less than half as likely to be contract managed as the smallest hospitals. On the other hand, there were no differences in the proportion of hospitals in networks across the four size categories of rural hospitals. The changes observed in organization linkages from 1996 to 1999 reinforce the idea of strong differential advantages by hospital size of participation in networks and health care systems. The increase in the proportion of rural hospitals in systems was greatest for the largest rural hospitals and these hospitals were also leaving networks at the highest rates. Similarly, rural hospitals continue to react to the changes they are confronting by employing more full-time physicians. While the increases between 1996 and 1999 are not as large as those observed earlier in the decade, the increase in the employment of physicians from 1996 to 1999 was experienced in each of the four size categories of hospitals, suggesting it was considered a useful strategy for a broad range of rural hospitals.

Table 2-1

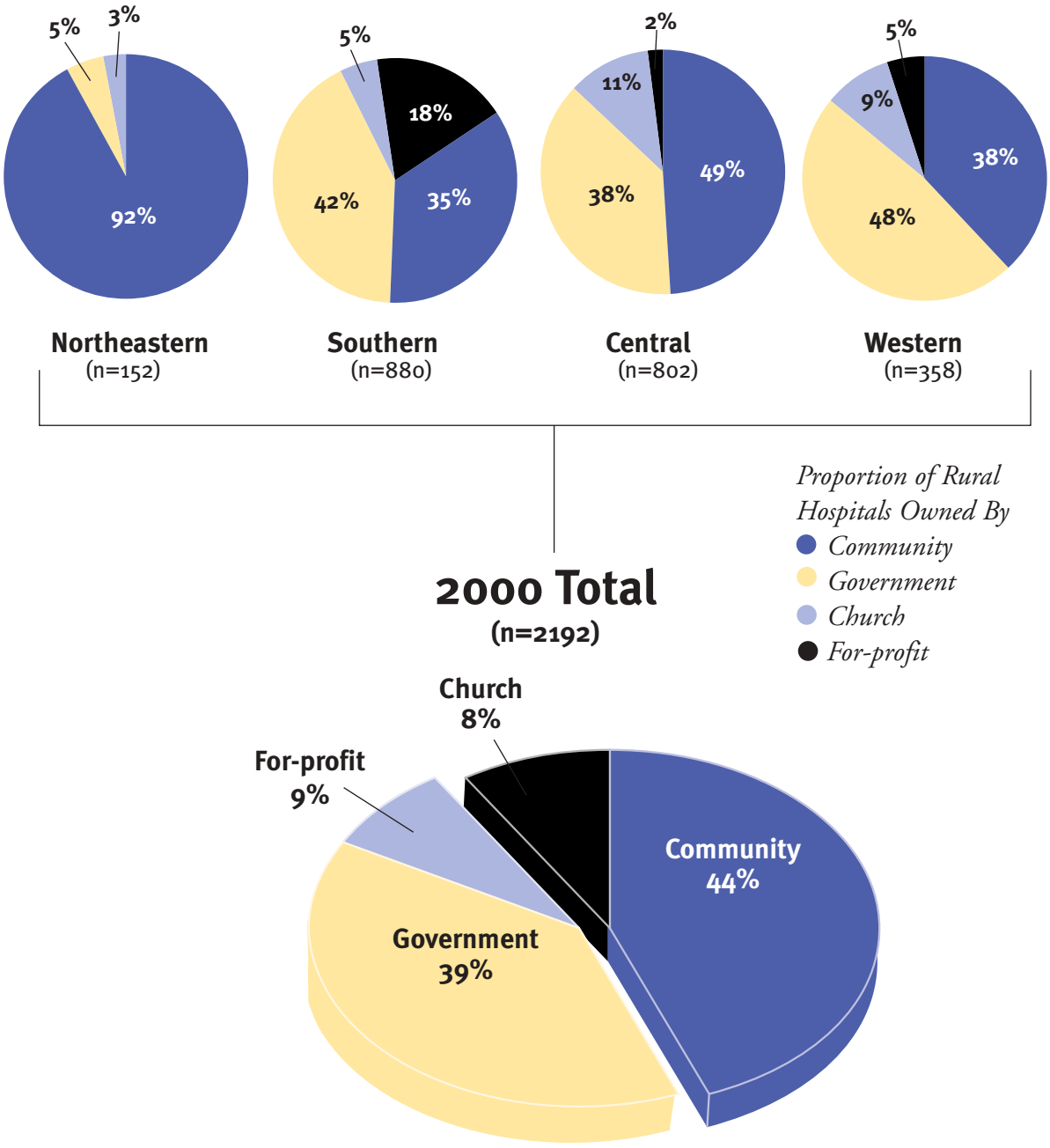
Average Size of Rural Hospitals and Proportion of Rural Hospital Beds to Total Hospital Beds by State, 2000

State	Number of Rural Hospitals	Average Bed Size of the Rural Hospital	Rural Hospital Beds to Total Hospital Beds
Alabama	53	78	26%
Alaska	15	49	52%
Arizona	18	58	12%
Arkansas	57	76	50%
California	41	49	3%
Colorado	40	42	24%
Delaware	3	137	25%
Florida	32	78	5%
Georgia	87	81	34%
Hawaii	10	59	24%
Idaho	36	51	69%
Illinois	73	77	16%
Indiana	46	86	20%
Iowa	94	59	45%
Kansas	107	44	48%
Kentucky	70	87	50%
Louisiana	46	63	18%
Maine	26	72	49%
Maryland	8	114	8%
Massachusetts	3	48	1%
Michigan	57	71	16%
Minnesota	91	48	34%
Mississippi	79	95	67%
Missouri	62	77	25%
Montana	50	38	80%
Nebraska	72	46	58%
Nevada	9	35	11%
New Hampshire	16	83	47%
New Mexico	22	69	44%
New York	37	109	7%
North Carolina	63	107	30%
North Dakota	37	48	59%
Ohio	55	100	16%
Oklahoma	66	61	35%
Oregon	32	62	28%
Pennsylvania	45	111	14%
South Carolina	29	100	25%
South Dakota	42	40	66%
Tennessee	64	80	26%
Texas	162	51	15%
Utah	22	44	22%
Vermont	12	70	57%
Virginia	35	115	24%
Washington	40	52	20%
West Virginia	38	92	46%
Wisconsin	65	69	28%
Wyoming	23	47	71%
TOTAL	**2,190**	**69**	**21%**

Data Sources:
American Hospital Association Annual Survey of Hospitals, 2000

Figure 2-1

Ownership of Rural Hospitals by Region, 2000



Data Source: American Hospital Association Annual Survey of Hospitals, 2000

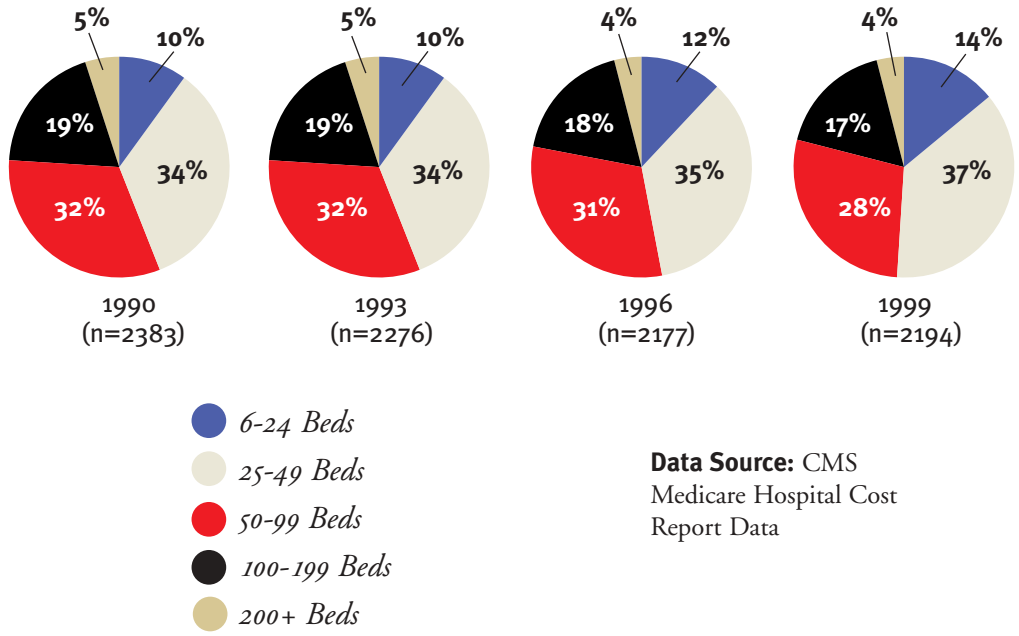
Table 2-2

Mean Change in the Number of Staffed Beds from 1990 to 1999, by 1990 Bed Size

	Beds in 1990				Mean Change 1990-1999
	6-49	50-99	100-199	200+	
Mean Change in the Number of Beds from 1990 to 1999	-3	-10	-17	-49	-10
Percent Reduction in Beds	7%	14%	13%	17%	11%
Percent of Hospitals Reducing Beds	46%	63%	70%	78%	58%
Percent of Hospitals Increasing Beds	15%	13%	20%	17%	15%

Figure 2-2

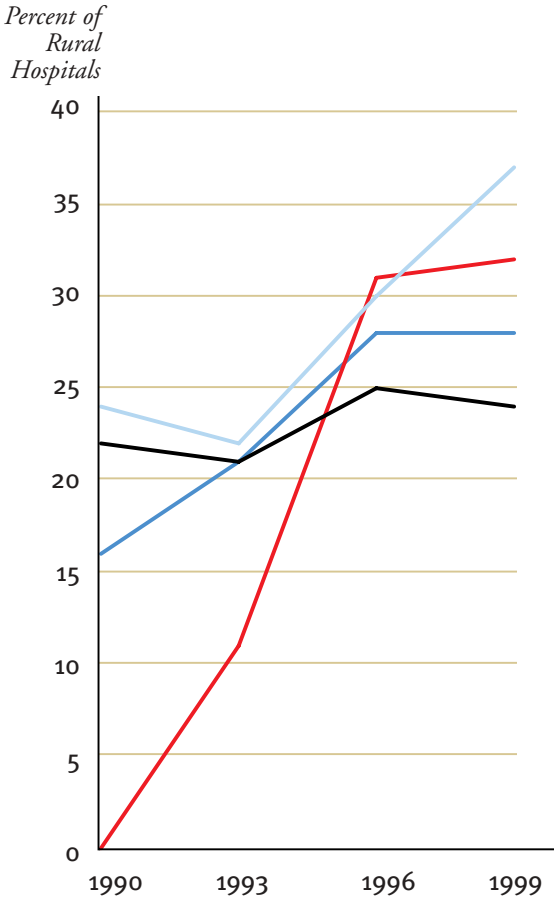
Number of Rural Hospitals by Staffed Bed Size, 1990-1999



Data Source: CMS Medicare Hospital Cost Report Data

Figure 2-3

Rural Hospital Organizational Linkages, 1990-1999



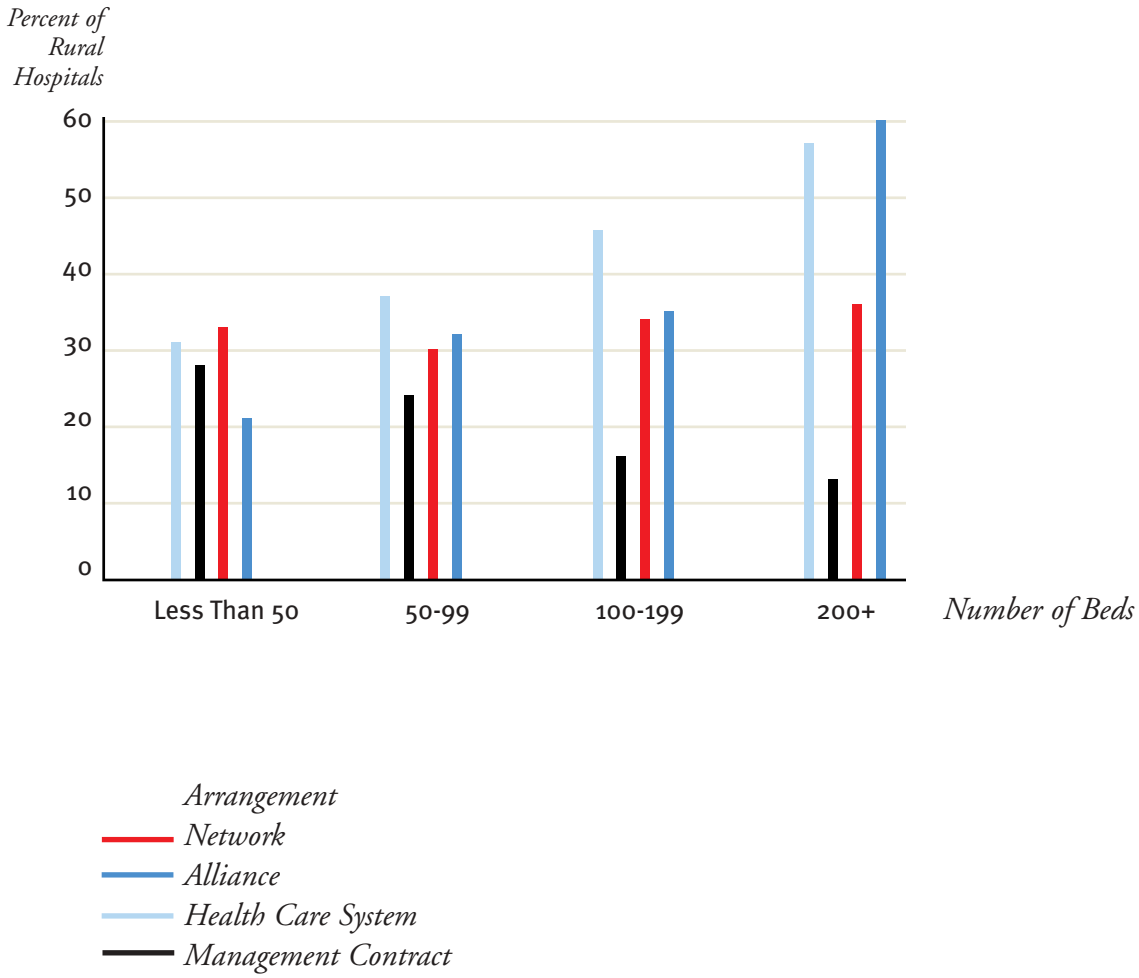
**In 1999, 75% of rural hospitals participated in one or more organizational linkage, up from 73% in 1996.*

** In 1999, rural hospitals participating in one or more organizational linkages, participated on average in 1.6 organizational linkages, also up slightly from 1996.*

Data Source: American Hospital Association Annual Survey of Hospitals Data Bases

Figure 2-4

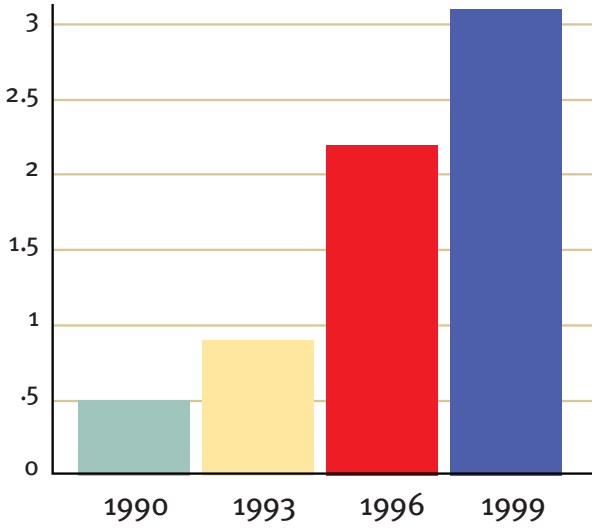
Rural Hospital Organizational Linkages by Bed Size, 1999



Data Source: American Hospital Association Annual Survey of Hospitals and CMS Medicare Hospital Cost Report Data

Figure 2-5

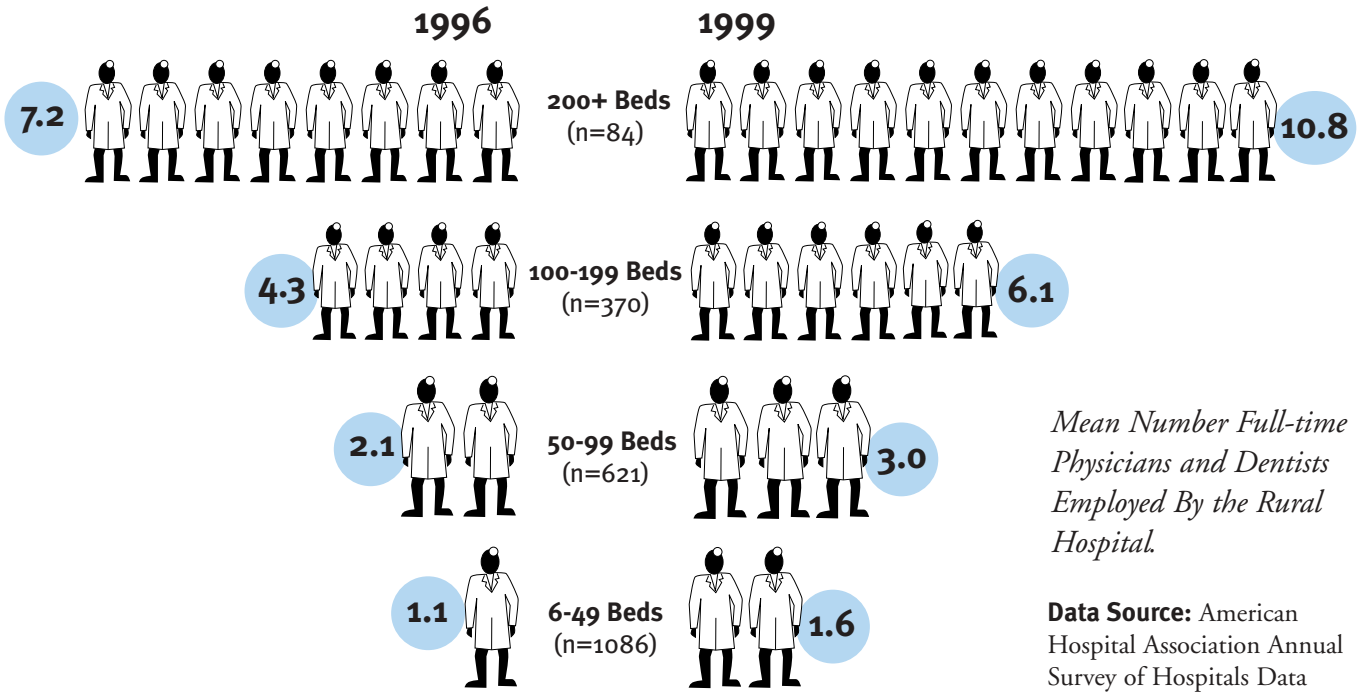
Mean Number Full-time Physicians and Dentists on the Rural Hospital Payroll, 1990-1999



Data Source: American Hospital Association Annual Survey of Hospitals Data Bases

Figure 2-6

Physician and Dentist Staffing by Bed Size, 1996 and 1999



Mean Number Full-time Physicians and Dentists Employed By the Rural Hospital.

Data Source: American Hospital Association Annual Survey of Hospitals Data Bases and CMS Medicare Hospital Cost Report Minimum Data Sets

The Expanding Role of Rural Hospitals

During the decade of the 1990's, rural hospitals provided more services directly and joined forces with other providers to expand the number of services available in rural communities. This chapter outlines the health care services offered by rural hospitals and reviews the changes in the breadth and sophistication of those services over this period. Recent data on the effect of inter-organizational linkages on the range of services offered in rural communities are also presented.

Chapter Three

Key Facts

Rural hospitals converted their excess beds to provide new inpatient services.

- Throughout the decade of the 1990's, growing numbers of rural hospitals offered psychiatric inpatient services, rehabilitation services, swing bed services, skilled nursing care and hospice services. *(Figure 3-1)*
- The percentage of rural hospitals offering such traditional services as ICU and OB services declined slightly over the decade. *(Figure 3-1)*
- The total volume of births among rural hospitals increased slightly, and became more concentrated – more hospitals had none at all and the number of hospitals with more than 10 births a week increased. *(Table 3-1)*

The total volume of surgeries performed in rural hospitals increased throughout the decade, with all of the increase accounted for by outpatient surgeries.

- The total number of surgeries performed annually in rural hospitals climbed by approximately one-third from 1990 to 1999. *(Figure 3-2)*
- While the percentage of hospitals performing no surgeries per week remained stable and low, a substantial increase in the total number of surgeries resulted in more hospitals performing larger surgical volumes (more than 10 per week) throughout the decade. *(Figure 3-2)*
- Defining the concentration of surgery performed by the percentage of total surgeries performed by the top 25 percent of hospitals and alternatively by the top 50 percent of hospitals, there is no evidence of greater concentration of surgery being performed among rural hospitals from 1990 to 1999. *(Figure 3-3)*

- Among all rural hospitals, there was a 72% increase in the number of outpatient surgeries per week from 1990 to 2000. *(Figure 3-4)*

- From 1990 to 2000, there was no change in the average number of inpatient surgeries per week among all rural hospitals *(Figure 3-5)*

Rural hospitals expanded the services they offered to rural communities.

- Rural hospitals were increasingly likely to offer sophisticated diagnostic imaging services themselves or through a hospital-affiliate over the period from 1994-2000. The gain in the proportion of hospitals offering MRI imaging services was particularly strong. *(Figure 3-6)*

- The increased rates of overall provision of mammograms and MRI imaging were due solely to an increase in the direct provision by the hospital of these services. For CT Scanner and ultrasound, the direct provision by the hospital supplanted some of the provision previously available through hospital-affiliates. *(Figure 3-6)*

- More complex, invasive procedures such as radiation therapy and cardiac procedures also increased over the period of 1994-2000, with most of the increase due to increased direct provision by the hospital. *(Figure 3-7)*

- The changes in the provision of services for the elderly were more complex – the proportion of rural hospitals offering adult day care services, after increasing through 1999, dropped in 2000. Growth in the proportion of hospitals offering assisted living and retirement housing continued throughout the period. *(Figure 3-8)*

- There also was a mixed pattern of change in the proportion of hospitals offering home health and other services. *(Figure 3-9)*

The diversification of rural hospital services has substantial implications for profitability.

- In 1999, 21% of rural hospitals had both a distinct-part nursing home and a home health agency. Among these hospitals, 70% had positive profits (i.e. net profit margins). In contrast, the proportion of rural hospitals with neither a distinct-part nursing home nor a home health agency (27% of all rural hospitals) with overall positive profits was 59%. For those rural hospitals with only a distinct-part nursing home, 60% had a profit, and 64% of those with only a home health agency had a positive profit *(Figure 3-10)*

- For each of the above categories of rural hospitals, the proportion having a positive profit in 1999 was markedly lower than in 1996. *(Figure 3-11)*

Implications of Expanded Rural Hospital Services

Over the decade of the 1990's, rural hospitals increasingly eliminated excess inpatient beds in the face of financial pressures. Faced with stagnant demand for such traditional services as obstetrical care and inpatient surgery, rural hospitals diversified into other health services throughout the decade. The percentage of rural hospitals that provided hospice, inpatient psychiatric, and skilled nursing services all grew, as did those that had swing beds and rehabilitation beds.

By 1999, 35% of all rural hospitals provided nursing home care in a distinct-part unit, and 59% provided home health services. Twenty-one percent of rural hospitals provided both nursing home and home health services, up slightly since 1996. This latter group of rural hospitals had the best financial performance as measured by overall net profit margins, both in 1996 and in 1999. However, providing both nursing home and home health services did not keep these hospitals from experiencing the same deterioration in their financial performance from 1996 to 1999 as other rural hospitals. The proportion of hospitals having both services that recorded profits dropped 12 percentage points from 1996 to 1999. Across the other three classifications of hospitals, the reduction in the percentages of hospitals posting profits ranged from 11 to 14 percentage points.

While the average number of surgeries performed on an inpatient basis was unchanged from 1990 to 1999, the number performed on an outpatient basis increased by 72% over this period. The cost-based reimbursement for outpatient services by CMS throughout this time period provided an incentive for some of this shift, since the prospective payment system (PPS) for outpatient services was not implemented by CMS until August 2000. It remains to be seen how the introduction of prospective payment for outpatient services by CMS effects this trend. This impact will be mitigated by two considerations. Due to the Balanced Budget Refinement Act of 1999, all rural hospitals with 100 or fewer beds are being held-harmless through the end of calendar year 2003 from any payment reductions they would otherwise have realized from their PPS-outpatient payments compared to what their cost-based payments would have been. The vast majority of rural hospitals have yet to experience any financial impact from PPS payment for outpatient services. Critical Access Hospitals also will be exempt from prospective payment for outpatient services, retaining their cost-based reimbursement. As discussed in Chapter 4, increasing numbers of small rural hospitals have applied for and are being granted this special designation.

Looking at the larger picture, there appears to be a growing, more important role for surgery in rural hospitals. From 1996 to 2000, the number of total surgeries performed in rural hospitals increased by 22%, with outpatient surgeries increasing by 37% and inpatient surgeries expanding by 8%. Over this same period, the number of total surgeries in urban hospitals increased by 8%, with outpatient surgeries up 14% and inpatient surgeries remaining constant. A similar pattern holds for the period of 1990 to 2000 as well. There undoubtedly are many reasons for this differential growth in the performance of surgeries in rural hospitals, including a disproportionately older population and a lag in the trends in utilization in rural areas compared to urban areas. Nonetheless, rural hospitals are providing an increasing share of the surgical procedures being performed in the country's hospitals—from just under 15% of all surgeries in 1990 to just over 17% in 2000.

The high fixed costs associated with operating an OB unit undoubtedly accounts for some of the increase in the number of rural hospitals reporting no deliveries. By 2000, 27% of all rural hospitals had no deliveries. There also was a decrease in the number of rural hospitals having an average of less than one birth per week from 401 hospitals in 1990 to 256 hospitals in 2000. Deliveries are increasingly likely to occur in rural hospitals with larger volumes, which may have positive implications for the quality of care as well as costs.

Definitions and Data Notes

Hospice services provide palliative care, chiefly medical relief of pain and supportive services, addressing the emotional, social, financial, and legal needs of terminally ill patients and their families. Care can be provided in a variety of settings, both inpatient and at home.

Psychiatric services provide acute or long-term care to emotionally disturbed patients, including patients admitted for diagnosis and those admitted for treatment of psychiatric problems, on the basis of physicians' orders and approved nursing care plans. Long-term care may include intensive supervision of the chronically ill, mentally disordered, or other mentally incompetent persons.

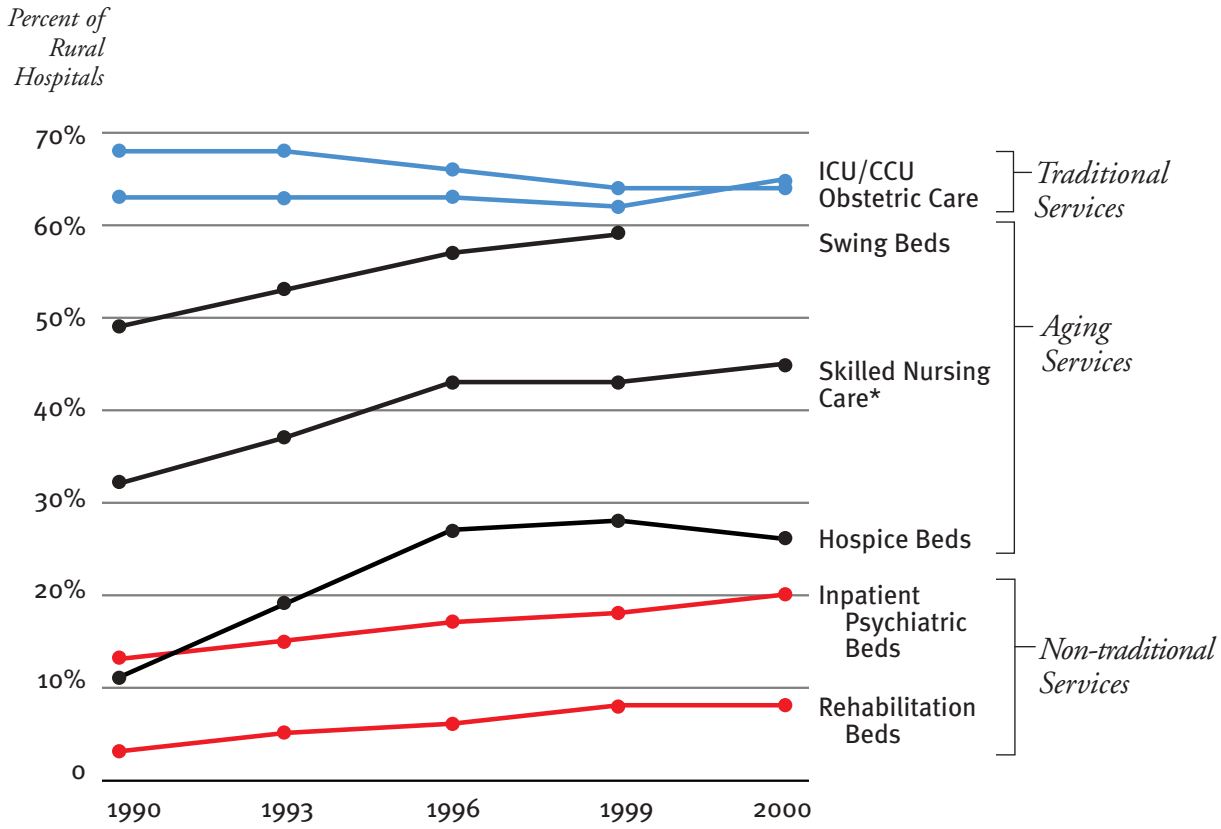
Rehabilitation services are used to provide care encompassing a comprehensive array of restoration services for the disabled and all support services necessary to help patients attain their maximum functional capacity.

Swing beds are licensed to provide either acute care or skilled nursing care in the same bed.

Source: AHA Annual Survey, 2000.

Figure 3-1

Inpatient Services of Rural Hospitals, 1990-2000

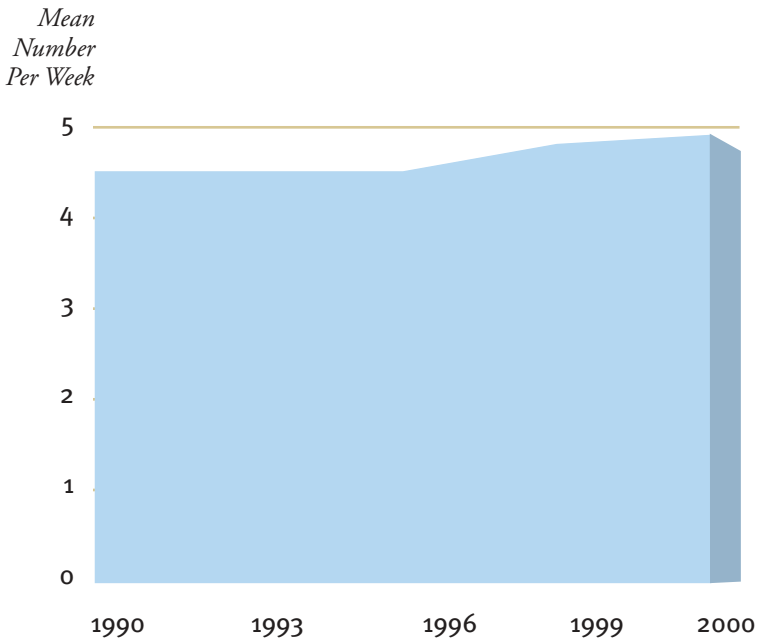


*Skilled Nursing Care, Intermediate Care, or other long-term care

Data Source: American Hospital Association Annual Survey of Hospitals Data Bases

Table 3-1

Volume of Births in Rural Hospitals, 1990-2000

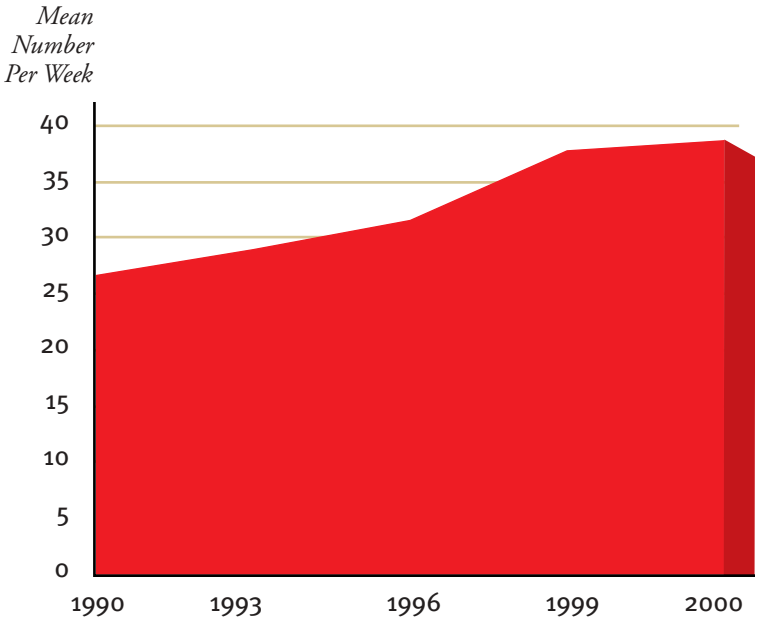


Year	Percent of Rural Hospitals With Births Per Week of: None	Less Than 1	1 to 10	More than 10
1990	21%	17%	48%	14%
1993	24%	15%	46%	14%
1996	19%	20%	47%	14%
1999	26%	12%	46%	16%
2000	27%	12%	45%	16%

Data Source: American Hospital Association Annual Survey of Hospitals Data Bases

Figure 3-2

Surgery in Rural Hospitals, 1990-2000

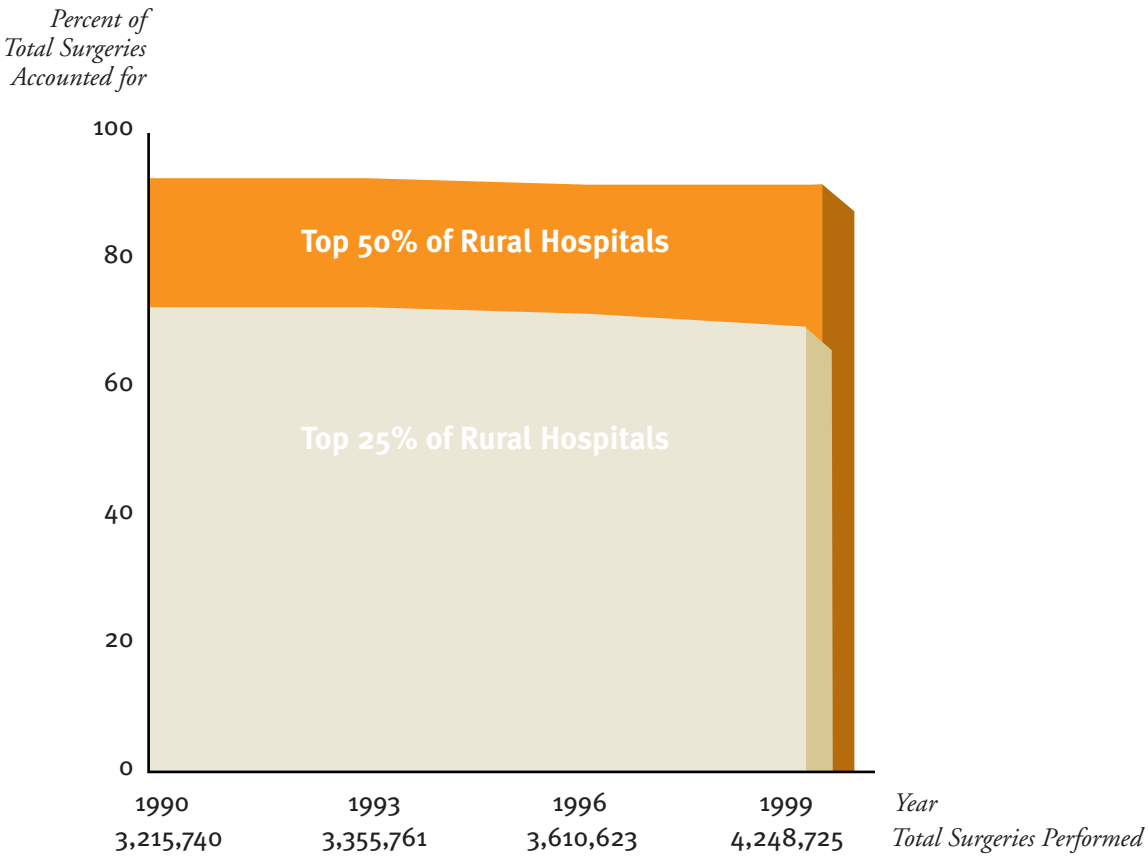


Year	Percent of Rural Hospitals With Surgeries Per Week of:			
	None	Less Than 1	1 to 10	More than 10
1990	5%	7%	34%	54%
1993	6%	7%	31%	56%
1996	5%	5%	30%	60%
1999	5%	4%	26%	66%
2000	5%	4%	24%	67%

Data Source: American Hospital Association Annual Survey of Hospitals Data Bases

Figure 3-3

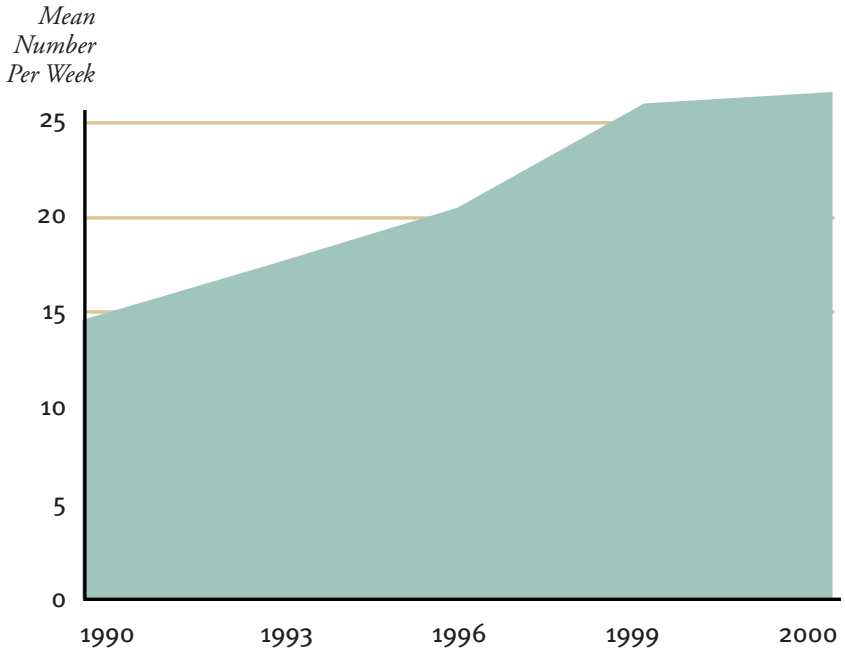
Surgery in Rural Hospitals, 1990-1999



Data Source: American Hospital Association Annual Survey of Hospitals Data Bases

Figure 3-4

Outpatient Surgeries in Rural Hospitals, 1990-2000

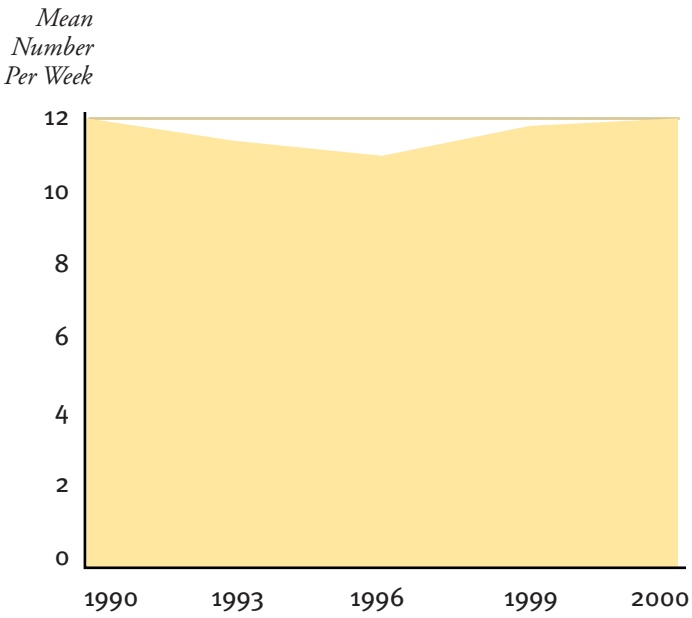


	Percent of Rural Hospitals With Outpatient Surgeries Per Week of:			
Year	None	Less than 1	1 to 10	More than 10
1990	5%	11%	44%	40%
1993	6%	10%	39%	45%
1996	5%	8%	38%	50%
1999	5%	5%	31%	58%
2000	5%	4%	31%	59%

Data Source: American Hospital Association Annual Survey of Hospitals Data Bases

Figure 3-5

Inpatient Surgeries in Rural Hospitals, 1990-2000

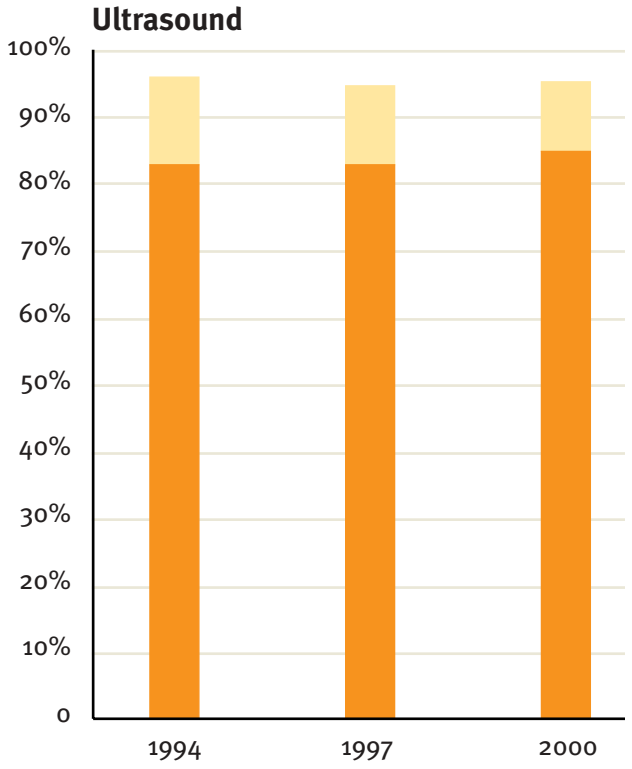


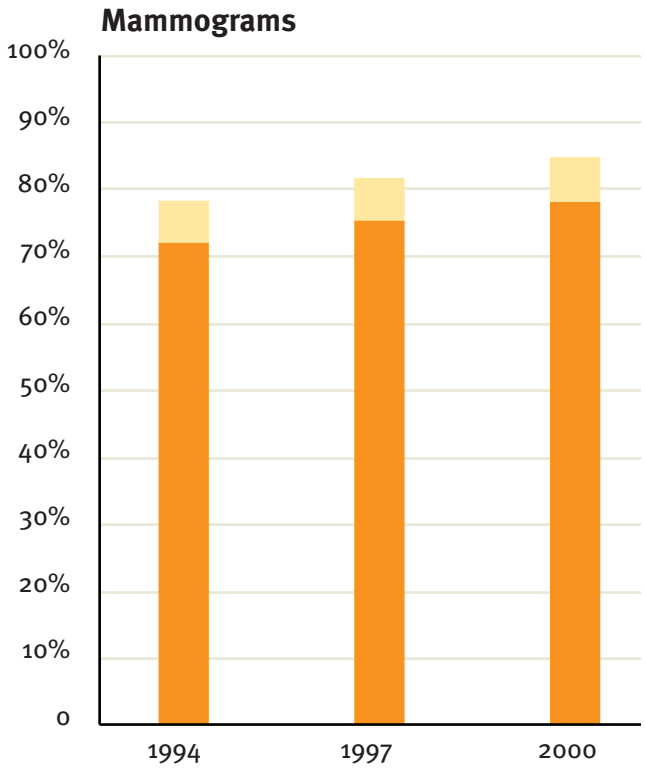
	Percent of Rural Hospitals With Inpatient Surgeries Per Week of:			
Year	None	Less than 1	1 to 10	More than 10
1990	6%	12%	48%	34%
1993	8%	15%	43%	34%
1996	7%	15%	45%	33%
1999	7%	15%	42%	35%
2000	8%	14%	43%	35%

Data Source: American Hospital Association Annual Survey of Hospitals Data Bases

Figure 3-6

Diagnostic Imaging Services Provided by Rural Hospitals or by a Hospital Affiliate, 1994-2000*

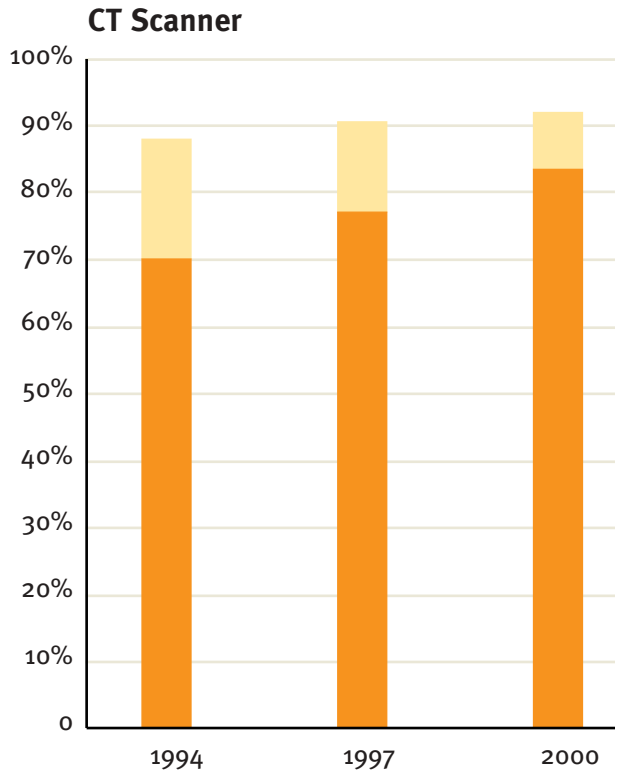


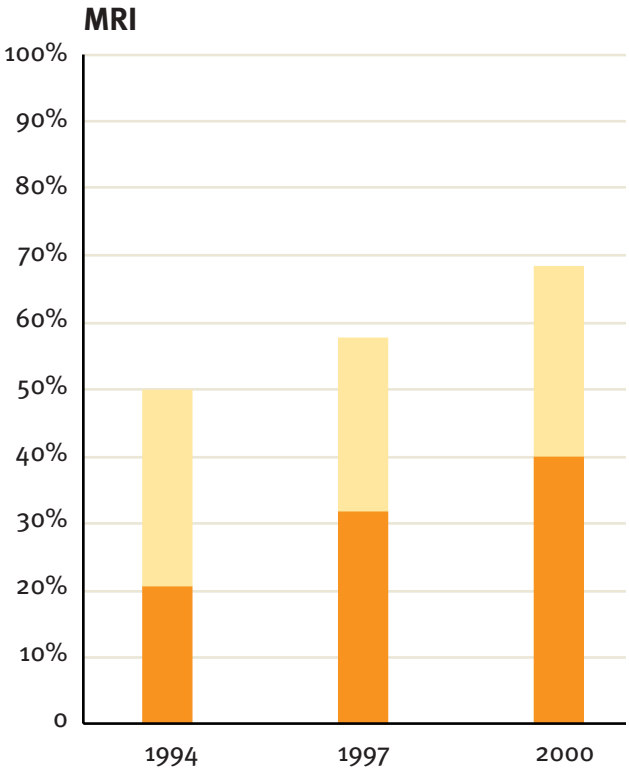


Proportion of Rural Hospitals Staffing Certain Hospital Services in their Community

- *Service Provided by the Hospital*
- *Service Provided by a Hospital Affiliate, But Not by the Hospital*

** Hospital affiliates consist of providers in the local community that are either a member of the hospital's system, a member of the hospital's network, a joint venture between the hospital and another provider, or a provider that has a contractual agreement with the hospital to provide services in the local community.*

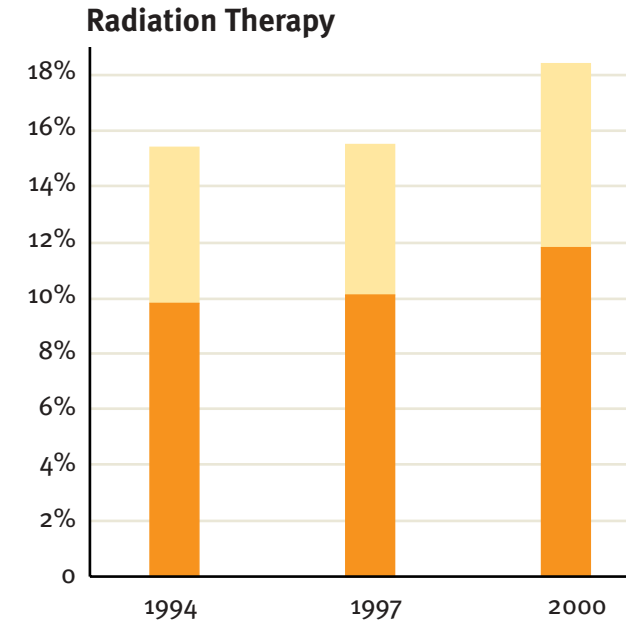


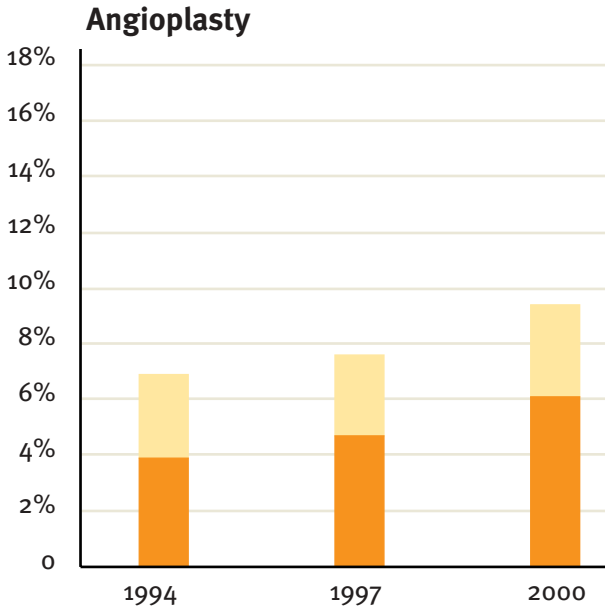


Data Source: American Hospital Association Annual Survey of Hospitals Data Bases

Figure 3-7

Therapies and Procedures Provided by Rural Hospitals or by a Hospital Affiliate, 1994-2000*

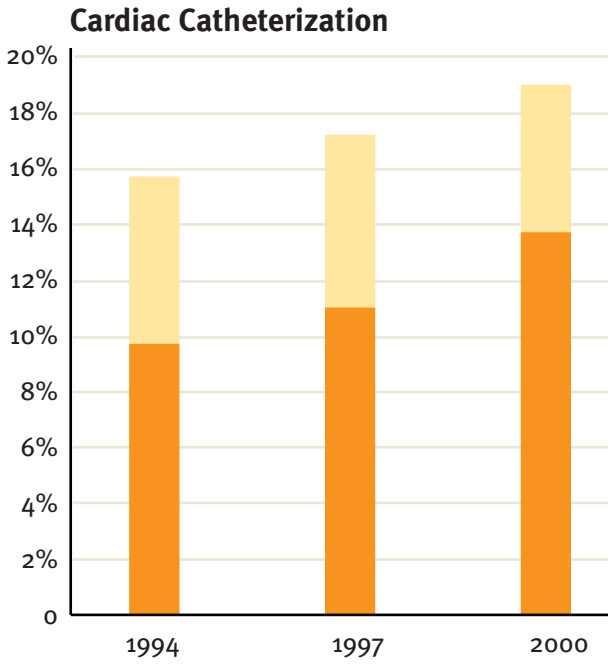


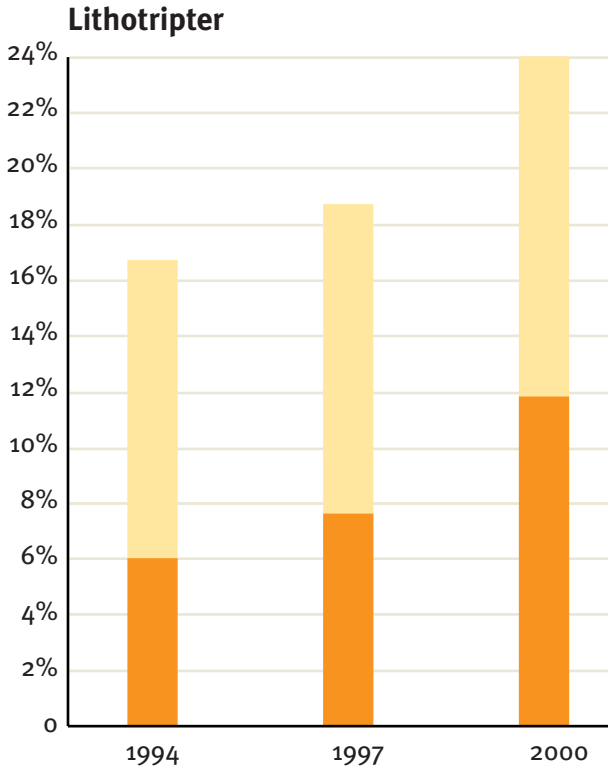


Proportion of Rural Hospitals Staffing Certain Hospital Services in their Community

- *Service Provided by the Hospital*
- *Service Provided by a Hospital Affiliate, But Not by the Hospital*

** Hospital affiliates consist of providers in the local community that are either a member of the hospital's system, a member of the hospital's network, a joint venture between the hospital and another provider, or a provider that has a contractual agreement with the hospital to provide services in the local community.*

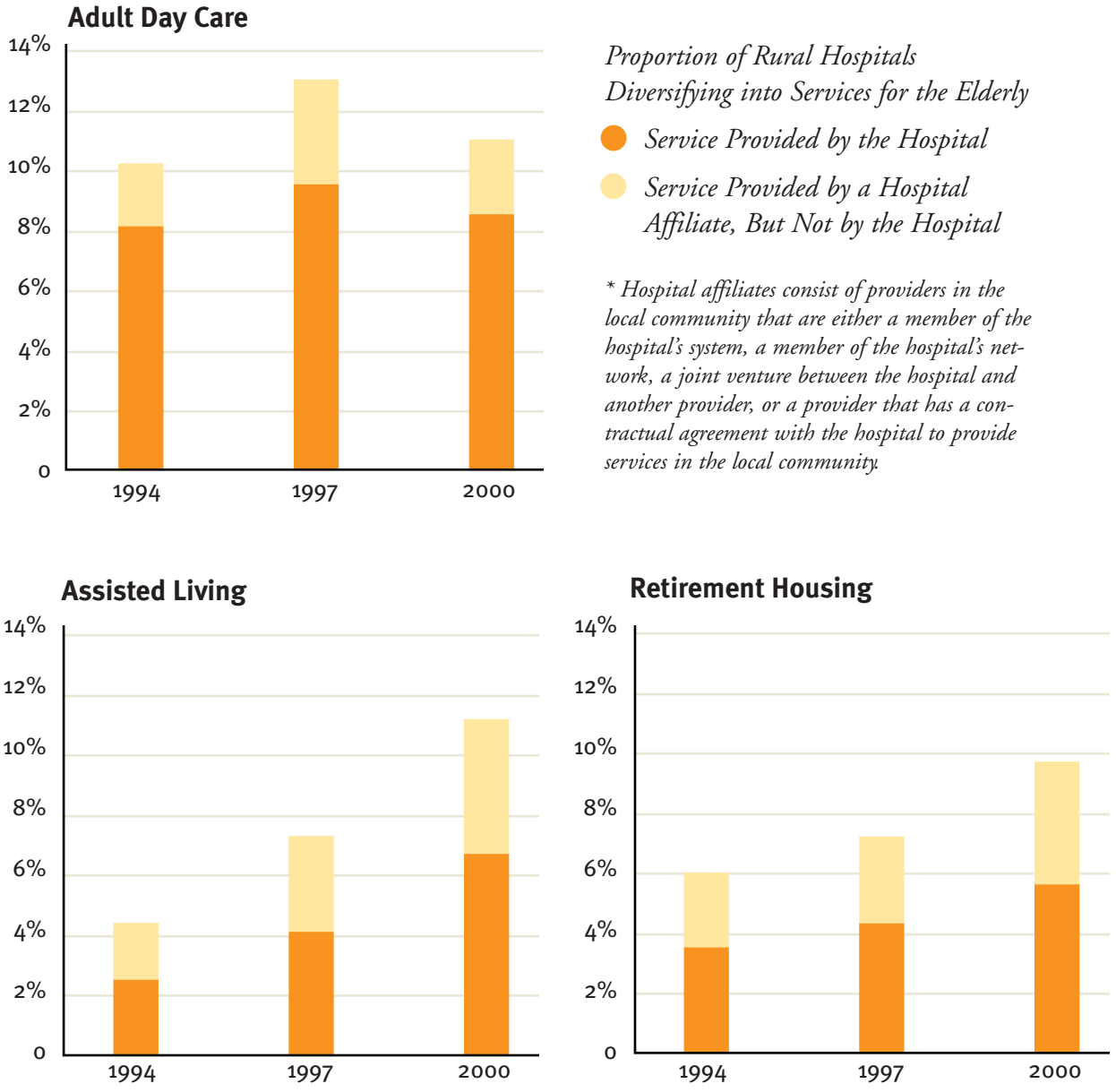




Data Source: American Hospital Association Annual Survey of Hospitals Data Bases

Figure 3-8

Services for the Elderly Provided by Rural Hospitals or by a Hospital Affiliate, 1994-2000*

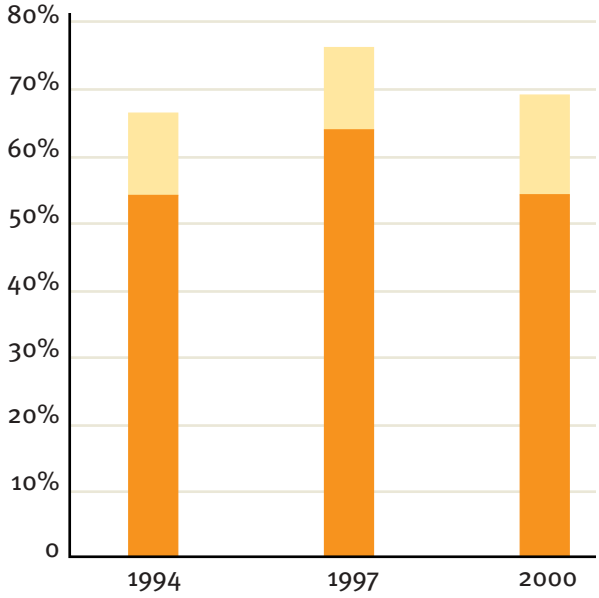


Data Source: American Hospital Association Annual Survey of Hospitals Data Bases

Figure 3-9

Home Health and Other Services Provided by Rural Hospitals or by a Hospital Affiliate, 1994-2000*

Home Health Services

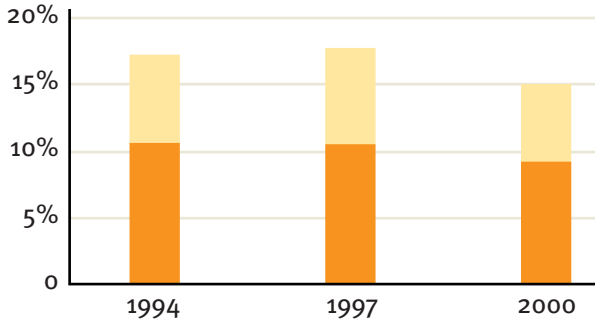


Proportion of Rural Hospitals Diversifying into Non-traditional Services

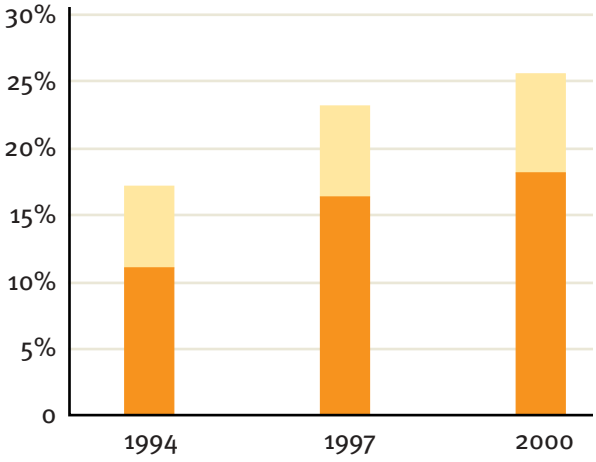
- *Service Provided by the Hospital*
- *Service Provided by a Hospital Affiliate, But Not by the Hospital*

** Hospital affiliates consist of providers in the local community that are either a member of the hospital's system, a member of the hospital's network, a joint venture between the hospital and another provider, or a provider that has a contractual agreement with the hospital to provide services in the local community.*

Outpatient Alcohol and Drug Treatment



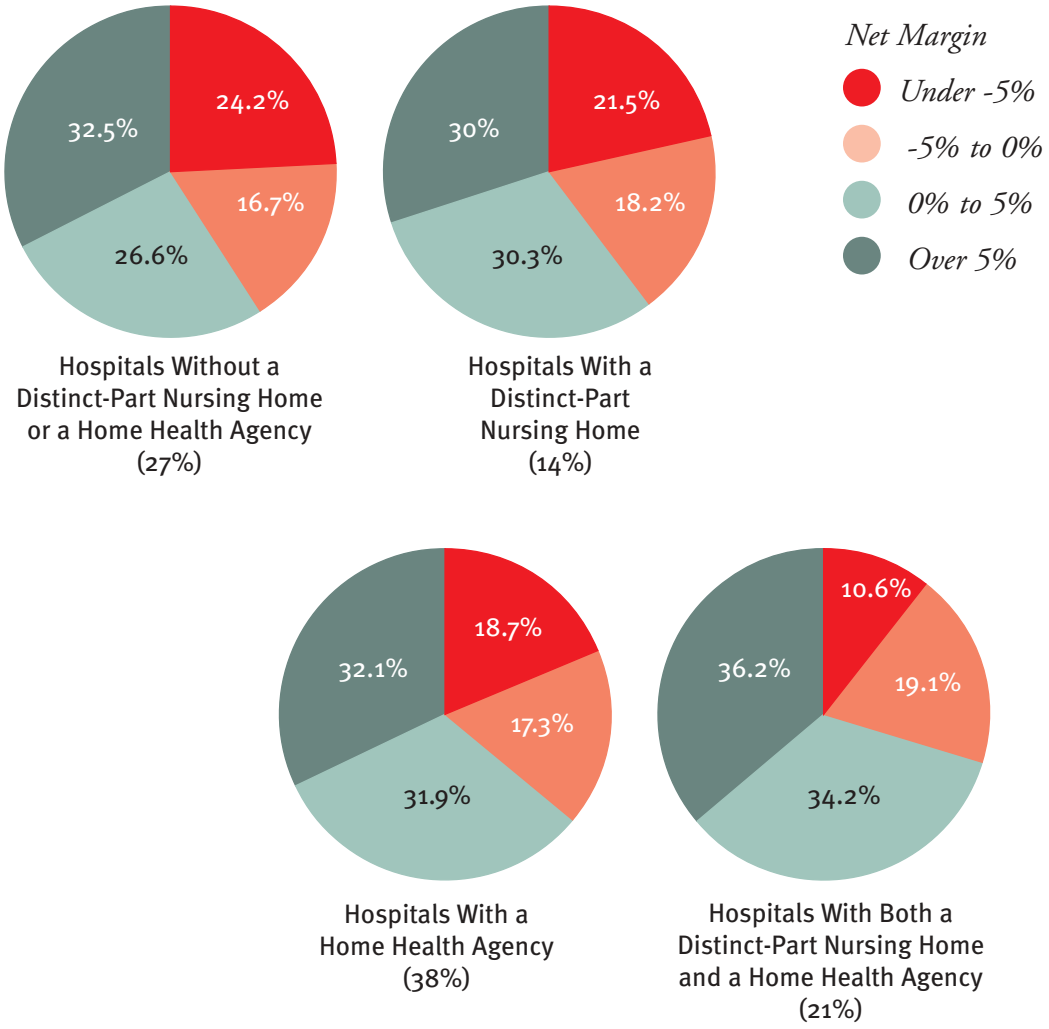
Transportation to Health Facilities



Data Source: American Hospital Association Annual Survey of Hospitals Data Bases

Figure 3-10

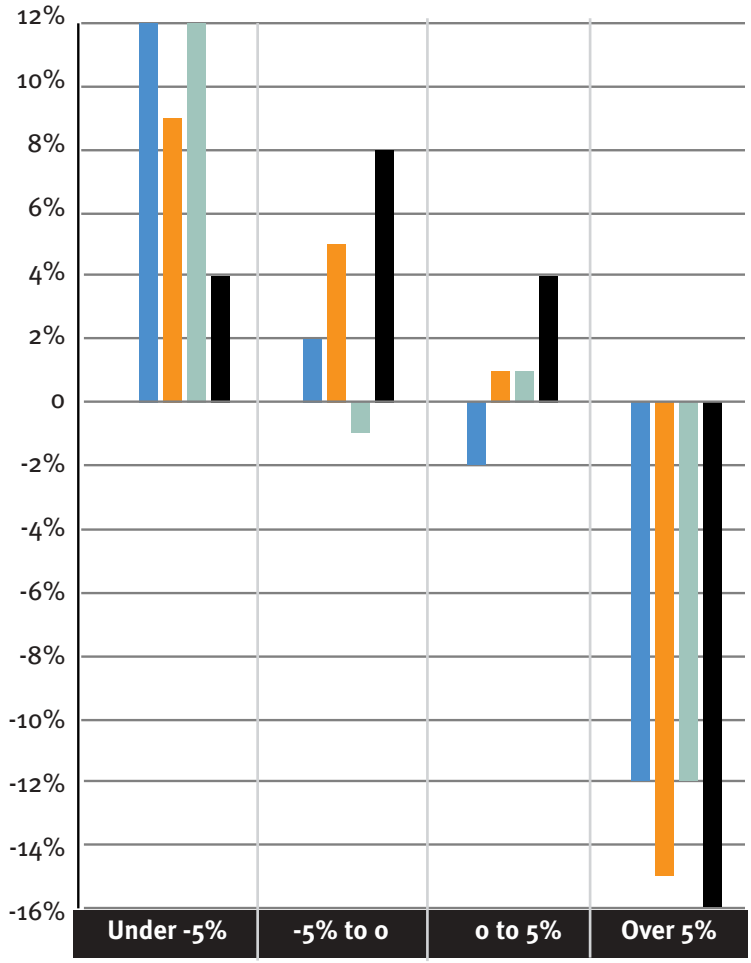
Profitability of Hospitals with Distinct-Part Nursing Homes and Home Health Agencies, 1999



Data Source: CMS Medicare Hospital Cost Report Data

Figure 3-11

Profitability of Hospitals with Distinct-Part Nursing Homes and Home Health Agencies, Comparison of 1999 and 1996



Data Source: CMS Medicare Hospital Cost Report Data

Rural Hospital Patient and Payer Mix

In this chapter we describe trends in the payment of rural hospitals with a focus on the growing importance of Medicare and outpatient services.

Key Facts

Over the decade of the 1990's rural hospitals depended increasingly on Medicare as a payer.

- Medicare patient days averaged 60% of all inpatient days across all rural hospitals by 1999. The smallest rural hospitals (under 50 beds) had the highest dependence on Medicare (almost two-thirds of all their inpatient days). *(Figures 4-1 and 4-3)*

- The smallest rural hospitals (under 50 beds) relied on swing-beds to care for patients to a significant extent, with an average of one-quarter of their total inpatient days in swing beds. Rural hospitals with 50-99 beds rely much less on swing beds (10% of total inpatient days). *(Figure 4-2)*

The growth of outpatient services far exceeded the growth of inpatient services in rural hospitals in the decade of the 1990's.

- For the smallest rural hospitals (under 50 beds), the proportion of total patient charges for outpatient services averaged 53% by 1999, compared to 32% in 1990. Rural hospitals with more than 50 beds also experienced significant growth in the proportion of total charges for outpatient services from 1990 to 1999—all exceeding 50% growth during this period. On average, outpatient services accounted for half of total charges of all rural hospitals in 1999. *(Figures 4-4)*

- By 1999, the share of total Medicare costs for Medicare outpatient services averaged 22% for all rural hospitals. The smallest rural hospitals (under 50 beds) had the highest outpatient share of total Medicare costs, 26%. In contrast, for all urban hospitals, the outpatient share of total Medicare costs was 16% in 1999. *(Figure 4-5)*

- The total number of outpatient surgical procedures performed in rural hospitals grew significantly throughout the 1990's, accounting for 73% of all surgeries performed in rural hospitals by 1999. *(Figure 4-6)*

Increasing numbers of rural hospitals obtained sole community provider status during the 1990's, with this trend continuing through 2001. The number of hospitals qualifying as Critical Access Hospitals continues to grow very rapidly.

- The percent of rural hospitals designated as Sole Community Hospitals doubled from 19% in 1990 to 38% in 2001. *(Figure 4-7)*

- There has been a very rapid growth in the number of rural hospitals certified as Critical Access Hospitals, with some of this growth coming from hospitals that previously had been Sole Community Hospitals or Medicare Dependent Hospitals. *(Figure 4-7)*

The proportion of rural hospitals with managed care contracts increased rapidly until 1998, decreasing slightly after that point.

- The percent of rural hospitals with at least one HMO contract, started at 20% in 1990, reached a high of 64% in 1998, but had dropped to 56% by 2000. *(Figure 4-8)*

- A similar pattern exists for the percent of rural hospitals with at least one PPO contract, reaching a high of 85% in 1998 but dropping to 80% by 2000. (Figure 4-8)

- Among rural hospitals that have one or more HMO or PPO contracts, the average number of contracts per hospital is highest in 2000. *(Figure 4-8)*

- The smallest rural hospitals are significantly less likely to have at least one HMO or at least one PPO contract than larger hospitals (more than 100 beds). *(Figure 4-9)*

- Hospitals more distant from urban areas and in counties without larger communities are significantly less likely to have one or more HMO contracts, but only slightly less likely to have a PPO contract than hospitals in counties adjacent to urban areas. *(Figure 4-10)*

The Implications of Changes to Rural Hospital Patient and Payer Mix

Two important changes concerning payer and patient mix occurred in rural hospitals over the past decade—an increasing reliance on Medicare as a payer of all services and a substantially greater growth rate in outpatient services than inpatient services. These changes will have an important effect on small rural hospitals in the coming years. For small rural hospitals, outpatient services account for a significantly higher proportion of their total charges. These hospitals also have a higher dependence on Medicare as a payer of all services, particularly outpatient services. For the approximately 80% of rural hospitals with 100 or fewer beds, the "full" implementation of prospective payment (PPS) for outpatient services by CMS in 2004 (when the 'hold-harmless' protection is scheduled to expire) can be expected to have a larger impact than outpatient service PPS has had for the larger rural hospitals operating under it since August, 2000.

In addition to smaller rural hospitals having more of their total revenue "at risk" under outpatient PPS, the financial risks themselves are likely to be higher for smaller hospitals. The fixed payments that hospitals receive under prospective payment systems (inpatient or outpatient) reflect the average costs of average-sized hospitals. To the extent that outpatient costs per procedure vary systematically by the total volume of outpatient services produced, PPS for outpatient services could adversely impact smaller rural hospitals. Statistical analyses completed by MedPAC suggest that there is a strong relationship between outpatient volume and costs. Hospitals performing less than 2000 outpatient procedures per year have average outpatient costs per procedure at least 20% above the overall mean.

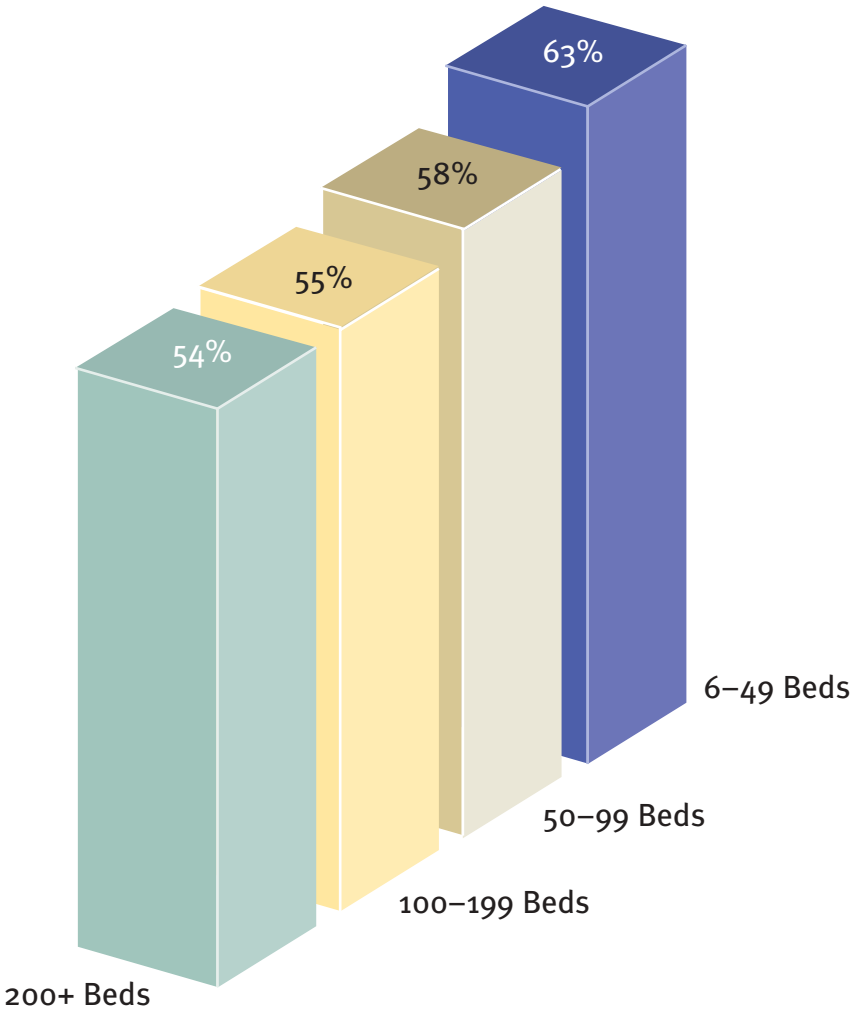
Although the Medicare Rural Hospital Flexibility Program that established Critical Access Hospitals (CAH) has a number of other important payment implications for small rural hospitals, CAHs will be the only rural hospitals exempt from outpatient PPS. CAHs are among the smallest of rural hospitals. Given the existence of a "volume effect" for outpatient services noted previously, the rural hospitals expected to have been harmed the most by outpatient PPS (because of their probable higher average costs for outpatient services) will not be. The number of Critical Access Hospitals continues to grow, constituting almost 40% of all rural hospitals with 100 or fewer beds.

The percentage of rural hospitals with either one or more HMO contracts or one or more PPO contracts peaked in 1998 and then decreased in the following two years. While there were more rural hospitals in 2000 with no managed care contracts than two years previously, over the same period the average number of managed care contracts among hospitals with at least one managed care contract increased. The former effect could result from some rural hospitals actively dropping managed care contracts with organizations operating within their market areas or it could reflect the loss of managed care plans in areas in which they previously operated. The increased number of managed care contracts per hospital with at least one contract likely reflects the fact that the rural hospitals dropping/losing their managed care contracts had less than the average number of contracts.

How likely rural hospitals are to have one or more HMO contracts differs significantly by size of the hospital and by how distant they are from urban areas. The smallest rural hospitals are more likely not to have any HMO contracts than larger rural hospitals, but hospital size makes much less of a difference in the average number of HMO contracts held by rural hospitals with at least one contract. Rural hospitals not adjacent to an urban area or without a city of at least 20,000 are much more likely not to have an HMO contract, but the average number of HMO contracts is not as affected. Both of these features of the distribution of rural hospitals with HMO contracts reflect the underlying selectivity in HMO presence in rural areas.

Figure 4-1

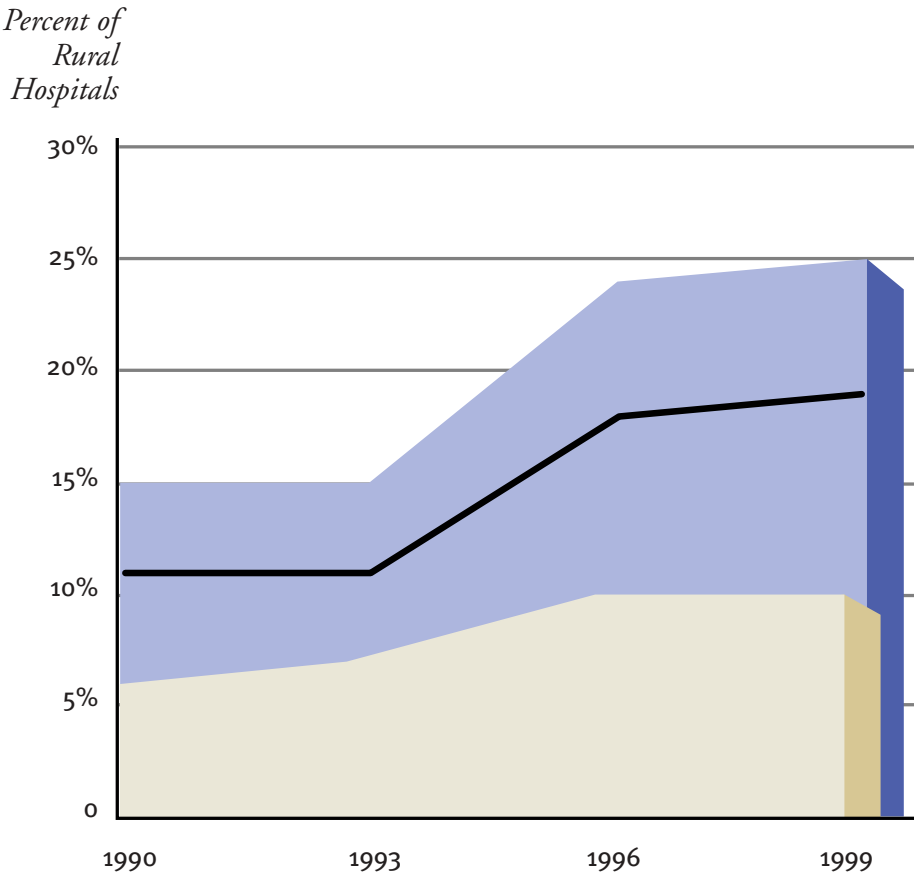
Medicare Acute Inpatient Days to Total Acute Inpatient Days (Excludes Swing Bed Days) by Bed Size, 1999



Data Source: CMS Medicare Hospital Cost Report Data

Figure 4-2

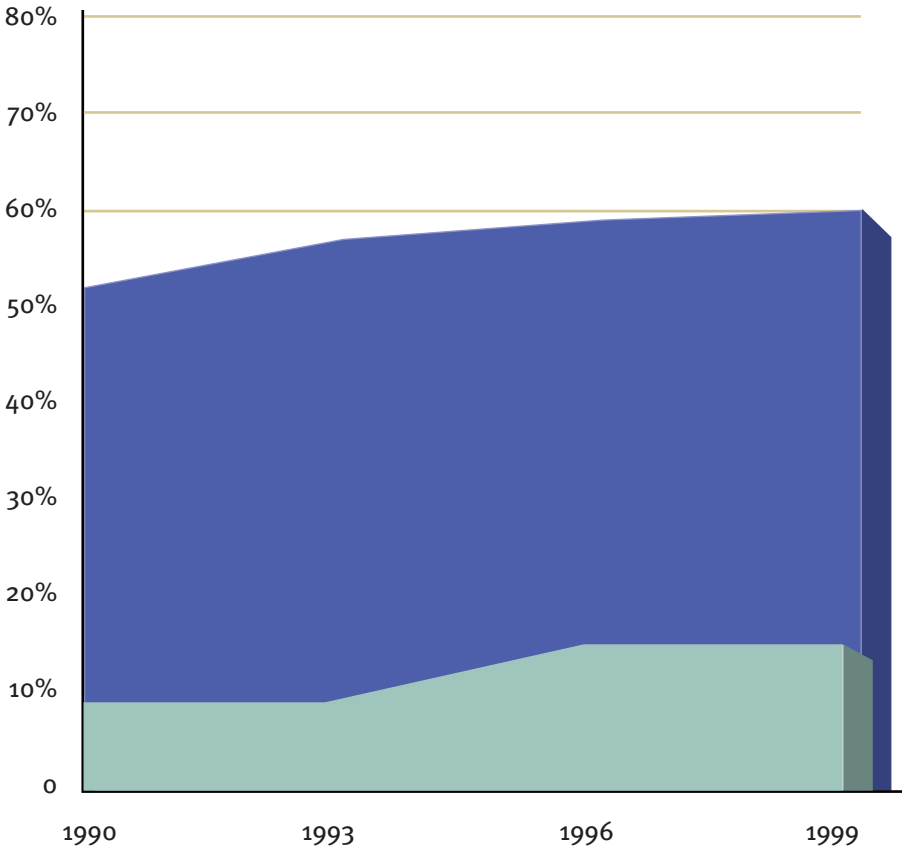
Proportion of Rural Hospitals' Inpatient Days That Are in Swing Beds, by Bed Size, 1990-1999



Data Source: CMS Medicare Hospital Cost Report Data

Figure 4-3

Proportion of Medicare Inpatient and Swing Bed Days to Total Inpatient Days, 1990-1999



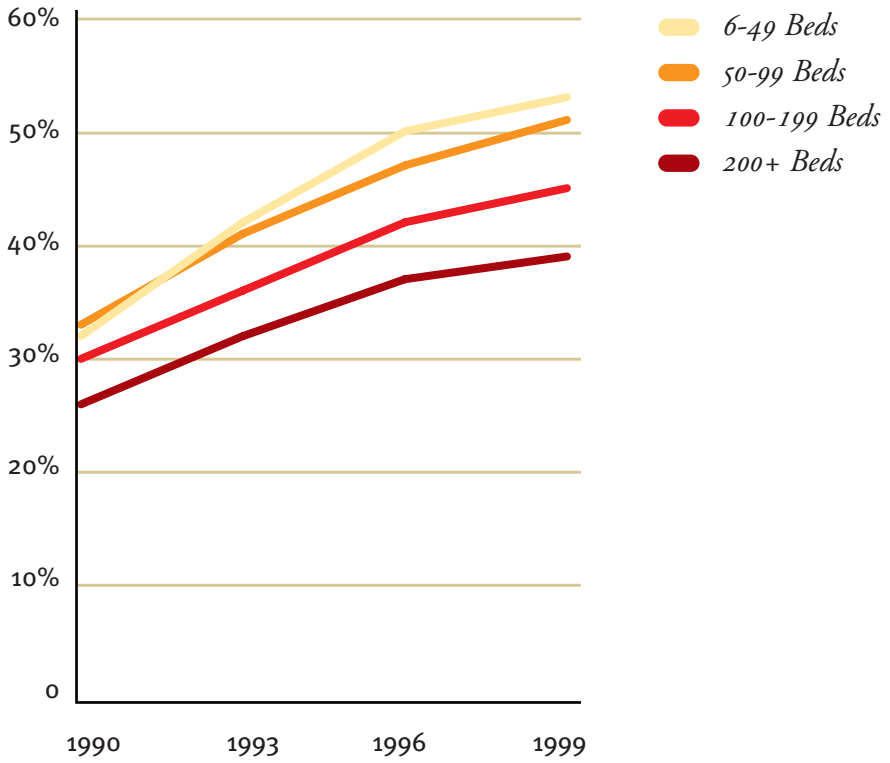
Medicare Inpatient Days as a Proportion of Total Inpatient Days

Medicare and Medicaid Swing Bed Days as a Proportion of Total Inpatient Days

Data Source: CMS Medicare Hospital Cost Report Data

Figure 4-4

Mean Proportion of Outpatient Charges to Total Charges in Rural Hospitals by Bed Size, 1990-1999



Data Source: CMS Medicare Hospital Cost Report Data

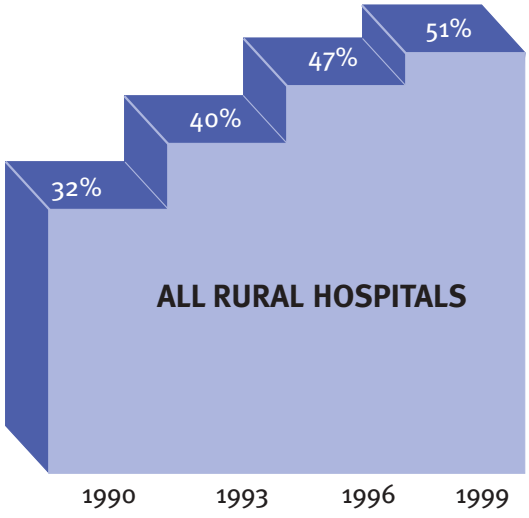
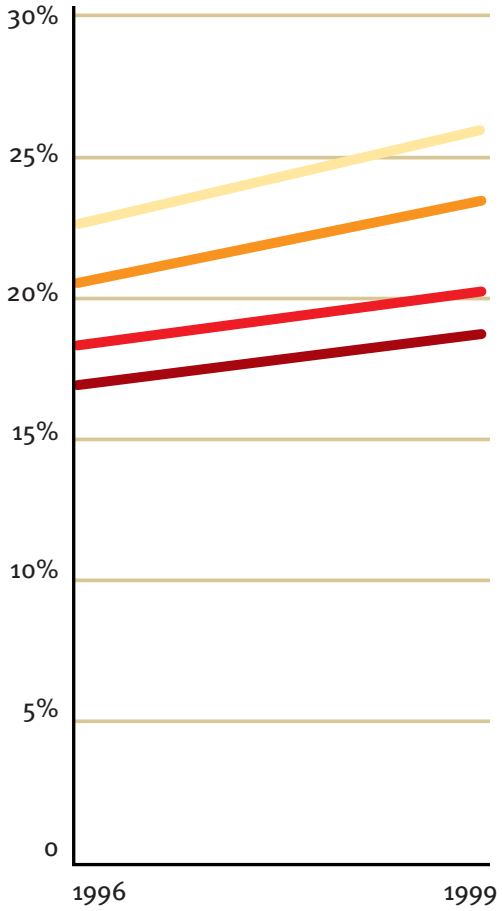


Figure 4-5

Outpatient Medicare Costs as a Percent of Overall Medicare Costs, 1996 and 1999



NOTE ON COMPARING FIGURES 4-4 AND 4-5

The numbers used in this figure differ from the previous figure in several ways:

1. This figure is based solely on Medicare (previous figure uses all payers). Medicare patients' use of outpatient services compared to inpatient services is less than for other payers.

2. This figure presents aggregate proportions, calculated as the ratio of aggregate outpatient costs to aggregate total Medicare costs, and not as the mean proportion among the hospitals (previous figure).

3. This figure is based on Medicare costs, not charges (previous figure).

Data Source: MedPAC analysis of Medicare cost report data from CMS.

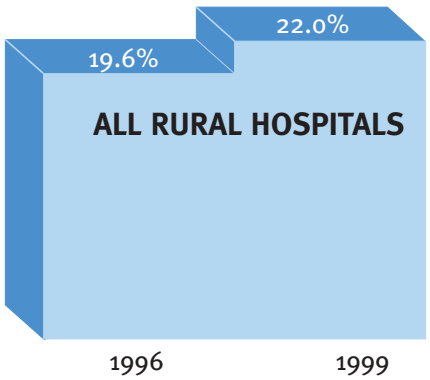
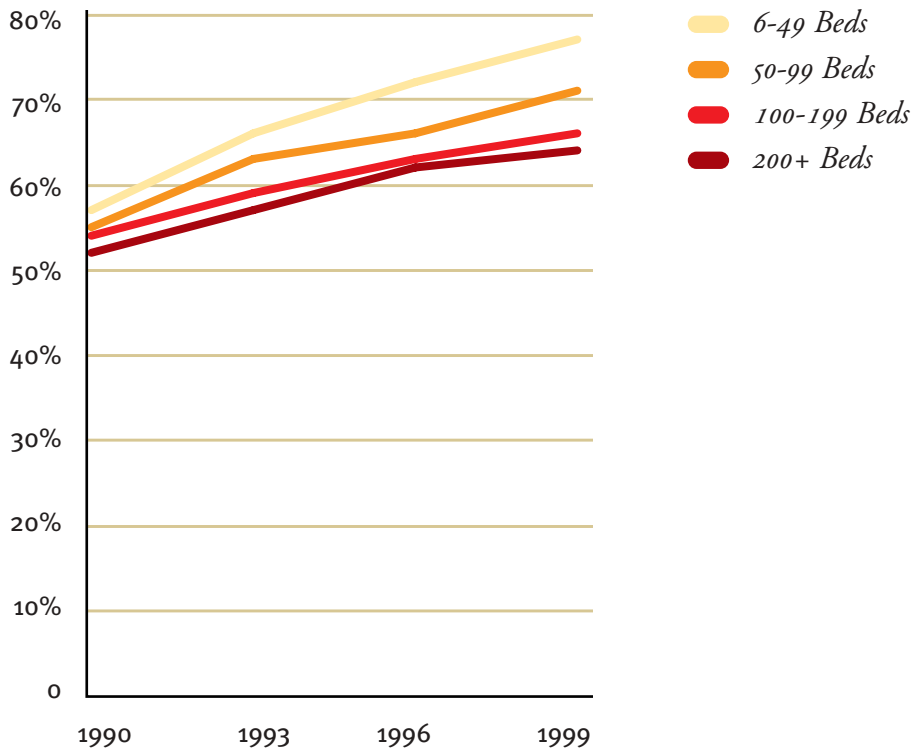
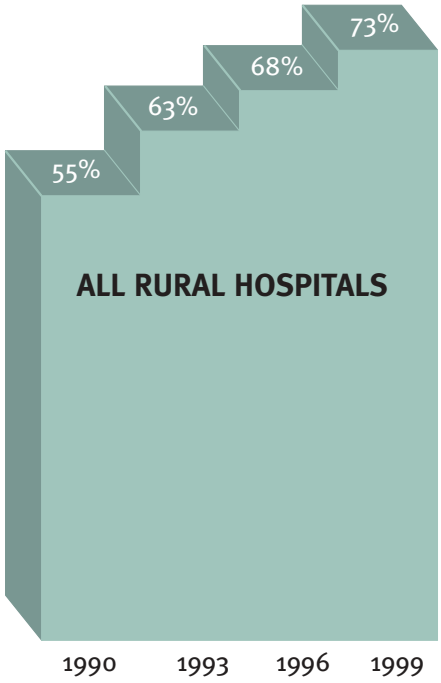


Figure 4-6

Proportion of Outpatient Surgeries to Total Surgeries in Rural Hospitals by Bed Size, 1990-1999

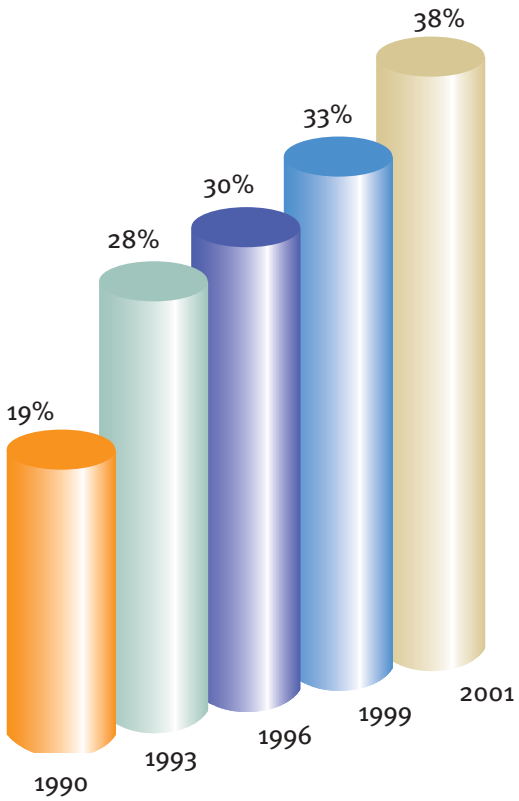




Data Source: American Hospital Association Annual Survey of Hospitals and CMS Medicare Hospital Cost Report Data

Figure 4-7

Percent of All Rural Hospitals that are Designated Sole Community Hospitals, 1990-2001



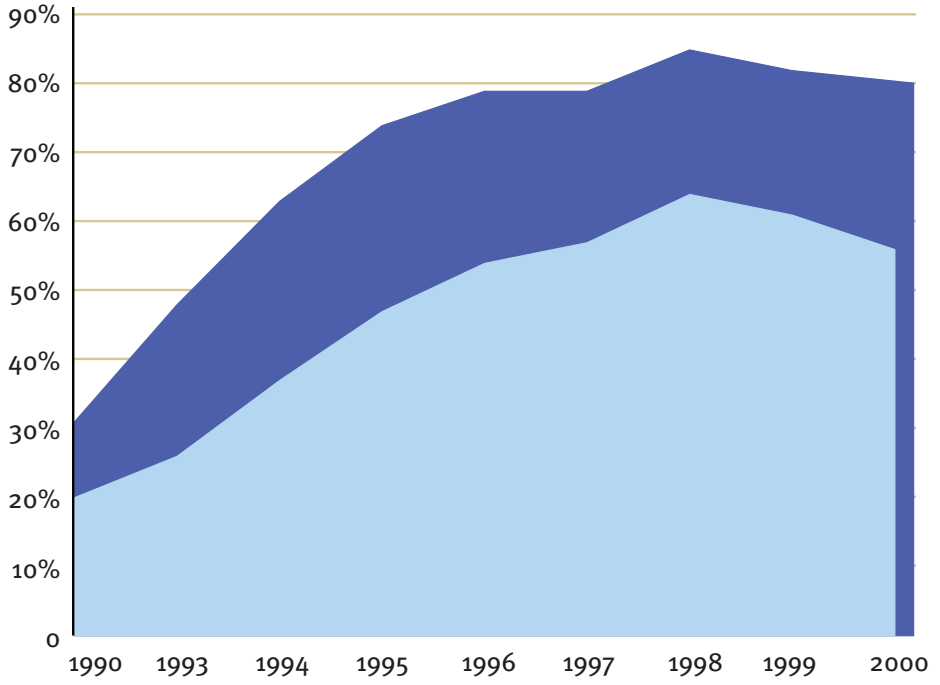
Growth in the Number of Critical Access Hospitals, 1997-2002

12/31/97	30
12/31/98	39
12/31/99	120
12/31/00	324
12/31/01	538
9/30/02	688

Data Source: CMS Medicare Hospital Cost Report Data and Rural Health Research and Policy Analysis Center, University of North Carolina at Chapel Hill.

Figure 4-8

Rural Hospitals with an HMO or PPO Contract, 1990-2000

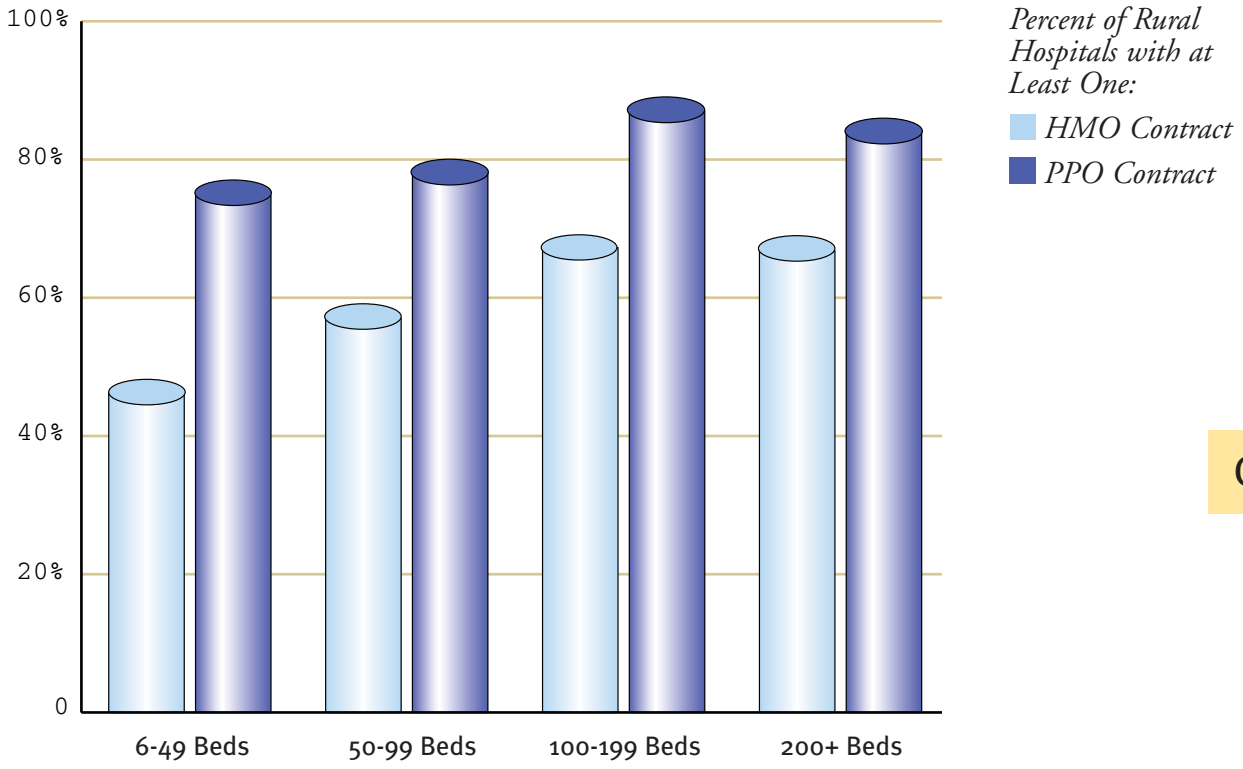


	Mean Number of HMO Contracts Held by Rural Hospitals with One or More HMO Contracts	Mean Number of PPO Contracts Held by Rural Hospitals with One or More PPO Contracts
1994	2.4	5.8
1995	2.5	7.0
1996	2.9	8.2
1997	3.2	9.9
1998	3.9	10.6
1999	3.6	9.9
2000	4.0	11.9

Data Source: American Hospital Association Annual Survey of Hospitals

Figure 4-9

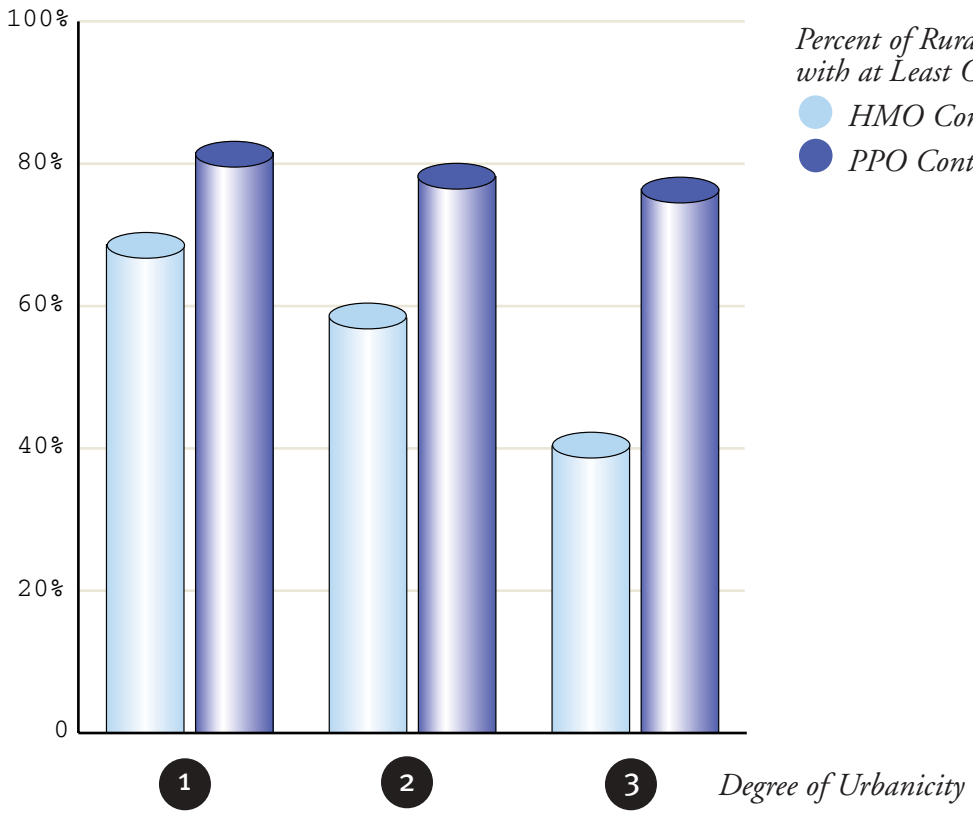
Rural Hospitals with an HMO or PPO Contract by Bed Size, 2000



Data Source: American Hospital Association Annual Survey of Hospitals

Figure 4-10

Rural Hospitals with an HMO or PPO Contract by Urbanicity, 2000



Urbanicity	Mean Number of HMO Contracts Held by Rural Hospitals with One or More HMO Contracts	Mean Number of PPO Contracts Held by Rural Hospitals with One or More PPO Contracts
1	4.6	14.5
2	4.1	11.1
3	3.2	9.5

Degree of Urbanicity:

1. *Adjacent to Urban Area*
2. *Not Adjacent to an MSA, but in a County With a City of 20,000 or More People*
3. *Non-Adjacent Counties Without a City of 20,000 or More People*

Definitions and Data Notes

Figure 4-10 examines whether the level of managed care in rural areas is dependent on the rural area's adjacency to urban areas and the size of communities in the rural county. Rural counties were divided into three categories. In the first category are counties adjacent to urban areas. Managed care appears to be most prevalent in these counties. Urban managed care organizations may include adjacent rural counties in their market area and more aggressively sell to rural employers in these counties. In the second category are rural counties that are not adjacent to metropolitan areas but which have a town of at least 20,000 people. These places are expected to have larger employers and may be more attractive places for managed care contracting. As a result, the majority of hospitals in these counties have at least one managed care contract, averaging 4.1 HMO contracts and 11.1 PPO contracts. In the third category are rural counties that have neither a city of 20,000 people nor adjacent metropolitan areas. As expected, these rural areas have the lowest level of managed care penetration.

Data Source: American Hospital Association Annual Survey of Hospitals Databases and 2000 Area Resource File

Rural Hospital Financial Performance

After improving steadily from 1990 through 1996, the financial performance of rural hospitals began to deteriorate and by 1999 rural hospitals were performing at levels below those experienced in 1990. This chapter highlights the financial performance of rural hospitals from 1990 to 1999.

Key Facts

Rural hospitals had increasing percentage discounts and allowances from charges throughout the decade.

- By 1999, the average amount by which all rural hospitals' gross charges were reduced by discounts and allowances reached 35%, having increased by 4 percentage points since 1996. *(Figure 5-1)*

Rural hospitals reduced patients' length of stay throughout the decade.

- Rural hospitals responded to PPS by reducing the length of stay of Medicare patients. Since 1990 the median length of stay for Medicare inpatients has declined by 23%, with the largest rural hospitals (over 200 beds) having the greatest decrease over this period, 35%, and the smallest rural hospitals having the lowest decrease at 14%. *(Figure 5-2)*

- The length of stay declined more for Medicare patients than other patients. Over all rural hospitals, the overall length of stay declined by 19% from 1990 to 1999 and declined by 23% for Medicare patients. *(Figure 5-2)*

The profitability of rural hospitals improved significantly through 1996 and has deteriorated since.

- In terms of both operating margins and net profit margins, there was considerable uniformity in the gains in financial performance among rural hospitals from 1990 to 1996. *(Figure 5-3)*

- The decline in financial performance of rural hospitals since 1996 also has been broad-based. In 1999, rural hospitals at the 25th percentile, at the median, and at the 75th percentile of the distribution of operating margins and net profit margins had margins that were at or below the levels of similarly defined hospitals in 1990. The percentage of all rural hospitals with net losses was higher in 1999 (36%) than at any other time in the decade. *(Figures 5-3 and 5-4)*

- Smaller rural hospitals had poorer financial performance throughout the 1990's. By 1999, 46% of rural hospitals with fewer than 50 beds had an overall net loss, and 32% with 50 to 99 beds had net losses. *(Figure 5-5)*

- In 1999, rural hospitals in all size-ranges on average had Medicare inpatient revenues exceeding their Medicare inpatient operating costs. However, Medicare inpatient gross margins for rural hospitals were down markedly from 1996. *(Figure 5-6)*

- By 1999, the overall Medicare margin for hospitals ranged from –2.2% for the largest rural hospitals to -4.3% for the smallest hospitals. For all rural hospitals, the Medicare overall margin dropped from +5.0% in 1996 to –3.2% in 1999. *(Figure 5-7)*

Hospitals in Medicare special payment programs experienced similar reductions in their financial performance to rural hospitals not in these programs during the period 1996 to 1999.

- Rural Referral, Sole Community or Medicare Dependent hospitals had similar reductions in their overall Medicare margins from 1996 to 1999 as rural hospitals not in these programs. *(Figure 5-8)*

- The reductions from 1996 to 1999 in net profit margins of rural hospitals are significantly smaller than the reductions in overall Medicare margins. *(Figure 5-8)*

By 1999, the number of rural hospitals at risk of closing for financial reasons climbed to levels comparable to those found in 1990.

- The proportion of rural hospitals with losses greater than 10% of their total revenues for two consecutive years was 4.4% in 1999, compared to 0.9% in 1996 and 4.6% in 1990. This is important since back-to-back annual losses of 10% or more of revenues are a strong predictor of subsequent hospital closure. *(Figure 5-4)*

- The proportion of rural hospitals with losses greater than 20% of their fund balance for two consecutive years was 7.9% in 1999, compared to 4.0% in 1996 and 8.3% in 1990. Back-to-back annual losses of 20% or more of fund balances are also a strong predictor of subsequent hospital closure. *(Figure 5-4)*

Closures of rural hospitals rose in 1999 after having declined during much of the decade.

- Rural hospital closures are a reflection of the general financial health of rural hospitals. Twenty-two rural hospitals closed in 2000, their highest level since 1993. *(Figure 5-9)*

The Implications of Changes in Rural Hospital Financial Performance

A significant reversal in the financial performance of rural hospitals occurred during the decade of the 1990's. Up to 1996, rural hospitals experienced steady improvement in their financial performance as measured by operating margins and overall net profit margins. By 1999, these indicators dropped to levels at or below where they stood in 1990. This change was broad-based, uniformly affecting rural hospitals of all size categories and all levels of financial performance.

Among the underlying reasons for this reversal was the slower growth in Medicare payments to all hospitals in the late 1990's. In addition, rural hospitals experienced a higher annual increase in their inpatient costs per discharge than urban hospitals beginning in 1996. The impact of both is reflected in the Medicare *overall* margin, or the difference between all Medicare payments and Medicare allowed-costs expressed as a percentage of Medicare payments. This margin fell for all rural hospitals from +5.0 % in 1996 to –3.2 % in 1999.

The median rural hospital had a total net profit margin of 4.5% in 1996 and 2.2% in 1999. Focusing on just operating margins (i.e. the difference in total patient revenue and total patient costs expressed as a percent of total patient revenue), the median rural hospital had an operating margin of –0.5% in 1996 and –3.5% in 1999. These declines do not include any impact of prospective payment for outpatient services by Medicare, since this payment change was instituted in August of 2000.

Hospital inpatient costs per case begin to increase during the last half of the decade after declining steadily in the first half. Rural hospitals had annual reductions in their average length of stay throughout the decade but these reductions became smaller each year. This reduction in the decrease in the average length of stay likely is one cause of the cost per case increases.

As noted in Chapter Four, managed care organizations become an important payer for rural hospitals in the 1990's. The additional competitive pressure they, other private payers, and Medicaid programs brought to bear on rural hospitals is reflected in the increasing discounts and allowances from charges.

In 1999, taking into account all patient revenue, philanthropy, endowment revenue and grants, the median rural hospital was still making an overall profit. Even by this broadest measure of financial health, 36% of rural hospitals had net losses, and more than a quarter of these (9.8% of *all* rural hospitals) had net losses of more than 10%. There were 84 rural hospitals (4.4% of *all* rural hospitals) in 1999 that experienced losses of this magnitude for two consecutive years, a more than four-fold increase since 1996. In addition, in 1999 there were 151 rural hospitals with net losses that exceeded 20% of their fund balances for two consecutive years. It isn't surprising that the number of closures has begun to rise for rural hospitals.

The importance of these trends for the future of rural hospitals will depend, among other factors, on how the Medicare program changes implemented since 1999 and in the coming years will affect rural hospitals. The changes in the Disproportionate Share (DSH) payment system due to the Medicare, Medicaid and SCHIP Benefits Improvement and Protection Act of 2000 (BIPA) will almost triple the number of rural hospitals eligible to receive DSH payments. Analysis by MedPAC of the impact of this change suggests that it will halve the difference between urban and rural hospitals in the aggregate percentage increase in payments resulting from all Medicare special payment provisions.

Beginning in calendar year 2004, *all* rural hospitals will receive prospective payment for outpatient services due to the scheduled termination of the special hold harmless provision for rural hospitals with 100 or fewer beds (approximately 80% of all rural hospitals). Small hospitals generally fare poorer under prospective payment programs, with their payments based on average costs by average-sized hospitals. The transitional "corridor payments" established by Congress to ease the adjustment to full PPS for outpatient services also are scheduled to expire at the end of 2003. The impact on rural hospitals of the *full* PPS for outpatient services will be mitigated by the exclusion from outpatient PPS of all Critical Access Hospitals. The continued growth in the number of small rural hospitals qualifying for this special payment program will provide significant help to smaller facilities.

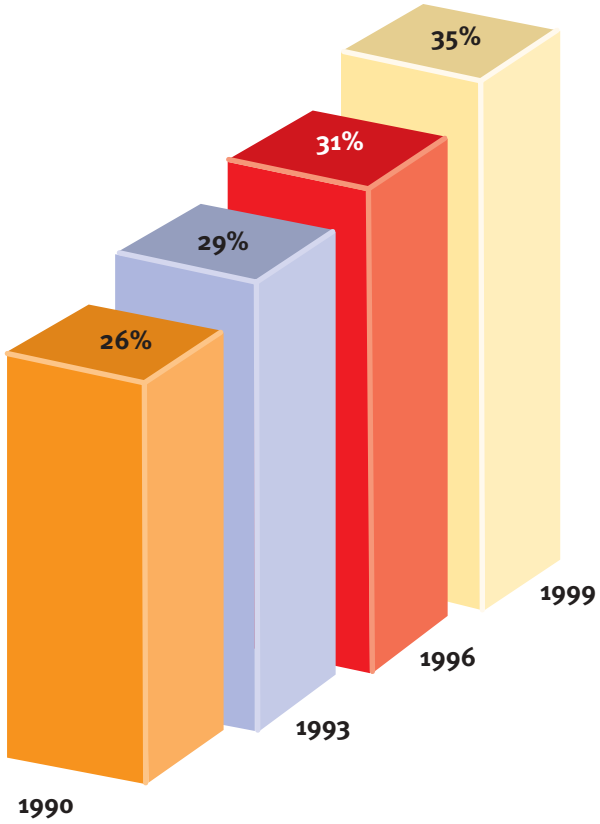
Skilled nursing care is provided by more than a third of rural hospitals in distinct-part units. PPS for skilled nursing facilities (SNFs) was first introduced in July 1998. Two of the temporary increases in the original SNF PPS payment rates that were enacted by Congress expired in September 2002. In addition, skilled nursing care provided by hospitals in swing-beds began to be paid on the basis of SNF PPS starting in July 2002. The impact of both of these changes will not be experienced by Critical Access Hospitals that have swing beds, since they are exempted from SNF PPS under BIPA.

Finally, home health services are provided by almost 60% of rural hospitals. Full PPS payment for these services began in October 2000. Because of Congressional concern for access to these services by Medicare beneficiaries in rural areas, rural hospitals have had a 10% add-on payment over their PPS rates that is scheduled to expire in April 2003. A substantial cut in the base rate for *all* hospitals under PPS for home health services also began in October 2002.

Among the possible future changes that have been proposed for Medicare payment policy, introducing an adjustment for low-volume producers of inpatient and outpatient services portentially is the most significant for rural hospitals. Fixed costs are large enough and patient loads low enough to inevitably lead to significantly higher unit costs in small rural hospitals. MedPAC analyses suggest this disadvantage is largely a matter of size *per se*. The CAH initiative, with its requirement of fewer than 15 acute care beds and cost-based reimbursement, is likely to address this volume-effect for small rural hospitals that get certified as CAHs. For small rural hospitals not certified as CAHs, a volume adjustment may be required to undo the inherently unlevel playing field PPS creates.

Figure 5-1

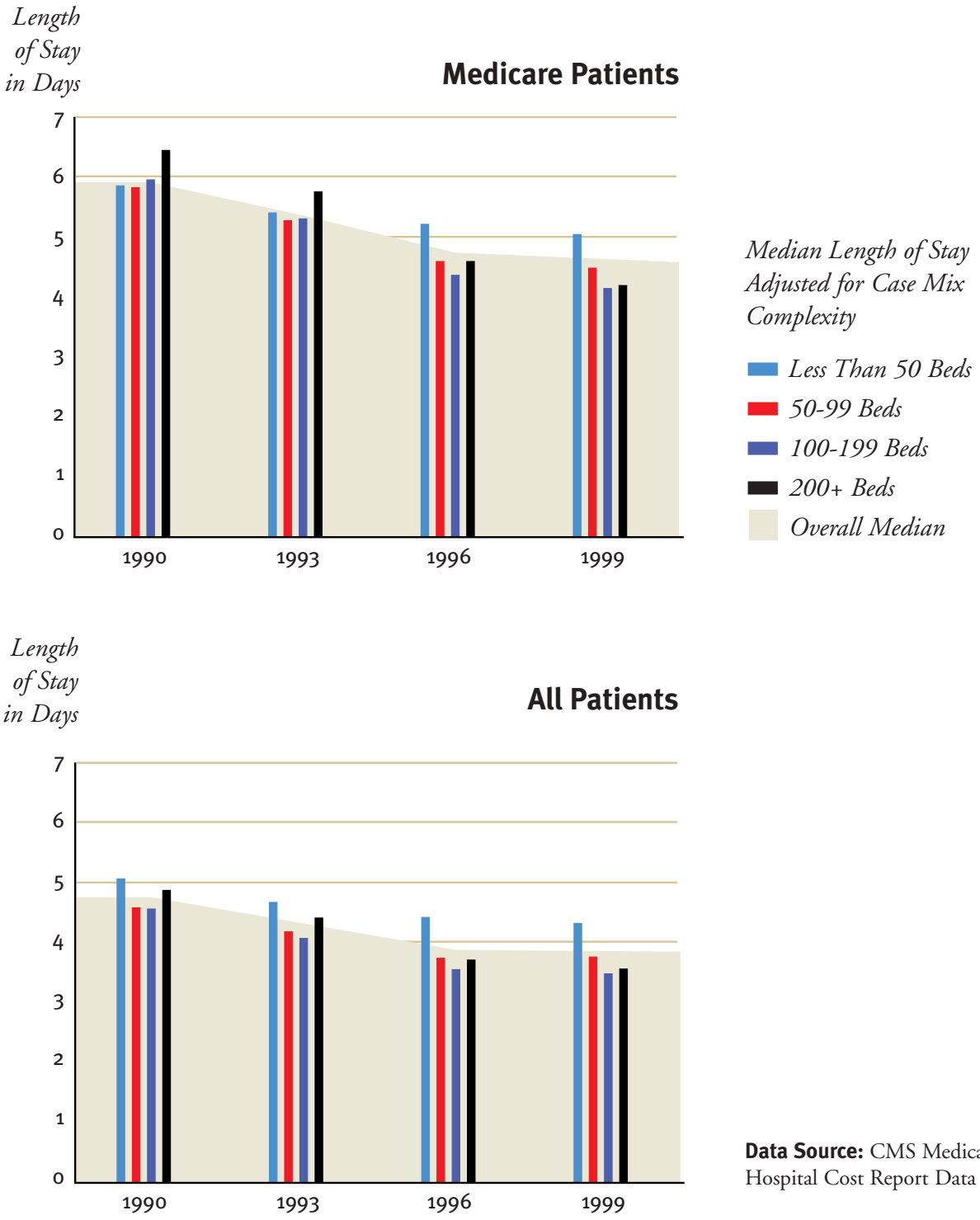
Mean Discounts and Allowances of Rural Hospitals, 1990-1999



Data Source: CMS Medicare Hospital Cost Report Data

Figure 5-2

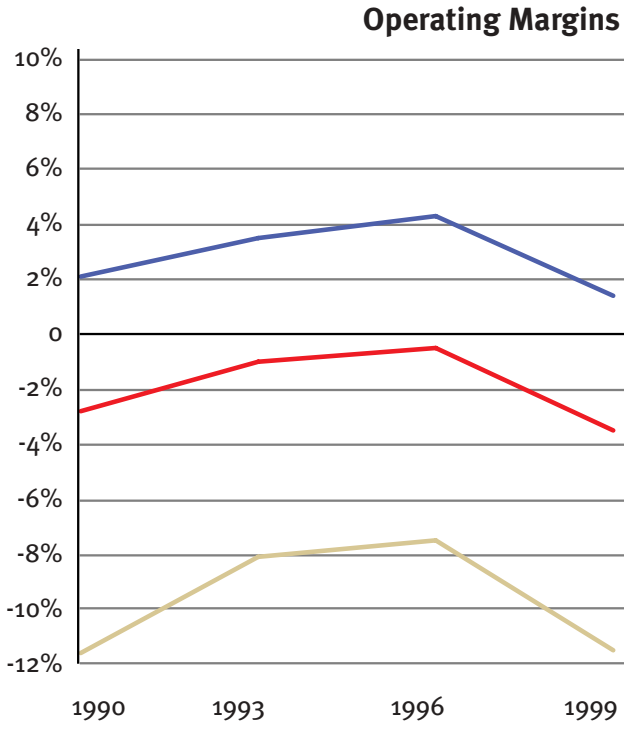
Median Length of Stay in Rural Hospitals by Bed Size, 1990-1999

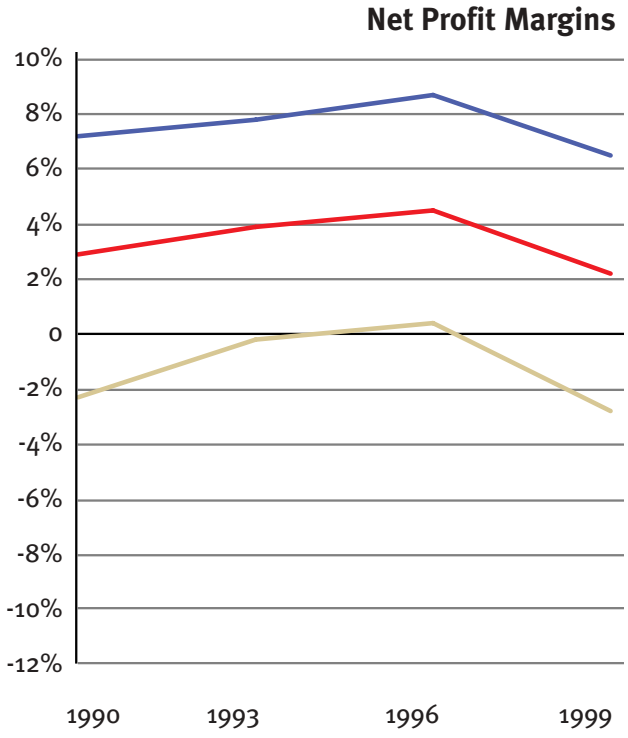


Data Source: CMS Medicare Hospital Cost Report Data

Figure 5-3

Rural Hospital Profitability, 1990-1999





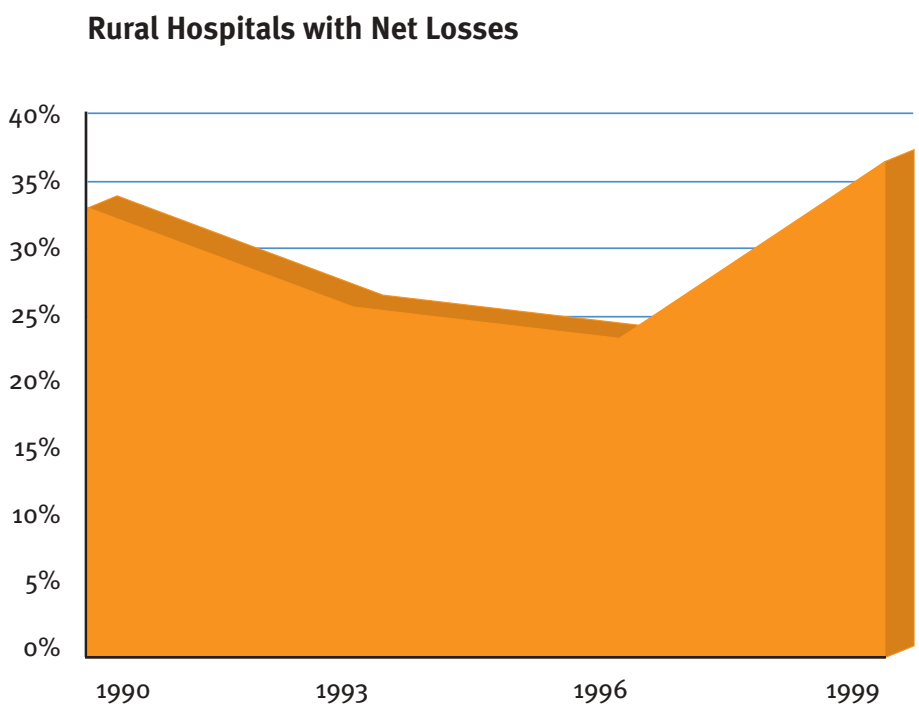
Operating Margins and Net Profit Margins For:

- *Rural Hospital at the 25th Percentile*
- *Median Rural Hospital*
- *Rural Hospital at the 75th Percentile*

Data Source: CMS Medicare Hospital Cost Report Data

Figure 5-4

Rural Hospital Financial Performance



	Rural Hospitals with Losses > 10% of Revenues				Rural Hospitals with Losses > 20% of Fund Balances			
	For 1 year		2 consecutive yrs.		For 1 year		2 consecutive yrs.	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1999	205	9.8%	84	4.4%	305	14.6%	151	7.9%
1996	80	3.8%	19	.9%	187	8.9%	81	4.0%
1993	142	6.4%	50	2.4%	234	10.6%	97	4.6%
1990	247	10.7%	104	4.6%	338	14.6%	189	8.3%

Data Source: CMS Medicare Hospital Cost Report Data

Figure 5-5

Rural Hospital Profitability By Bed Size

	1990	1993	1996	1999
Less than 50 beds				
Median Operating Margin	-8.6%	-5.6%	-4.9%	-7.6%
Median Net Profit Margin	0.9%	2.5%	2.3%	0.4%
Percent with Net Losses	46.4%	35.2%	35.7%	46.1%
50-99 beds				
Median Operating Margin	-1.9%	-0.1%	0.9%	-2.3%
Median Net Profit Margin	2.9%	3.9%	5.3%	3.1%
Percent with Net Losses	28.2%	23.5%	16.7%	31.5%
100-199 beds				
Median Operating Margin	1.0%	2.3%	3.2%	0.1%
Median Net Profit Margin	5.0%	5.2%	6.8%	4.5%
Percent with Net Losses	17.7%	11.1%	8.4%	22.0%
200 or more beds				
Median Operating Margin	0.4%	1.9%	3.5%	-0.6%
Median Net Profit Margin	5.2%	5.8%	8.5%	5.4%
Percent with Net Losses	6.8%	10.2%	3.4%	14.3%

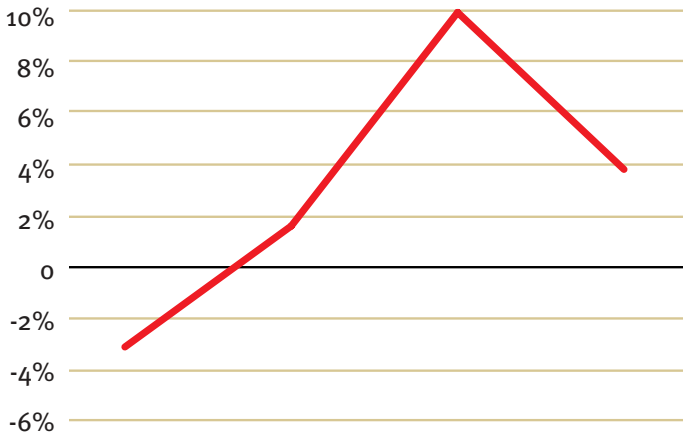
Source: CMS Medicare Hospital Cost Report Data

Figure 5-6

Rural Hospital Medicare Inpatient Gross Margins by Bed Size, 1990-1999

Median Medicare Inpatient Margin

Hospitals with Under 50 Beds

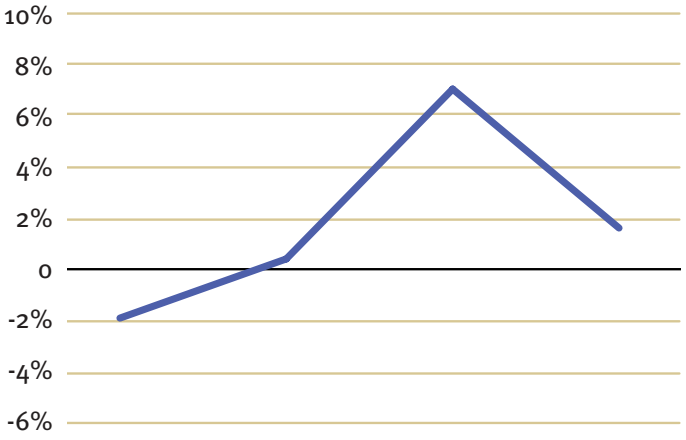


1990	1993	1996	1999	
1.00	1.01	1.02	.99	**Case Mix**
5.9	5.4	5.2	5.0	**Adjusted Length of Stay**

Year

Median Medicare Inpatient Margin

Hospitals with 50-99 Beds

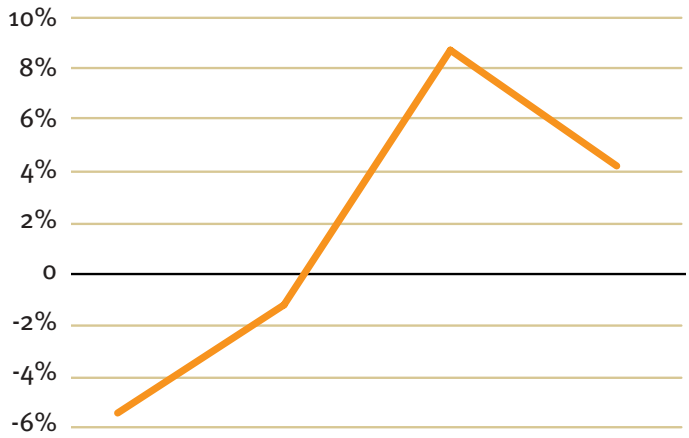


1990	1993	1996	1999	
1.08	1.10	1.14	1.12	**Case Mix**
5.8	5.3	4.6	4.5	**Adjusted Length of Stay**

Year

Median Medicare Inpatient Margin

Hospitals with 100-199 Beds

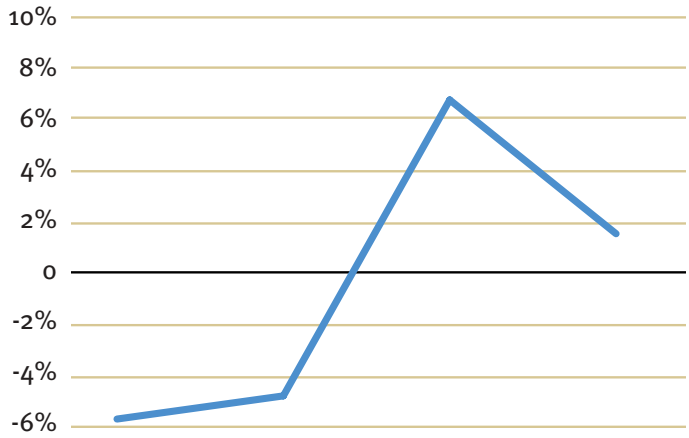


1990	1993	1996	1999	
1.17	1.21	1.25	1.23	**Case Mix**
5.9	5.3	4.4	4.1	**Adjusted Length of Stay**

Year

Median Medicare Inpatient Margin

Hospitals with 200+ Beds



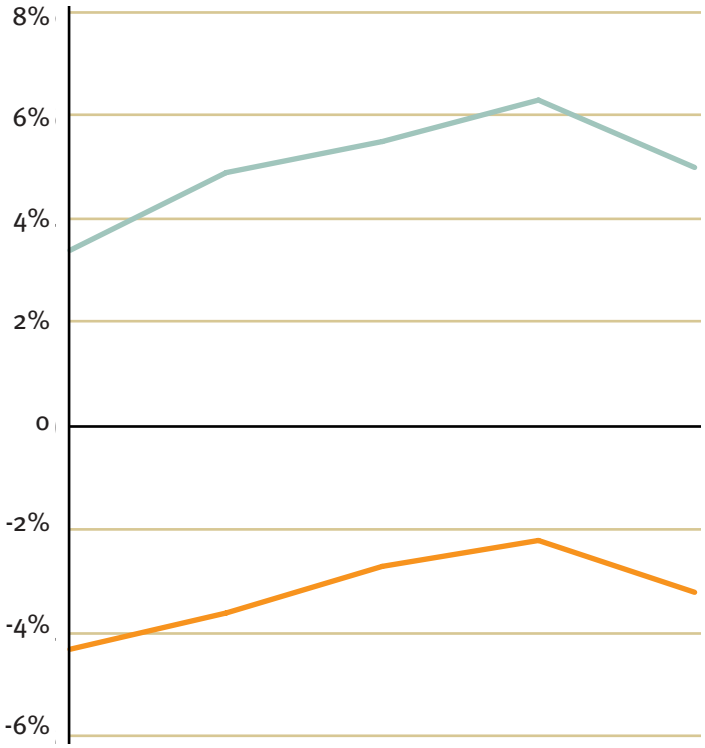
1990	1993	1996	1999	
1.24	1.26	1.33	1.31	**Case Mix**
6.4	5.8	4.6	4.2	**Adjusted Length of Stay**

Year

Source: CMS Medicare Hospital Cost Report Data

Figure 5-7

Overall Medicare Margin for Rural Hospitals by Bed Size, 1996 and 1999



Data Source: MedPAC analysis of Medicare cost report data from CMS

**The overall Medicare margin incorporates all Medicare-related payments and costs to hospitals, including outpatient, hospital-based skilled nursing and home health services. There is some shifting in the allocation of fixed costs between inpatient and outpatient sectors; as a result, an overall margin that incorporates all costs into a single margin is a better measure of overall impact. In addition, these margins are computed as aggregate margins for the size-category; within each size-range, larger hospitals have greater than average and smaller hospitals have less than average impact on these aggregate margins. They measure the margin for the size-range as a whole rather than for the "typical" hospital as does a median.*

Figure 5-8

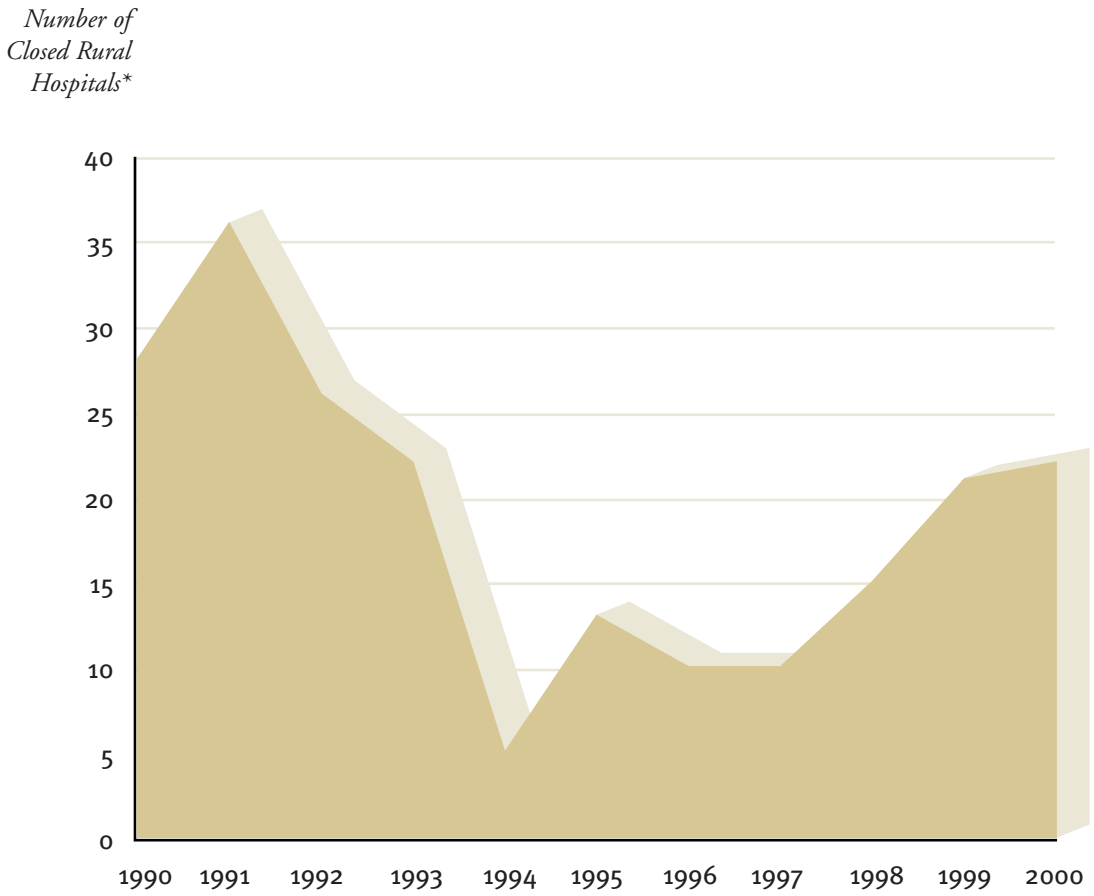
Overall Medicare Margins and Net Profit Margins by Type of Rural Hospital

TYPE OF RURAL HOSPITAL	Overall Medicare Margin 1996	1999	Net Profit Margin 1996	1999
Rural Referral Centers	5.9%	-2.1%	9.2%	7.5%
Sole Community Hospitals	6.1%	-2.4%	6.1%	3.4%
Medicare Dependent Hospitals	3.2%	-3.0%	4.0%	2.5%
Other, Less Than 50 Beds	2.4%	-5.4%	3.8%	1.7%
Other, 50 Beds or More	4.2%	-5.1%	6.9%	3.6%

Data Source: MedPAC, Report to the Congress: Medicare Payment Policy, March 2002

Figure 5-9

Rural Hospital Closures, 1990-2000



Data Source: American Hospital Association Annual Survey of Hospitals Data Bases and Office of the Inspector General (OIG), Department of Health and Human Services, various reports on hospital closure 1993-2000.

** The OIG indicates that a majority of "closed" facilities convert to some type of health-related facility.*

Conclusions

Although many rural hospitals have proved themselves to be resilient, the decade of the 1990's presented substantial challenges and as a consequence they made several significant changes. First, to achieve efficiencies in an ever more competitive marketplace and in response to incentives provided by Medicare's special payment programs, rural hospitals contracted in bed size. Over the decade, almost 60% of all rural hospitals reduced the number of beds they staffed, on average a reduction of ten staffed beds. By 2000, over half of all rural hospitals had fewer than 50 beds.

Second, rural hospitals broadly diversified their service lines. Significantly more rural hospitals were providing hospice services, skilled nursing care, inpatient psychiatric services, and rehab and swing bed services. They also became more organizationally complex, with more rural hospitals participating in networks, alliances and hospital systems. By 1999, three-quarters of all rural hospitals had one or more of these organizational links.

Despite these changes, the financial health of rural hospitals suffered. After steady improvement through 1996, the financial performance of virtually all rural hospitals quickly and sharply deteriorated. By 1999, rural hospitals were less fiscally viable than they had been at the outset of the decade.

Due in large part to increasing competitive pressures, rural hospitals have become more sensitive to the policy changes by their major payer, Medicare. The increased competitive pressures are reflected by the deeper discounts and allowances that rural hospitals offered over the decade. The sensitivity to Medicare reimbursement and policy changes can be seen in two ways. On the one hand, the slow-down in base-payment increases by Medicare in the latter half of the decade contributed to the poorer financial performance of rural hospitals. On the positive side, the rapid growth in conversion to Critical Access Hospitals is a response to the disadvantage rural hospitals are placed at by prospective payment systems.

Looming on the horizon are several scheduled changes in Medicare reimbursement with important implications for rural hospitals. While CAHs are protected from many of these changes, it remains to be seen how small rural hospitals not in the CAH program will fare.

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