

MINNESOTA HOSPITALS:  
A DECADE IN REVIEW,  
1990 - 2001

APRIL 2003



HEALTH ECONOMICS PROGRAM





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# Executive Summary

Hospital costs represent the largest category of health care spending, and hospitals are the most expensive setting in terms of spending per unit of service. In light of this, understanding hospital trends is crucial to understanding overall trends in the health care sector. This report examines the capacity, utilization and financial trends of Minnesota hospitals from 1990 to 2001. National data is included for comparison when available.

In 2001, there were 139 hospitals in Minnesota. Most of these hospitals (60 percent) had fewer than 50 beds and two-thirds were in rural Minnesota. Most of the large hospitals, however, were in urban Minnesota. More than half (58 percent) of the 139 hospitals were part of a hospital system. In 2001, over 82 percent of total admissions were to hospitals in a system. The two largest systems (Allina and Fairview) accounted for one-third (34 percent) of total 2001 admissions.

Throughout the 1990s, Minnesota saw a decline in hospital physical capacity. Overall, 13 rural and 9 urban hospitals closed from 1990 to 2001, which caused an 11 percent decline in beds overall, and a 21 percent reduction in the number of beds per 1,000 population. Although the majority of the closures were among rural hospitals with fewer than 50 beds, there was a greater loss of beds in urban Minnesota because the hospitals that closed in urban areas tended to be large.

Although physical capacity at hospitals declined, hospital staffing increased. The total number of FTEs included in salary and wage costs went up 16 percent. This increase in FTEs, however, was distributed unevenly across occupational categories. While the total number of FTEs increased, staffing costs as a share of total operating cost declined by almost 5 percentage points over the 1990s.

Trends in utilization were mixed. Outpatient visits grew steadily, increasing by 64 percent from 1990 to 2001. Inpatient admissions had a more varied trend, falling sharply from 1990 to 1994, but increasing 17 percent from 1995 to 2001. Minnesota's average length of stay (ALOS) followed a downward trend consistent with national averages, and remained significantly lower than the national ALOS throughout the decade. In Minnesota, the most rapid reduction in ALOS was from 1992 to 1993 and led to strong negative growth in inpatient days. Urban hospitals had longer ALOS compared to rural hospitals, ALOS associated with public payers were longer than for private payers and ALOS associated with managed care were shorter than for other payers.

Financially, hospitals in Minnesota did relatively well in the last decade. From 1990 to 2001, the total revenue of Minnesota hospitals consistently exceeded expenses. In addition, on average, incomes grew for hospitals of all sizes. In terms of margins, both the Minnesota and national average total hospital margins rose in the mid-1990s. On average, from 1990 to 2001, Minnesota hospitals had higher total margins than the average in the nation.

Despite relatively strong industry-wide total margins, there was substantial variation by hospital size and location. The Twin Cities metro area had proportionally fewer hospitals with very high total margins, but more with moderate margins. In addition, rural Minnesota hospitals, on average, had higher total margins than urban hospitals throughout much of the decade. Small hospitals had higher overall average total margins but were also more likely to have individual hospitals that qualify as "distressed" or "troubled."

Minnesota has lower uncompensated care (UC) costs (by roughly 4 percentage points) as a share of total operating expenditures when compared to the nation. In 2001, uncompensated care in Minnesota hospitals was 1.8 percent of overall hospital operating expenditures. Despite the low burden of UC in Minnesota compared to the nation, this burden is distributed unevenly. Within Minnesota, UC represents a larger percentage of operating expenses in urban hospitals than rural hospitals. Further, 6 of the 10 largest providers of UC in 2000 were Twin Cities hospitals.



# 1

## Introduction

Hospitals are an important segment of the health care industry. Hospital services are the largest single category of health care expenditures, and hospitals are the most expensive setting in terms of cost per unit of service. In 2001, hospital care accounted for an estimated 29 percent of total health care spending in Minnesota. The role of hospitals as a major source of health care spending makes their financial condition crucial to the overall stability of the health care industry. For this reason, it is important to study both the financial and service trends in the industry and track its performance.

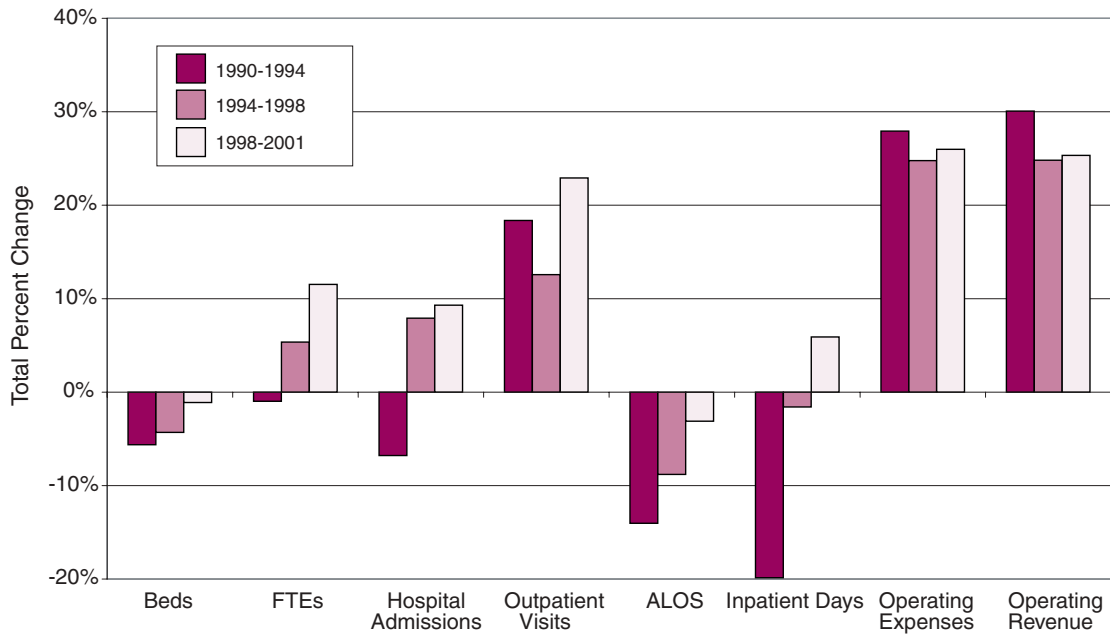
This report analyzes financial and utilization trends in Minnesota's hospital industry from 1990 through 2001.<sup>1</sup> The report is organized as follows:

- Chapter 2 focuses on trends in hospital capacity: how many hospitals are in the state, where they are located, and their size, as well as the composition of the hospital workforce.
- Chapter 3 addresses the utilization of hospital services over the past decade. This chapter outlines trends in admissions, outpatient visits, and average length of stay.
- Chapter 4 discusses financial trends in Minnesota hospitals over the past decade. Trends in revenues, expenditures, and total margins are presented by hospital size and location.

The data used in this report comes from the Health Care Cost Information System (HCCIS), a data set that is collected on behalf of the Minnesota Department of Health by the Minnesota Hospital Association.<sup>2</sup> National data is included for comparison when it is available.

Figure 1-1

Summary of Trends in Minnesota Hospitals, 1990-2001



Note: Average Length of Stay (ALOS), Full-Time-Equivalents (FTEs)  
Source: MDH, Health Care Cost Information System

Figure 1-1 summarizes some of the major trends in Minnesota hospitals from 1990 to 2001. In terms of hospital capacity, there was a decline in the number of hospital beds across the state over the 1990s. At the same time, there was growth in full time equivalent hospital employment across the state. Utilization in terms of inpatient admissions declined in the early 1990s, but grew steadily for the rest of the decade. Despite the growth in admissions, there was a decline in average length of stay (ALOS), which caused a decline in total inpatient days until the end of the decade. Utilization of outpatient services grew throughout the decade. Overall, hospitals in Minnesota performed well financially over the last decade.

# 2

## Hospital Capacity

In 2001, there were 139 hospitals in Minnesota (see Table 2-1). Over half of these hospitals (60 percent) had fewer than 50 beds and about two-thirds (66 percent) were in rural Minnesota.<sup>3</sup> In rural Minnesota, there were a disproportionate number of small hospitals and only one hospital with over 200 beds. In urban Minnesota, however, there were few small hospitals, while more than one-third of the hospitals had over 200 beds. The distribution of hospitals by size is important because it relates to the type of care provided. Large hospitals tend to have more sophisticated technology and therefore serve more complicated cases, while small hospitals, particularly in rural areas, tend to focus on primary and general care, often sending patients to larger hospitals for trauma or tertiary care.

Table 2-1

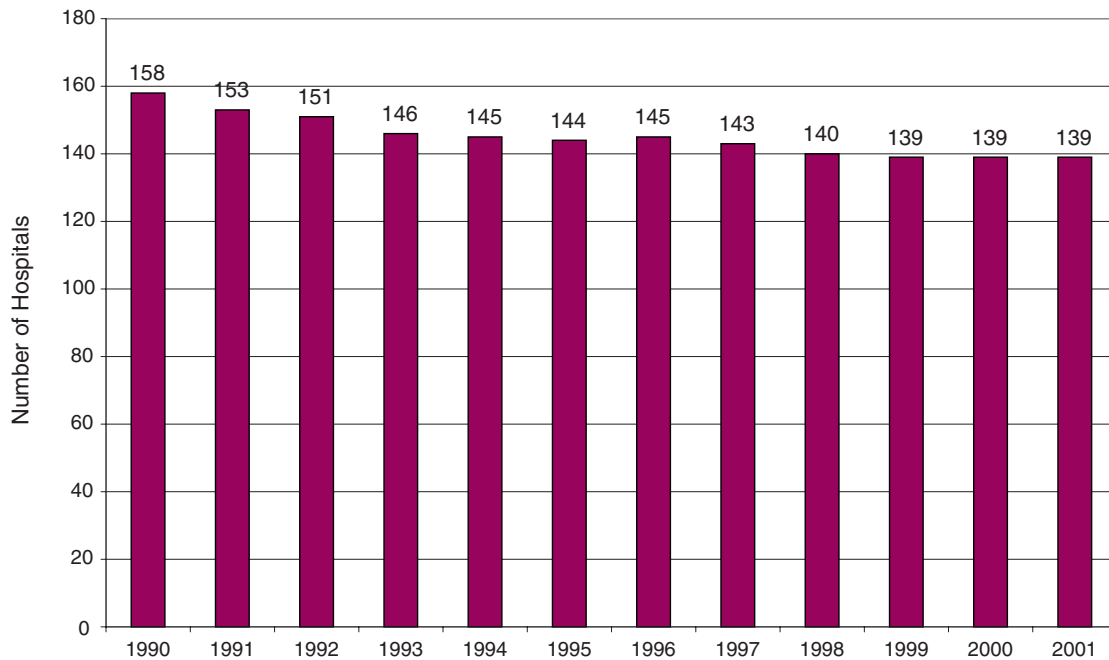
### Minnesota's Hospitals by Size, 2001

	Rural	Urban	Total
<b>Total Number of Hospitals</b>			
Under 25 Beds	25	5	30
25-49 Beds	46	7	53
50-199 Beds	15	11	26
100-199 Beds	5	7	12
Over 200 Beds	1	17	18
<b>Total</b>	<b>92</b>	<b>47</b>	<b>139</b>
<b>Percent of Total</b>			
Under 25 Beds	27.2%	10.6%	21.6%
25-49 Beds	50.0%	14.9%	38.1%
50-199 Beds	16.3%	23.4%	18.7%
100-199 Beds	5.4%	14.9%	8.6%
Over 200 Beds	<u>1.1%</u>	<u>36.2%</u>	<u>12.9%</u>
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Source: MDH, Health Care Cost Information System

Figure 2-1

Number of Minnesota Hospitals, 1990-2001

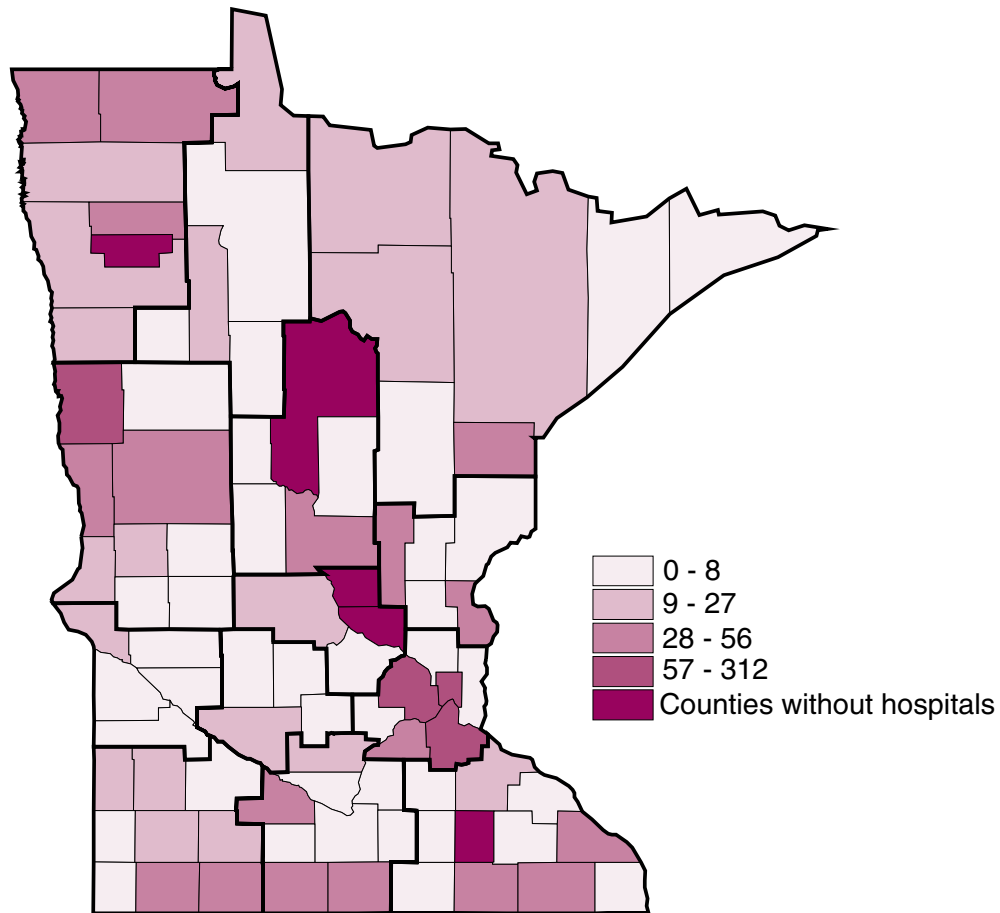


Source: MDH, Health Care Cost Information System

The number of acute care hospitals declined during the 1990s, as shown in Figure 2-1. While some new hospitals opened, others closed or merged. The net effect was a decline in the total number of Minnesota hospitals and the total number of beds.<sup>4</sup> Figure 2-2 shows the loss in acute care hospital beds in Minnesota from 1990 to 2001 by region.<sup>5</sup> The decline in hospital beds in Minnesota over the decade of the 1990s is likely due to a number of factors. As managed care became more prevalent in Minnesota in the 1990s, overcapacity in the hospital system was reduced through mergers between hospital systems. In addition, Medicare, one of hospitals' largest revenue sources, shifted its reimbursement method to payment per case. This created incentives to decrease lengths of stay and encouraged the substitution of outpatient for inpatient care. The potential addition of new hospital beds is further complicated by a hospital moratorium, passed in 1984 by the Minnesota Legislature, which prohibits hospitals from increasing or redistributing bed capacity. This moratorium is still in effect.

Figure 2-2

Decline in Acute Care Beds by Region, 1990 to 2001



Overall, 13 rural and 9 urban hospitals closed from 1990 to 2001. The majority of these closures were small rural hospitals with less than 30 beds. Although there were fewer urban closures, the urban closures involved much larger hospitals than the rural closures. As a result, there was a greater loss of beds in urban areas in Minnesota in the last decade than in rural areas (see Figure 2-2).

The loss of beds in urban Minnesota during the 1990s can be attributed primarily to the closure of two large urban hospitals, Metropolitan/Mt. Sinai Medical Center in 1991, which eliminated 710 beds, and HealthEast Midway Hospital, which closed in 1997, eliminating 246 beds. Table 2-2 provides more detail on the hospital closures that occurred during the 1990s.

Table 2-2

Hospital Closures and Bed Loss, 1990-2001

	<b>Year Closed</b>	<b>County</b>	<b>Number of Beds</b>
<b>Hospitals in Rural Areas</b>			
Parkers Prairie District Hospital	1991	Otter Tail	21
Greenbush Community Hospital	1991	Roseau	27
Mountain Lake Community Hospital	1991	Cottonwood	24
Trimont Community Hospital	1991	Martin	24
Heron Lake Municipal Hospital	1991	Jackson	16
Fairview Milaca Hospital	1991	Mille Lacs	41
Wells Hospital	1992	Faribault	28
Pelican Valley Health Center	1993	Otter Tail	13
Comfrey Hospital	1993	Brown	8
Lakefield Municipal Hospital	1994	Jackson	10
Karlstad Memorial Hospital	1995	Kittson	19
Community Memorial Hospital	1996	Fillmore	24
Harmony Community Hospital	1999	Fillmore	8
<b>Total Rural</b>		<b>13 Hospitals</b>	<b>263 Beds</b>
<b>Hospitals in Urban Areas</b>			
Metropolitan/Mt. Sinai Med Center	1991	Hennepin	710
St. Ansgar Hospital	1992	Clay	155
Eveleth Health Services Park	1993	St. Louis	26
Divine Redeemer Memorial Hospital	1994	Dakota	130
HealthEast Midway Hospital	1997	Ramsey	246
Chisago Health Services	1997	Chisago	49
District Memorial Hospital	1997	Washington	49
Rush City Hospital	1997	Chisago	29
Trinity Hospital	2000	Dakota	47
<b>Total Urban</b>		<b>9 Hospitals</b>	<b>1,441 Beds</b>
<b>Statewide</b>		<b>22 Hospitals</b>	<b>1,704 Beds</b>

Source: MDH, Health Care Cost Information System

Table 2-3

Number of Hospital Beds and Beds Per 1,000 Population, 1990-2001

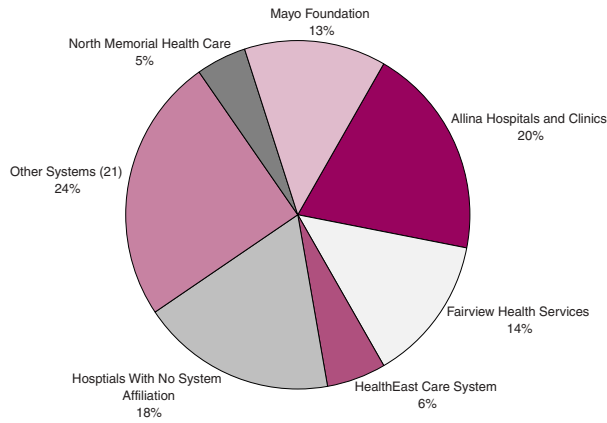
	<b>1990</b>	<b>2001</b>	<b>Percent Change, 1990-2001</b>
<b>Total Licensed Beds</b>			
Rural	5,095	4,184	-17.9%
Urban	13,395	12,327	-8.0%
Total	18,490	16,511	-10.7%
<b>Beds per 1,000 Population</b>			
Rural	3.73	2.85	-23.8%
Urban	4.45	3.56	-20.0%
Total	4.23	3.35	-20.8%

Source: MDH, Health Care Cost Information System

The number of rural hospital beds declined by 18 percent between 1990 and 2001, compared to an 8 percent decline in urban beds; however, the difference between rural and urban loss of beds is smaller in terms of beds per 1,000 population (24 percent and 20 percent declines in rural and urban beds per 1,000 population, respectively). Despite the decline in hospital beds in both rural and urban Minnesota, in 2001 both had a bed capacity per 1,000 population that was greater than or equal to the national average. In 2001, urban Minnesota had 3.6 hospital beds per 1,000 and rural Minnesota and the nation had a capacity of 2.9 beds per 1,000.<sup>6</sup>

Figure 2-3

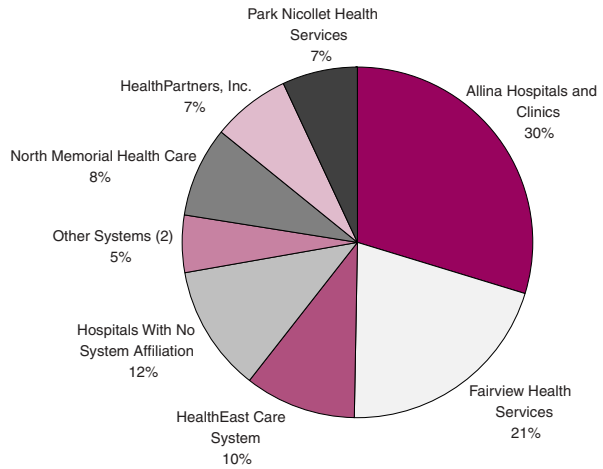
Statewide Hospital Admissions by System Affiliation, 2001



Source: MDH, Health Care Cost Information System

Figure 2-4

Twin Cities Hospital Admissions by System Affiliation, 2001



Source: MDH, Health Care Cost Information System

The degree to which market share of a given area is controlled by hospital systems can potentially affect patient access, pricing, and provider negotiations within the area. In 2001, more than half (58 percent) of Minnesota hospitals were part of a hospital system.<sup>7</sup> In addition, 78 percent of Minnesota hospital beds were in hospitals affiliated with a system, and 82 percent of total admissions were to hospitals in a system. Figures 2-3 and 2-4 show the distribution of total inpatient admissions in 2001 by system for all of Minnesota and for the Twin Cities.<sup>8</sup> In the Twin Cities, two large systems (Allina and Fairview) accounted for more than 50 percent of total 2001 admissions. In the state as a whole, however, admissions were spread more evenly across a larger number of systems (see Table 2-4).

Table 2-4

## Hospital Systems in Minnesota, 2001

System	Statewide			Twin Cities		
	Number of Hospitals	Beds	Admissions	Number of Hospitals	Beds	Admissions
Allina Hospitals and Clinics	15	2,586	112,763	5	2,048	93,796
Avera Health	2	64	1,037			
Benedictine and Allina Health System	1	70	3,786	1	70	3,786
Benedictine Health System	4	374	12,104			
Board of Social Ministry	1	18	529			
Catholic Health Initiatives	5	178	5,920			
Centracare Health System	3	551	21,936			
Children's Hospitals and Clinics	2	269	12,487	2	269	12,487
Fairview Health Services	7	2,582	78,127	3	2,240	64,875
Graceville Missionary Benedictine Sister	1	22	193			
Gunderson Lutheran Medical Center	1	10	9			
HealthEast Care System	4	913	32,367	4	913	32,367
HealthPartners, Inc.	1	427	22,980	1	427	22,980
Immanuel St. Joseph's-Mayo Health System	1	27	319			
Mayo Foundation	9	2,594	75,916			
MeritCare Health System	2	44	828			
North Memorial Health Care	1	518	26,272	1	518	26,272
Park Nicollet Health Services	2	475	23,208	1	426	21,924
Paynesville Area Health Care System	1	30	736			
Presentation Health System	1	18	194			
Quorum Health Resources	2	132	4,315			
Rice Memorial Hospital	1	31	553			
Sioux Valley Hospitals & Health System	10	289	6,460			
Sisters of the Sorrowful Mother	1	31	532			
SMDC Health System	2	545	22,146			
St. Luke's Hospital, Duluth	1	30	274			
<b>All Systems</b>	<b>81</b>	<b>12,828</b>	<b>465,991</b>	<b>18</b>	<b>6,911</b>	<b>278,487</b>
<b>Hospitals with No System Affiliation</b>	<b>58</b>	<b>3,683</b>	<b>104,088</b>	<b>7</b>	<b>1,381</b>	<b>37,486</b>
<b>All Hospitals</b>	<b>139</b>	<b>16,511</b>	<b>570,079</b>	<b>25</b>	<b>8,292</b>	<b>315,973</b>
<b>System Hospitals Percent of Total</b>	<b>58%</b>	<b>78%</b>	<b>82%</b>	<b>72%</b>	<b>83%</b>	<b>88%</b>

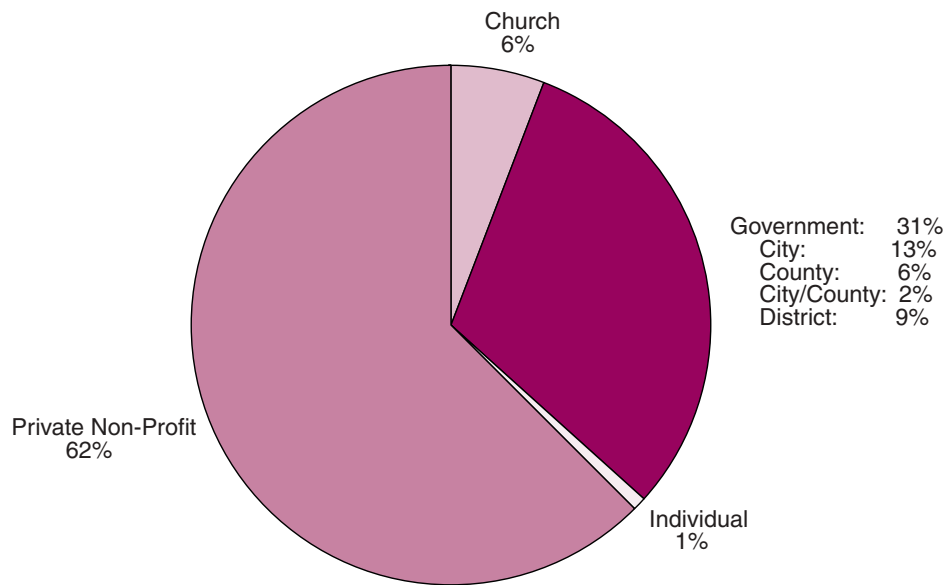
Source: MDH, Health Care Cost Information System

Most hospitals in Minnesota are owned by non-profit organizations (62 percent) or by government entities (31 percent) (see Figure 2-5). Ownership type is important because it can affect the mission of the hospital, its ability to access capital, its financial situation, the type of services it provides, and the type of patients it sees.



Figure 2-5

### Hospital Ownership, 2001



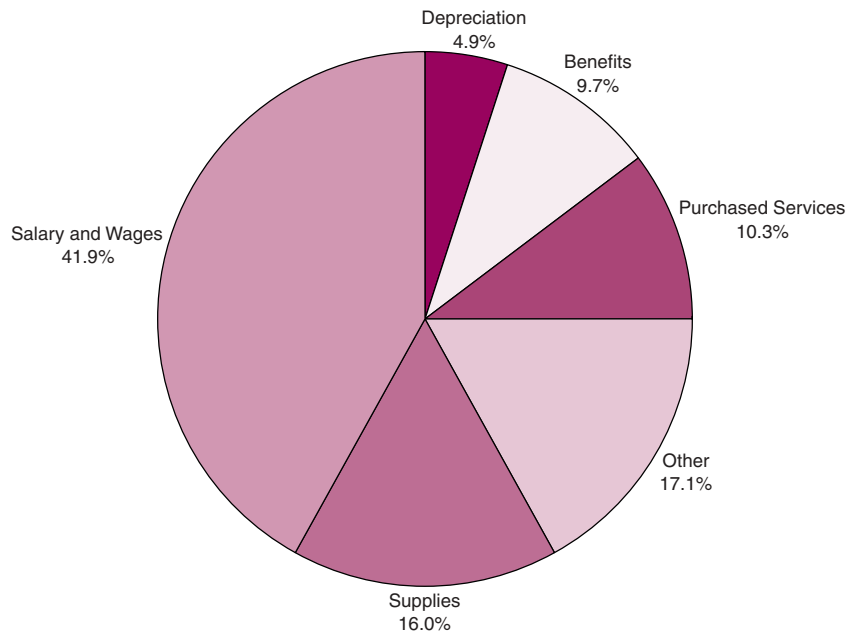
Source: MDH, Health Care Cost Information System

## Staffing

Another key measure of hospital capacity is the trend in hospital staffing.<sup>9</sup> As shown in Figure 2-6, staffing costs are the largest component of hospital expenditures in Minnesota. In 2001, Minnesota hospitals' expenditure for salaries and benefits was over \$3.5 billion, or 52 percent of total operating cost. However, labor costs as a share of total operating costs are lower than they were a decade ago: from 1990 to 2001, wages and benefits as a share of total operating cost decreased by almost 5 percentage points. The cost of salary and wages encompasses payments for a multitude of occupations. Although the HCCIS data is not comprehensive in identifying the occupational breakdown of salary and wage costs, in 2001 roughly 35 percent of personnel cost was expended for registered nurses (RN), 3 percent each was for licensed practical nurses (LPN) and X-ray technicians and 2 percent each went to pharmacists, nurses assistants/aides, and nurse anesthetists.

Figure 2-6

Distribution of Total Hospital Operating Costs, 2001

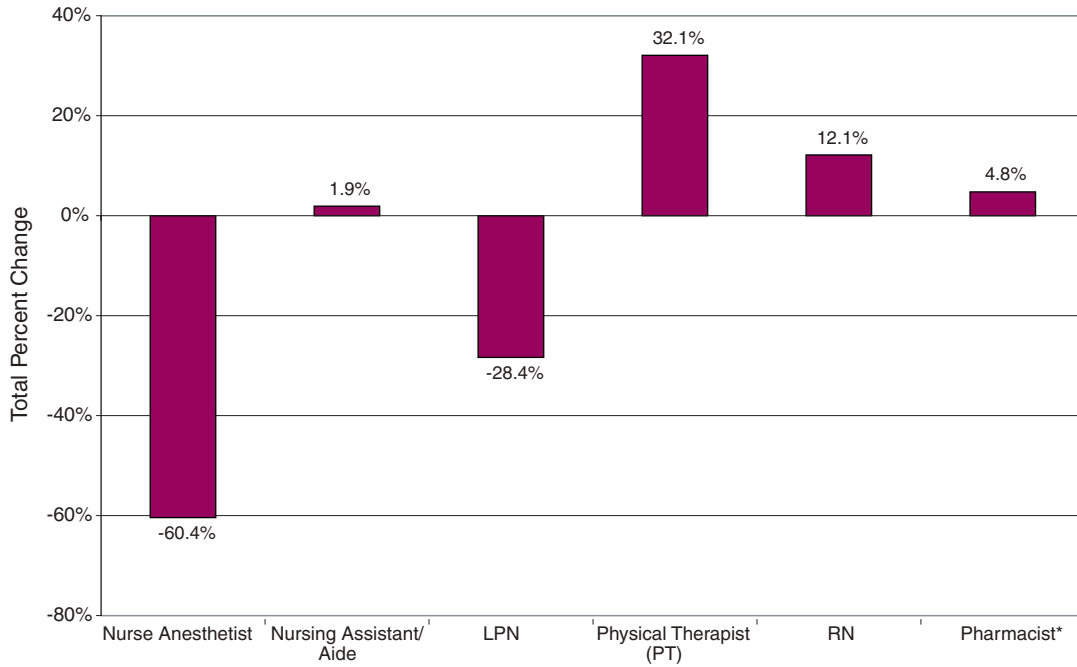


Source: MDH, Health Care Cost Information System

Although labor costs declined relative to total operating expenditures from 1990 to 2001, the total number of FTEs included in salary and wage costs went up 16 percent. While there was an overall increase in the number of FTEs, the changes were distributed unevenly across occupational categories (see Figure 2-7). Figure 2-8 shows the composition of the hospital workforce by occupation in 2001. As shown, RNs made up the largest single identifiable component of employment.

Figure 2-7

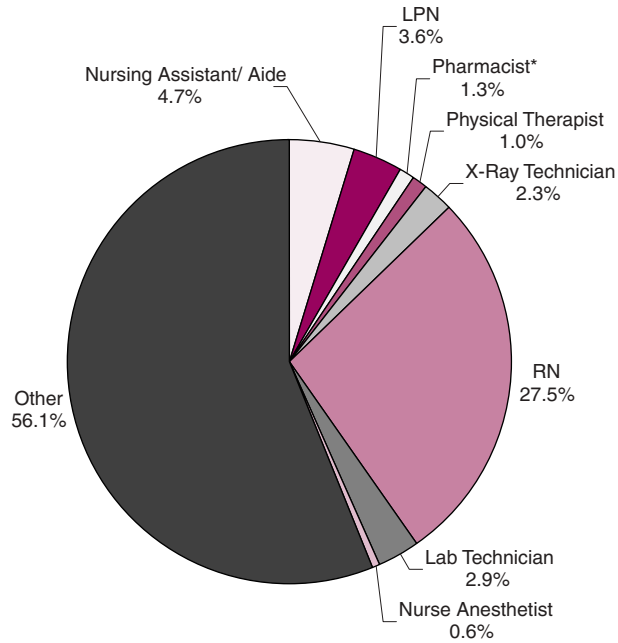
Percent Change in Full-Time Equivalents by Occupation, 1990-2001



Source: MDH, Health Care Cost Information System

Figure 2-8

Composition of the Hospital Workforce, 2001



Source: MDH, Health Care Cost Information

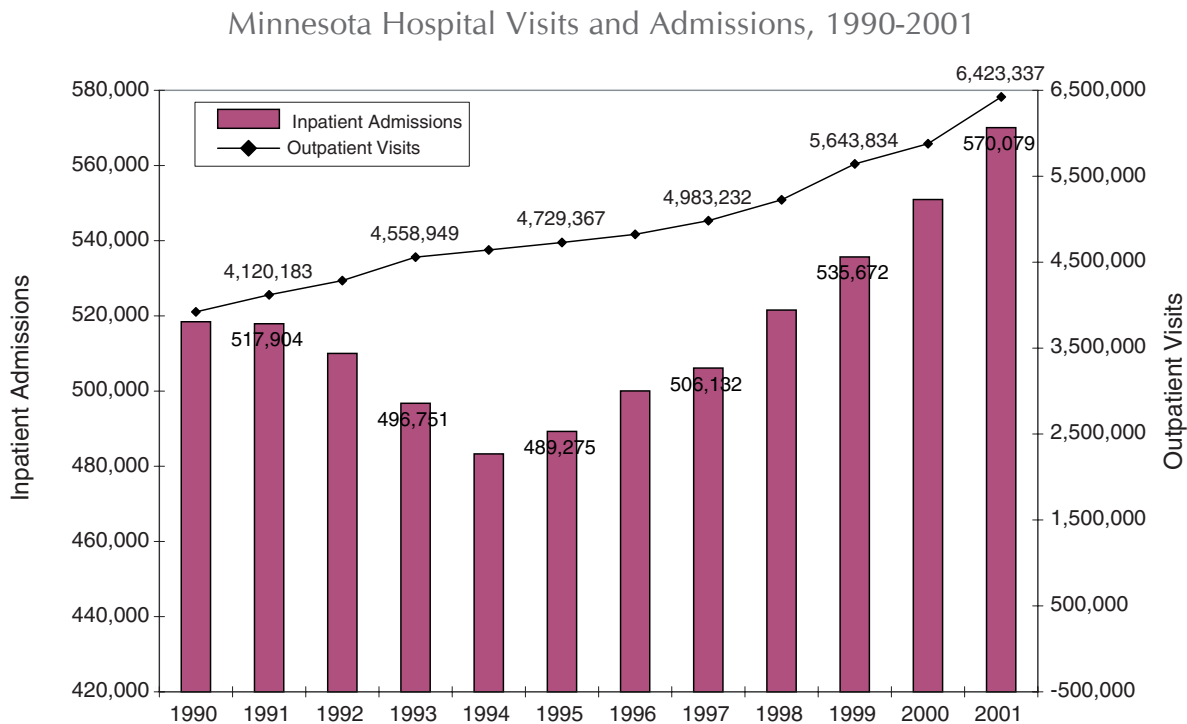


# 3

## Utilization of Services

Figure 3-1 shows the trend in inpatient admissions and outpatient visits in Minnesota hospitals from 1990 to 2001. Over the decade, outpatient visits grew steadily from about 3.9 million in 1990 to almost 6.4 million visits in 2001, a total increase of 64 percent. This increase is likely related to many factors, including population growth, an increase in overall use of services due to the aging of the population, and the continued substitution of outpatient for inpatient procedures. Almost 23 percent of outpatient visits in 2001 were visits to emergency rooms, and 4 percent were for outpatient surgeries.

Figure 3-1



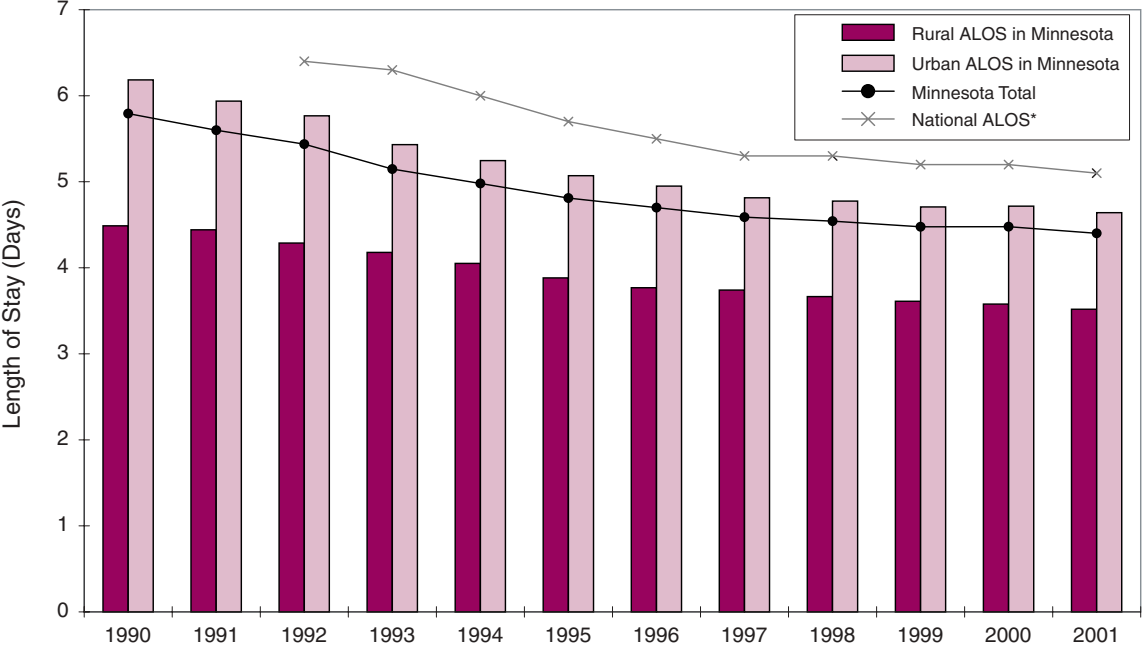
Source: MDH, Health Care Cost Information System

In the same period, inpatient admissions to Minnesota hospitals showed a more varied trend. Inpatient admissions fell sharply from 1990 to 1994, and then rebounded to over 570,000 admissions in 2001. The initial decline in admissions may be related to shifts in the early 1990s from inpatient to outpatient settings for care. These shifts were driven largely by changes in payment policies and other incentives adopted by managed care, as well as the implementation of the Medicare prospective payment system. The increase in admissions that began in 1995 (driven initially by an increase in admissions to urban hospitals) may be related to a loosening of managed care, increase in population growth, and increases in the use of services due to increasing levels of chronicity and complexity.<sup>10</sup>

Both rural and urban hospitals experienced a decline in inpatient admissions in the early 1990s and resurgent growth in the second half of the decade, but the trend was less exaggerated and lagged for hospitals in rural Minnesota. This may be due to the fact that managed care was slower to penetrate (and did so to a smaller extent) in rural Minnesota.

Figure 3-2

Average Length of Stay (ALOS) in Minnesota Hospitals and in the Nation, 1990-2001



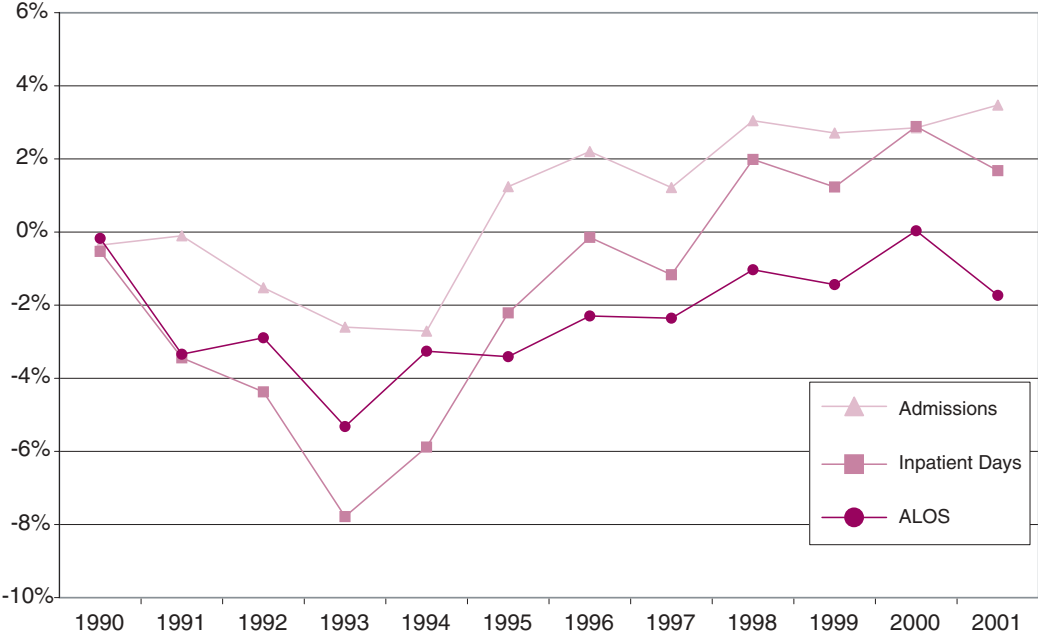
\* National data is unavailable for years 1990-1991  
 Source: MDH, Health Care Cost Information System and the American Hospital Association (2000) *Hospital Statistics*.

Another way of looking at the trends in admissions and hospital days is to look at the average length of stay (ALOS). Figure 3-2 shows the ALOS for urban, rural, and all hospitals in Minnesota, compared to the national average. The ALOS in Minnesota was consistently lower than the national average throughout the last decade. In both Minnesota and the nation, however, ALOS declined steadily from 1990 to 1997, leveled off from 1998 to 2000, and declined slightly again in 2001. In

Minnesota, the reduction in ALOS drove a strong decline in inpatient days. Specifically, the most rapid decline in ALOS occurred between 1992 and 1993, and can be directly linked with negative growth in inpatient days (see Figure 3-3). The factors most likely related to this were an increase in managed care, shorter inpatient stays due to improvements in procedures and technology, and the implementation of the Medicare prospective payment system, which resulted in shortened stays.

Figure 3-3

Annual Percent Change in Inpatient Days, Admissions and ALOS, 1990-2001

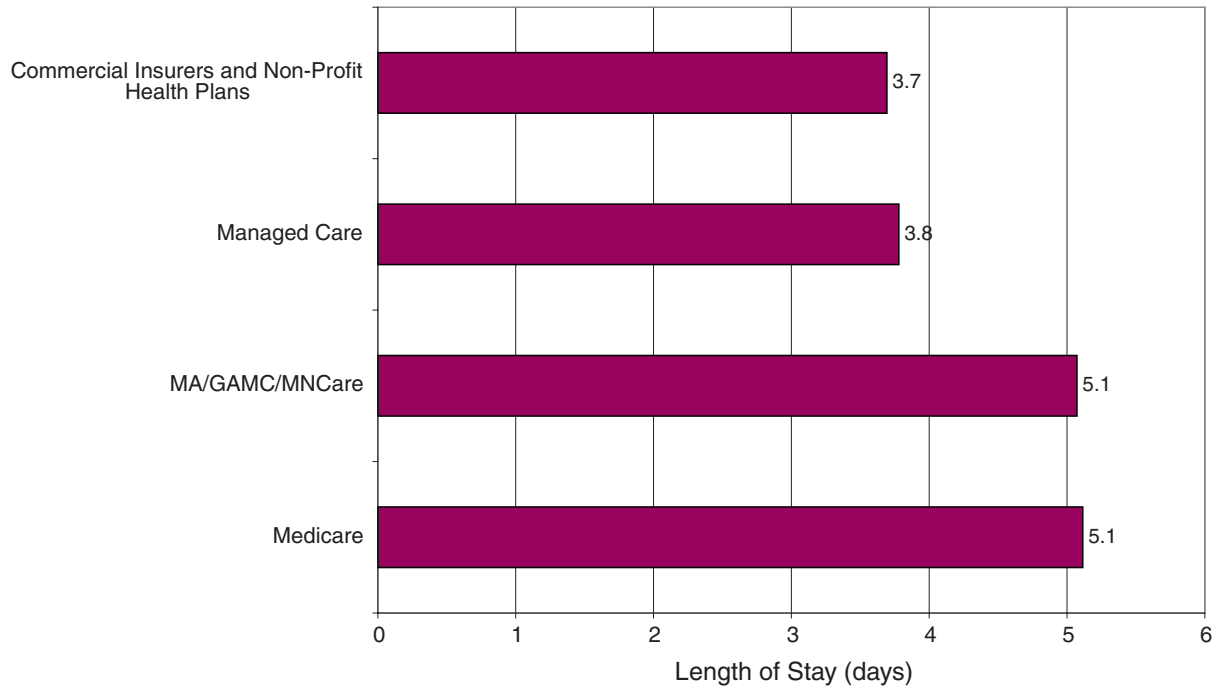


Source: MDH, Health Care Cost Information System

When broken down by region in 2001, ALOS was 4.6 days for hospitals in urban areas and 3.5 for hospitals in rural areas. This is likely related to the hospital size, the level of advanced medical technologies at the hospital, and the type of patients that hospitals attract as a result. As expected, ALOS also varies by the type of payer (see Figure 3-4). The ALOS of cases paid by public programs tends to be much longer than for any other payer category, while cases paid by private insurance are the shortest. These variations in ALOS by type of payer are likely influenced by a number of factors, including the demographics of the enrolled population, the type of payment incentives, and the intensity with which the care is managed.

Figure 3-4

Minnesota Hospitals' Average Length of Stay by Payer Type, 2001



Source: MDH, Health Care Cost Information System

In 2001, Minnesota hospitals billed for approximately 2.5 million hospital days. Eighty-three percent of patient days were in urban hospitals, and 17 percent were in rural hospitals. When broken down by service categories, the majority (73 percent) of hospital days were attributed to adult/pediatric days, with chemical dependency/mental health (11 percent) and intensive care (8 percent) as the next largest categories (see Table 3-1). Table 3-1 also illustrates the differences in the distribution of admissions and inpatient days by service category. These differences are due to the fact that certain admission categories, intensive care in particular, are associated with much longer lengths of stay than other categories.

Table 3-1

Admissions and Patient Days by Service Category, 2001

	Adult/ Pediatric	Chemical Dependency and Mental Health	Rehabilitation	Neonatal**	Coronary Care	Intensive care	Other
Admissions	90.9%	6.1%	0.9%	0.6%	*	*	1.5%
Patient Days	72.8%	11.1%	3.1%	2.4%	2.5%	7.6%	0.5%

\*admissions data for these categories is not collected and is therefore represented in the "other" category.

\*\*excludes routine nursery days

Table 3-2 shows the top 10 diagnosis-related groups (DRGs) in terms of the number of admissions



to Minnesota hospitals in 2001. Diagnosis-related groups are sets of bundled services related to a diagnosis and are used mainly for billing purposes. It is important to note that these top 10 DRGs accounted for 28 percent of total overall admissions, but only 19 percent of total hospital revenue. In other words, there are expensive but more rare procedures which account for a disproportionate amount of hospital revenue, and many of the most common procedures are relatively less expensive. For example, in 2001, the DRG “normal newborn” accounted for about 7 percent of total admissions, but represented less than 1 percent of total revenue.

Table 3-2

Top 10 DRGs by Admission, Revenue and Percent of Total Admissions and Revenue 2001

DRG Label	Inpatient Admissions	Percent of Total Admissions	Revenue	Percent of Total Revenue
Normal newborn	40,104	7.0%	\$56,589,826	0.8%
Vaginal delivery without complicating diagnoses	37,142	6.5%	\$176,112,573	2.5%
Psychoses	17,756	3.1%	\$231,585,543	3.3%
Major joint and limb reattachment procedures of the lower extremity	11,670	2.0%	\$259,906,363	3.7%
Chest pain	10,119	1.8%	\$56,616,790	0.8%
Other permanent cardiac pacemaker implant or PTCA with coronary artery stent	9,981	1.8%	\$257,033,498	3.7%
Heart failure and shock	9,655	1.7%	\$103,680,823	1.5%
Cesarean section without complications	7,784	1.4%	\$77,706,629	1.1%
Neonatal with other significant problems	6,925	1.2%	\$14,267,470	0.2%
Simple pneumonia and pleurisy age > 17 without complications	<u>6,839</u>	<u>1.2%</u>	<u>\$64,197,201</u>	<u>0.9%</u>
<i>Subtotal, Top 10 DRGs</i>	<i>157,975</i>	<i>27.7%</i>	<i>\$1,297,696,716</i>	<i>18.5%</i>
<b>Total, All DRGs</b>	<b>570,079</b>	<b>100.0%</b>	<b>7,008,590,021</b>	<b>100.0%</b>



# 4

## Financial Status

When discussing the financial performance of hospitals, it is important to remember that, with only two exceptions, hospitals in Minnesota are nonprofit.<sup>11</sup> This does not mean that hospitals cannot have revenues in excess of expenditures, but rather that all income or “profit” must be retained within the organization. For example, income may be used to fund capital improvement and expansion or to retire outstanding debt.

Figure 4-1

Minnesota Hospital Operating Revenues and Expenses, 1990-2001  
(in billions of dollars)

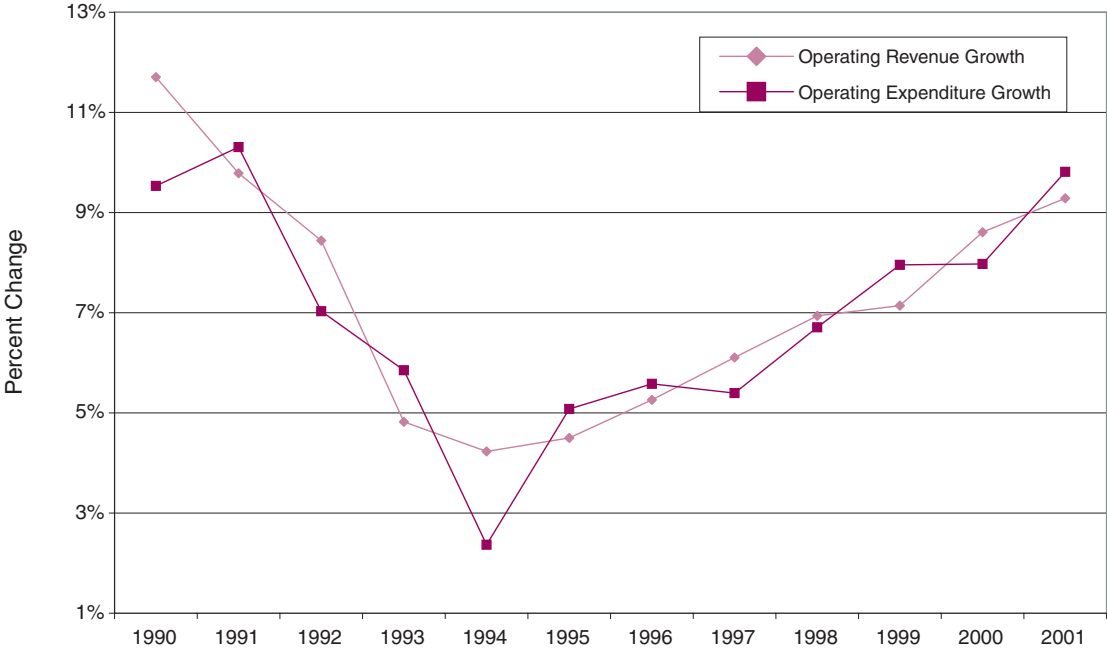


Source: MDH, Health Care Cost Information System

In 2001, total operating expenditures for Minnesota hospitals were roughly \$6.8 billion and operating revenue was \$7.0 billion. As shown in Figure 4-1, from 1990 to 2001, the combined operating revenue of all Minnesota hospitals consistently exceeded expenses, although the annual growth rates of operating revenue and expenditures varied (see Figure 4-2). Revenue and expenditures had a declining rate of growth from 1990 to 1994, and in 1994 hit a decade low of 4.2 percent and 2.4 percent, respectively. After 1994, growth in both revenue and expenditures began to accelerate. It is important to point out that the trend for revenues and expenditures is almost identical to the admissions trend shown in Figure 3-1, and these trends are strongly related to changes in admissions.

Figure 4-2

Annual Operating Revenue and Expenditure Growth Rates for Minnesota Hospitals, 1990-2001

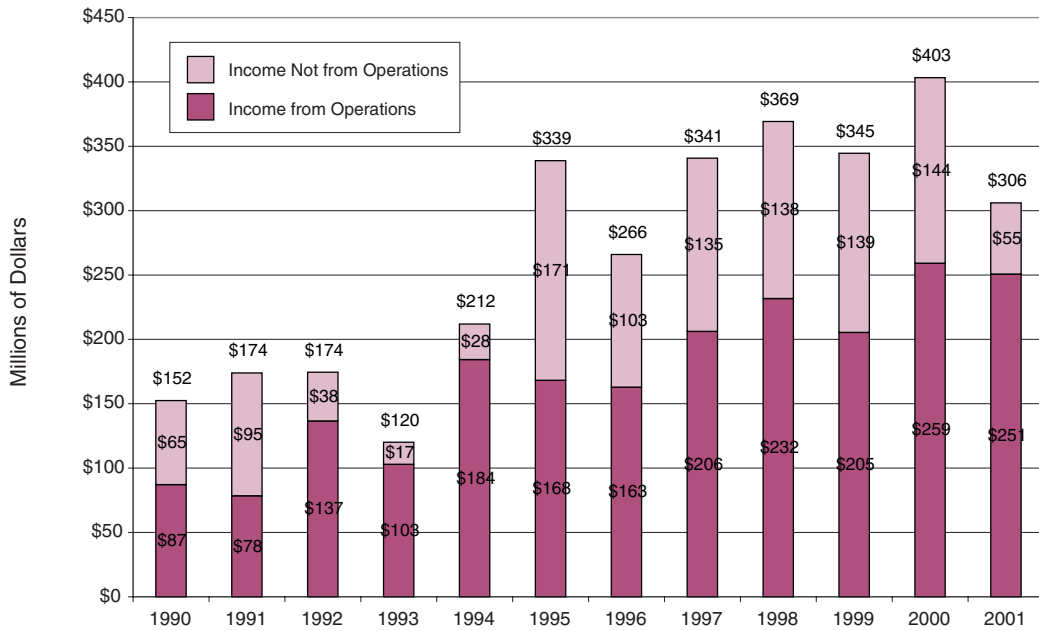


Source: MDH, Health Care Cost Information System

Figure 4-3 shows operating, non-operating, and total income for Minnesota hospitals from 1990 through 2001. In 2001, total operating income for Minnesota hospitals was \$251 million, and total income was \$306 million. Throughout the decade the trend in overall annual growth in income was volatile. Figure 4-4 shows the total income of Minnesota hospitals by size from 1990 through 2001. A comparison of Figure 4-3 and 4-4 shows that the overall trends in income from 1990 to 2001 were driven by the largest hospitals in Minnesota. Although hospitals of all sizes saw an overall increase in income over the decade, hospitals with more than 200 beds had erratic earnings punctuated by declines in income in 1993 and 1996, and large gains in 1995 and 1997. Smaller hospitals had less overall income growth over the decade, but more stable growth.

Figure 4-3

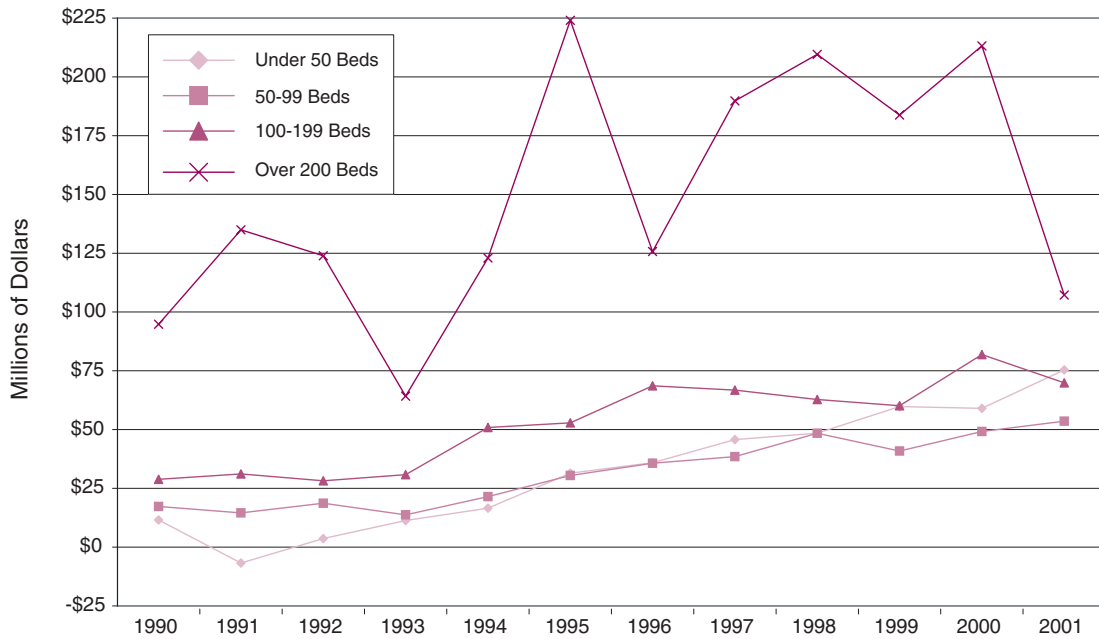
Operating, Non-Operating and Total Income for Minnesota Hospitals, 1990-2001  
(in millions of dollars)



Source: MDH, Health Care Cost Information System

Figure 4-4

Total Hospital Income in Minnesota by Size, 1990-2001  
(in millions of dollars)

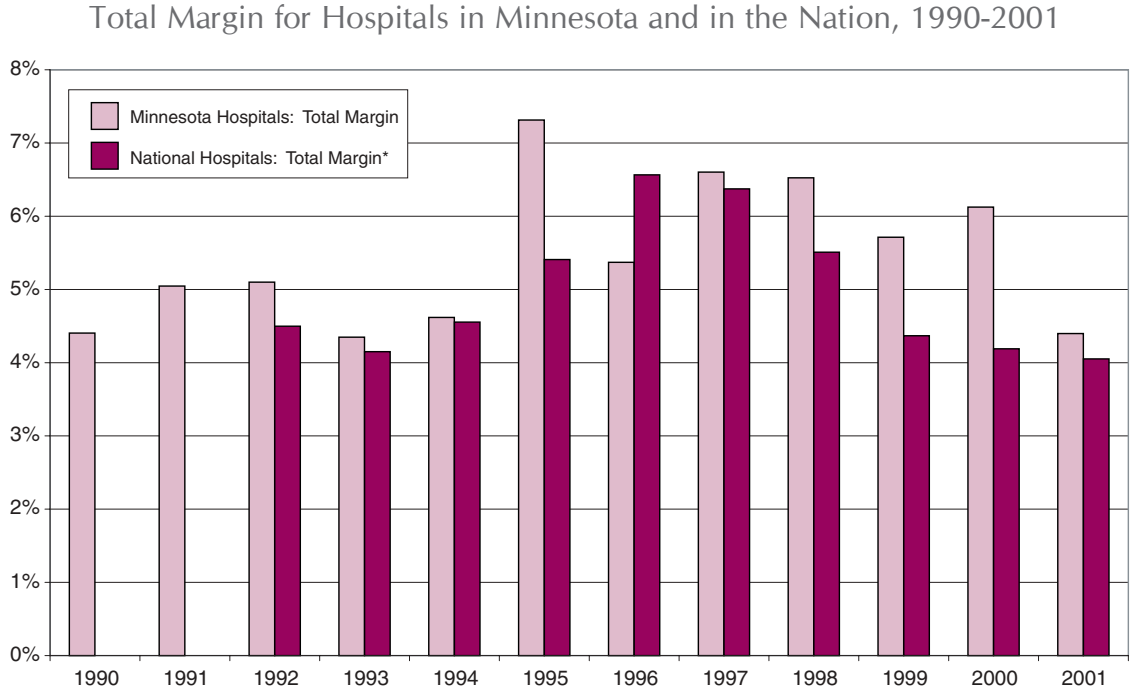


Source: MDH, Health Care Cost Information System

Another important trend to note in the financial performance of acute care hospitals is the role that non-operating income played in overall hospital income. Non-operating income comes from a variety of sources such as income from the sale of assets, or investments, interest income, and non-operating donations or grants. The split between non-operating income and operating income as a share of total income varied throughout the decade. Non-operating income was 13 percent of total income in 1994, its lowest share in the decade, and was almost 55 percent of total income in 1991 at its largest share. In 2001 the decline in total income can be attributed in large part to a decline in non-operating income. This trend is important to watch, particularly if financial markets continue to be volatile.

In addition to analyzing the level of income, it is important to examine income as a share of revenue when evaluating the financial strength of Minnesota’s hospital industry. Profit margins are revenues minus expenses, divided by revenues and multiplied by 100. They show the percent of revenue that is profit. There are two ways of calculating financial margins. The first is based on operating revenues and expenditures. These figures represent revenue and expenditures that are related to patient care activities only and show whether a hospital can support itself through revenue from its operations alone. The second way is to look at total hospital revenue and expenditures. Total revenue and expenditures are the combination of operating revenue and expenditures and revenue and expenditures that are not related to patient care, such as investment income. Unless otherwise noted, this report presents total margins. This was done to provide a complete financial picture of hospitals in Minnesota, not just of hospitals’ patient care activities, and to acknowledge the impact of non-operating income on financial performance.<sup>12</sup>

Figure 4-5



Note: margins are calculated at the hospital level rather than at the institution level

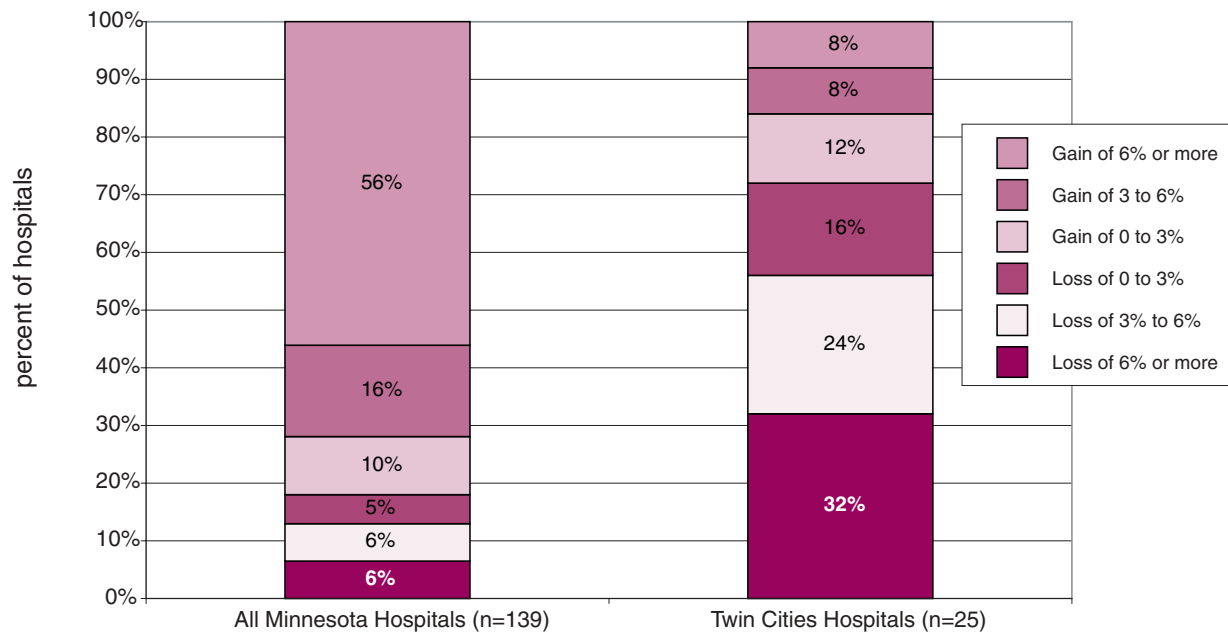
\*National data is unavailable until 1992

Source: MDH, Health Care Cost Information System

Figure 4-5 shows the average industry total margin for Minnesota and the nation from 1990 to 2001.<sup>13</sup> Both the Minnesota and national total hospital margins rose in the mid-1990s and decreased in the second half of the decade into 2001. This figure also shows that collectively, Minnesota hospitals had higher total margins than in the nation. In other words, Minnesota hospitals as a group were doing as well or better financially than hospitals across the nation throughout most of the last decade.

Figure 4-6

Distribution of Total Margin for All Minnesota Hospitals and for Twin Cities Hospitals, 2001\*

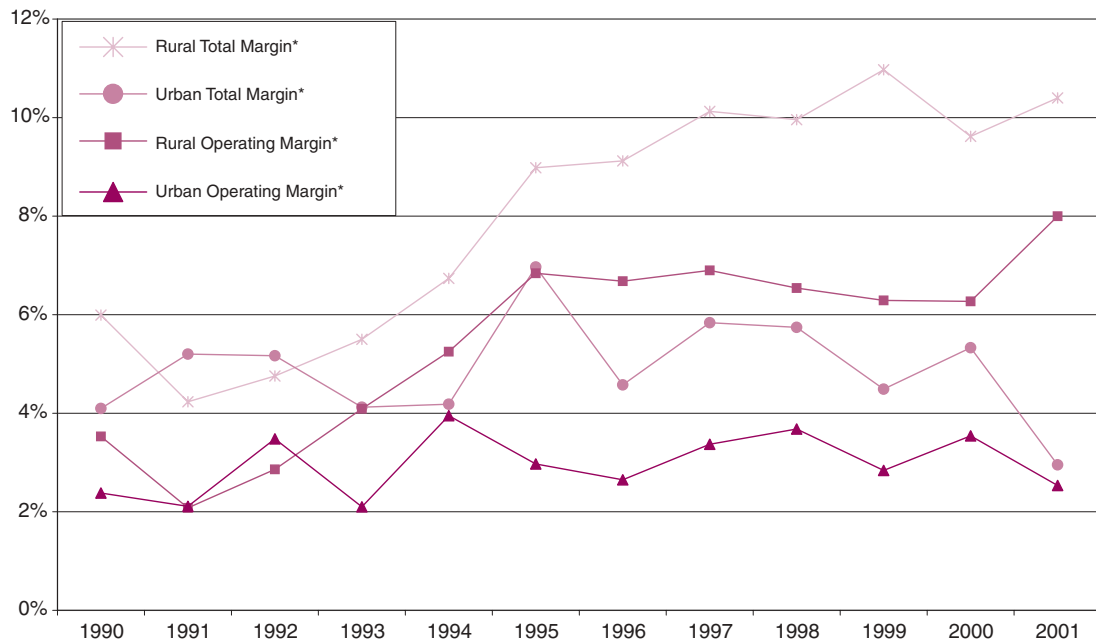


\*calculated at the hospital level rather than at the institution level  
 Source: MDH, Health Care Cost Information System

Despite relatively strong industry-wide performance, there is variation in the financial performance of individual hospitals. Figure 4-6 shows the distribution of total margins for all Minnesota hospitals and for hospitals in the Twin Cities in 2001. As illustrated by the figure, in 2001 there were many fewer hospitals in the Twin Cities with total margins of 6 percent or higher, and many more with margins of negative 6 percent or less than in the state as a whole. The Twin Cities also had a higher proportion of hospitals with negative profit margins than the state average in 2001 (28 percent compared to 18 percent.)

Figure 4-7

Total and Operating Margin for Rural and Urban Minnesota Hospitals 1990-2001



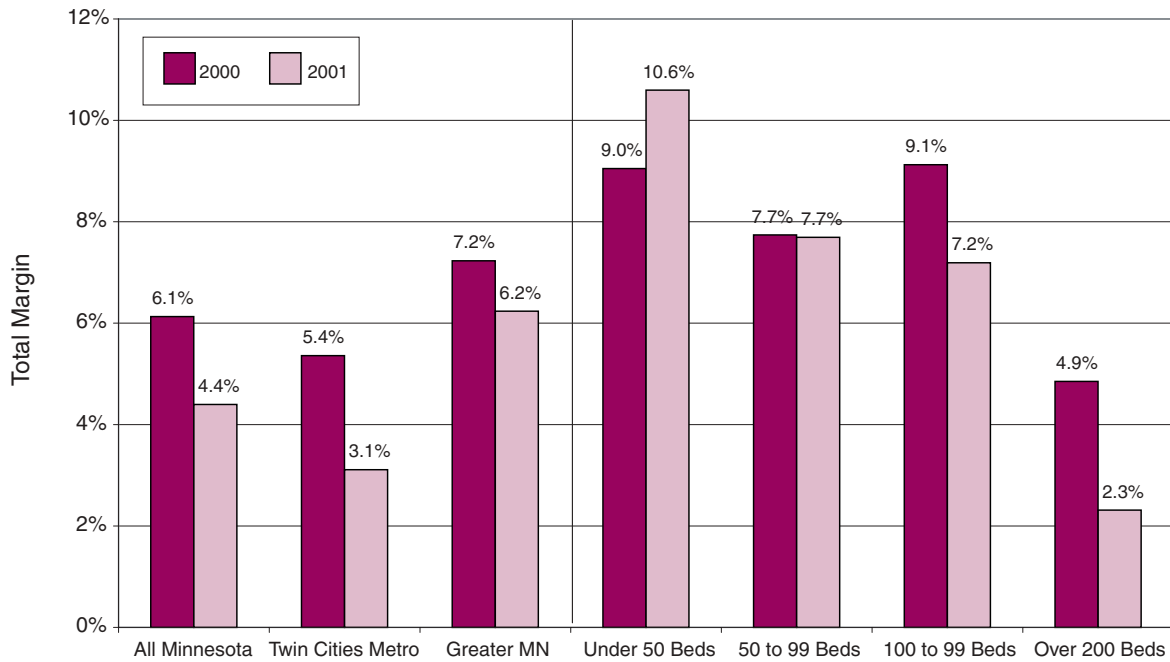
\*calculated at the hospital level rather than at the institution level  
 Source: MDH, Health Care Cost Information System

Breaking down the aggregate total margin further shows that rural Minnesota hospitals had larger total margins than urban hospitals throughout much of the decade (see Figure 4-7). The gap widened from slightly less than 2 percentage points in 1993 to over 7 percentage points in 2001, when the total margin earned by rural hospitals was more than three times the level of urban hospitals. Operating margins show a similar picture. In addition, there were differences between the total margin for hospitals in the Twin Cities metro area and those in Greater Minnesota (see Figure 4-8).<sup>14</sup> Figure 4-8 also shows the total margins for hospitals by size; hospitals with less than 50 beds had the highest total margin in 2001. Collectively, small and medium sized hospitals had higher total margins than large hospitals. Differences in total margins are related to a number of factors, including the amount of uncompensated care a hospital provides and the types of cases it attracts.



Figure 4-8

Total Margin by Region and Hospital Size, 1999 and 2001



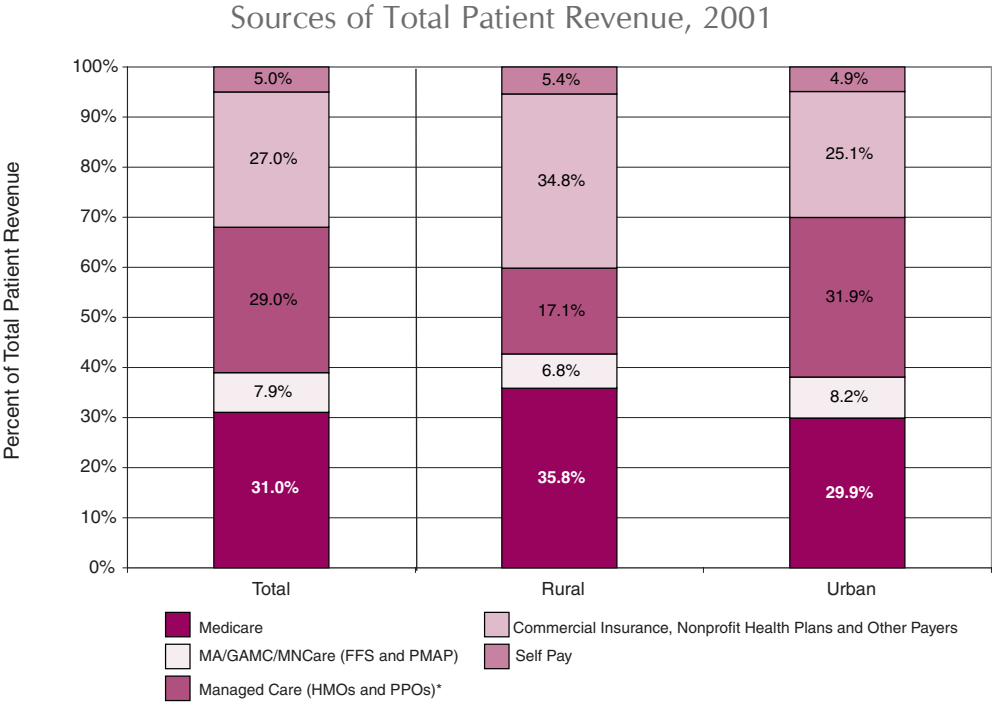
Source: MDH, Health Care Cost Information System

Another way of assessing the financial status of hospitals is to identify those that are categorized as “distressed.” To be considered distressed, a hospital must meet two criteria. First, a hospital must have had four or more years of losses over an 8-year period (termed a “troubled” hospital). Second, the cumulative net loss of the hospital over those 8 years must be greater than 10 percent of the hospital’s equity in the sixth year of the eight-year period. In 2001, 17 Minnesota hospitals qualified as “distressed” and one qualified as “troubled.” Of these, 13 were in rural areas, 15 had less than 50 licensed beds, and 10 had less than 25 beds. Although small rural hospitals display high positive total margins collectively, they also constitute the majority of hospitals in the worst financial condition in the state.

## Major Payers

Figure 4-9 shows the total patient revenue collected by Minnesota hospitals by source of payment.<sup>15</sup> Statewide, 39 percent of patient revenue in 2001 was financed through Medicare, Medicaid, or other public health insurance programs; this proportion is higher in rural areas than in urban areas (43 percent versus 38 percent), with Medicare representing a larger portion of hospital revenue in rural Minnesota compared to urban areas of the state. On the private side, revenue from managed care is a much higher share of the total in urban areas (32 percent and 17 percent in urban and rural areas, respectively).

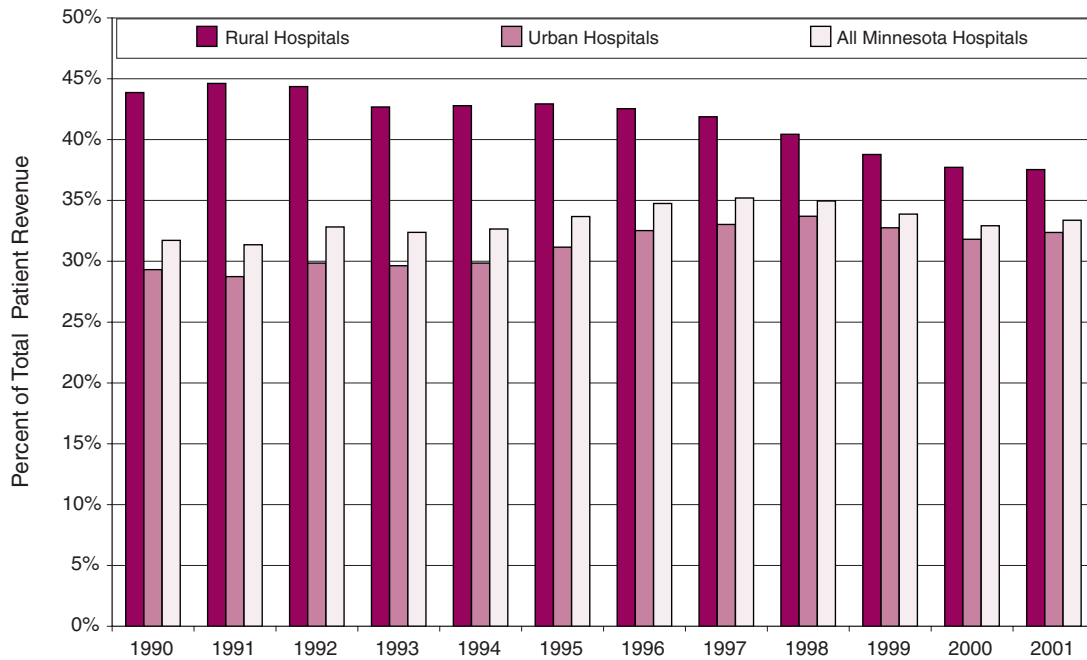
Figure 4-9



\*private insurance only  
 Source: MDH, Health Care Cost Information System

Figure 4-10

Percent of Minnesota Hospital Net Patient Revenue from Medicare, 1990-2001



Source: MDH, Health Care Cost Information

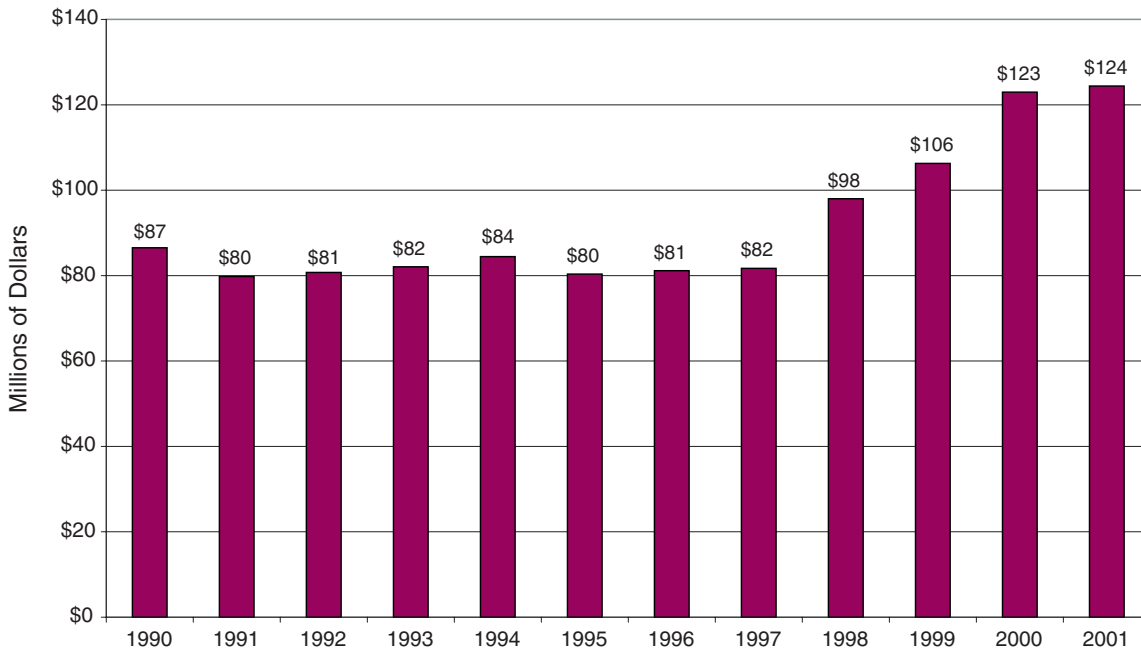
Figure 4-10 shows the share of net patient revenue that came from Medicare in urban, rural, and all Minnesota hospitals from 1990 to 2001. Overall, Medicare is the largest single payer for hospital services in Minnesota. The data show that Medicare represents a larger proportion of total revenue in rural hospitals than in urban hospitals, due to the fact that there is a higher share of the population over age 65 in rural Minnesota. Despite this, Medicare revenue of rural hospitals declined from roughly 44 percent of total revenue in 1990 to approximately 38 percent in 2001. The most rapid decline came in 1998, a year after the passage of the Balanced Budget Act. Hospitals in urban areas, however, saw Medicare as a proportion of total patient revenue rise beginning in 1995, hitting a high of 34 percent in 1998, followed by a decline through 2001.<sup>16</sup>

## Uncompensated Care

Uncompensated care (UC) is care that is provided but not paid for. When a hospital determines that a patient is unable to pay for services through insurance or personal resources, it classifies the charges as “charity care.” When a hospital expects a patient to pay for services but later determines that all or a portion of the bill cannot be collected, it classifies the charges as “bad debt.” Hospitals vary in their policies and procedures for classifying charges, and it is therefore difficult to make a distinction between charity care and bad debt. For this reason, the sum of charity care and bad debt is often reported together as uncompensated care. Hospitals with high uncompensated care costs may be more at risk financially than others. To cover the cost of uncompensated care, hospitals must collect more revenue from other sources.

Figure 4-11

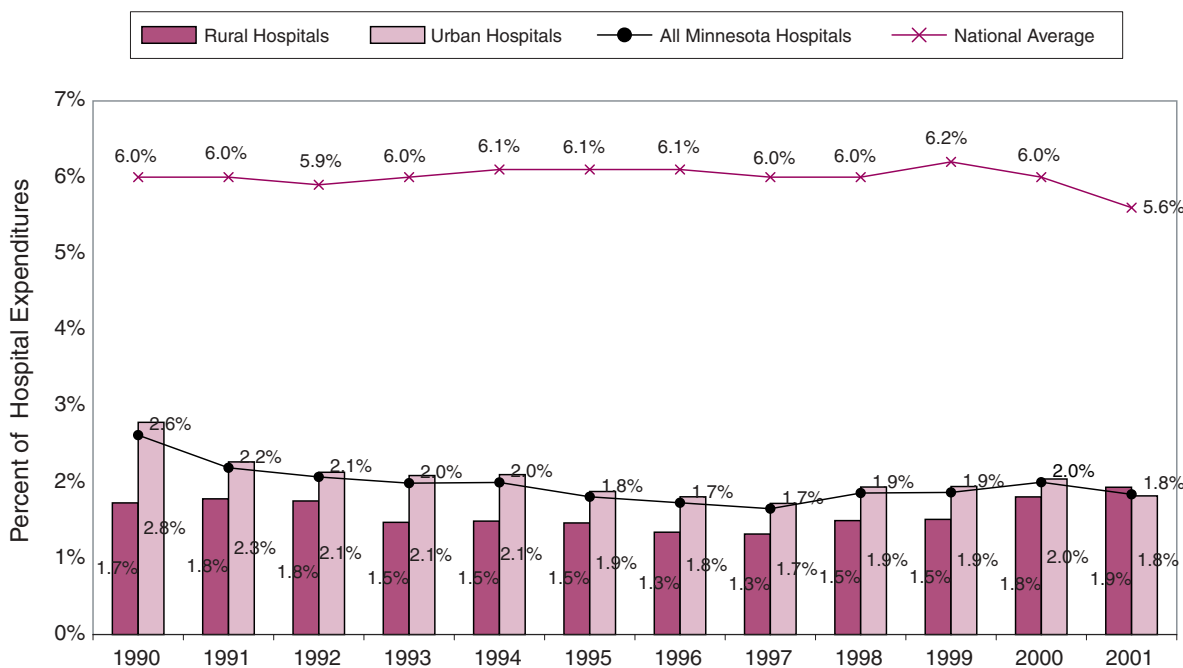
Uncompensated Care Costs in Minnesota Hospitals, 1990-2001\*  
(in millions of dollars)



\* uncompensated care is adjusted by a cost-to-charge ratio  
Source: MDH, Health Care Cost Information System

Figure 4-12

Uncompensated Care as a Percent of Hospital Operating Expenditures  
in Rural and Urban, Minnesota and Nationally, 1990-2001\*

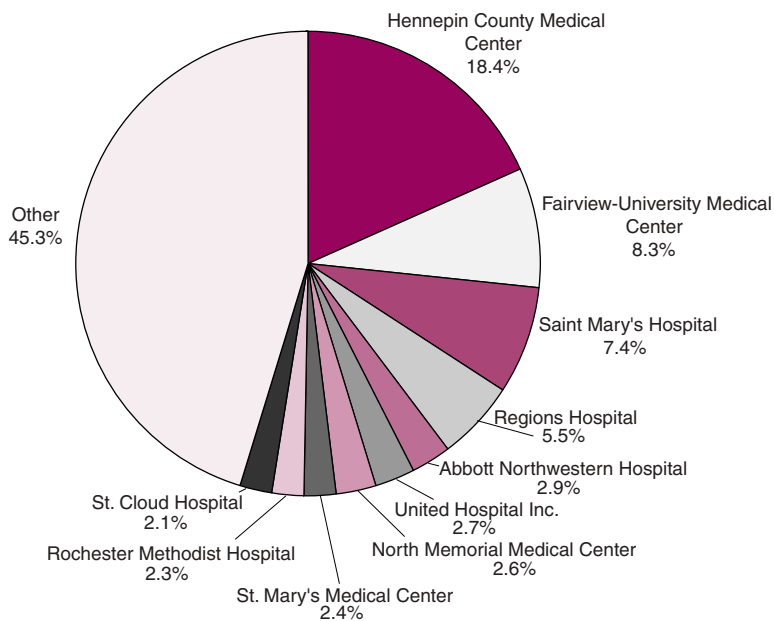


\* uncompensated care is adjusted by a cost-to-charge ratio  
Source: MDH, Health Care Cost Information System and AHA/Health Forum Annual Survey Data, 1980-2000.

Historically, Minnesota has had lower uncompensated care costs as a share of total operating expenditures when compared to the nation. In 2001, uncompensated care in Minnesota hospitals was \$124 million, and \$21.5 billion in the nation.<sup>17</sup> This represented about 1.8 percent of overall hospital operating expenditures in Minnesota, and 5.6 percent of operating expenditures in the nation. Figure 4-11 shows that the cost of uncompensated care increased during the late 1990s in Minnesota, after being stable for much of the decade. Despite these increases, however, uncompensated care costs have remained at about 2 percent of operating expenditures from 1990 to 2001. Figure 4-12 shows UC as a percent of hospital operating expenses for rural, urban, all Minnesota hospitals, and for all hospitals in the nation. As shown in the figure, UC in Minnesota accounts for a much smaller proportion of total operating expenses than in the nation as a whole. Within Minnesota, urban hospitals had higher UC as a share of expenses from 1990 to 2000, but the gap was shrinking. In 2001, rural hospitals had higher UC as a share of expenses for the first time in ten years. This has to do with the type of care that is provided at rural versus urban hospitals. Urban hospitals tend to be larger and provide more tertiary care, which means they see more severe cases. With more severe cases, urban hospitals are more likely to have expensive charity care cases.

Figure 4-13

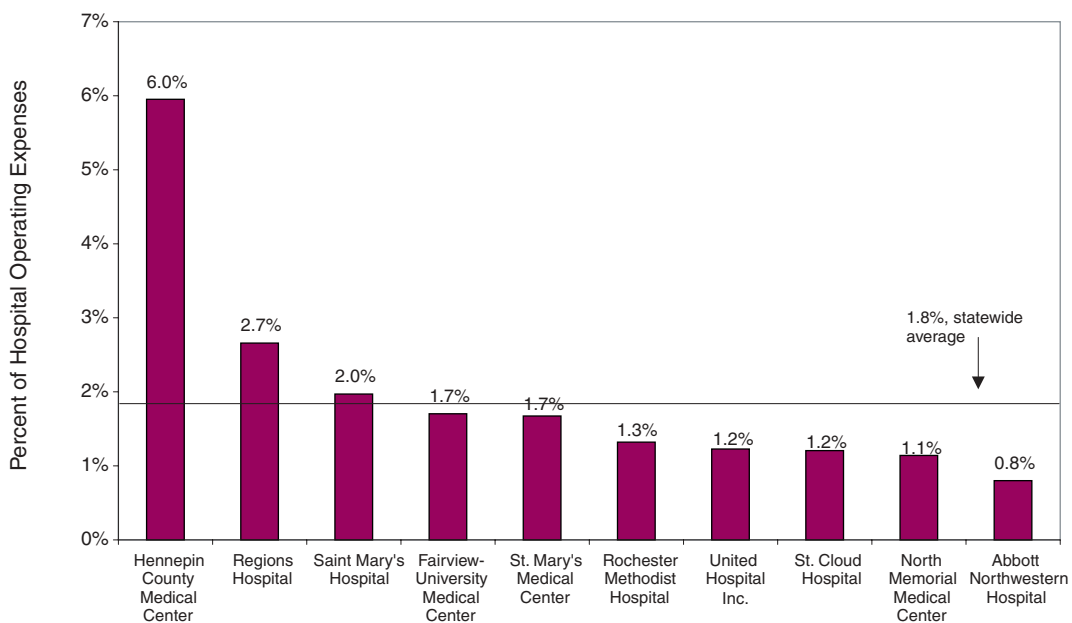
Distribution of Uncompensated Care by Hospital, 2001\*



\* uncompensated care is adjusted by a cost-to-charge ratio  
 Source: MDH, Health Care Cost Information System

Figure 4-14

Uncompensated Care as Share of Operating Expenses for the 10 Largest Providers of Uncompensated Care, 2001\*



\* uncompensated care is adjusted by a cost-to-charge ratio  
 Source: MDH, Health Care Cost Information System

Although on average Minnesota's hospitals have a relatively low burden of UC, this burden is distributed unevenly. Figure 4-13 shows the share of statewide uncompensated care costs for the 10 hospitals with the largest uncompensated care costs in 2001. Figure 4-14 shows uncompensated care costs for the largest providers of uncompensated care as a share of their total operating expenses. This figure illustrates that although all of these hospitals have large uncompensated care costs, all do not have high uncompensated care costs compared to their overall expenditures. Further, it suggests that the roughly 2 percent of operating expenses attributed to uncompensated care for urban hospitals during the 1990s (see Figure 4-12) was driven mainly by a small number of hospitals.





# Endnotes

<sup>1</sup> The analysis in this report is for non-federal, acute care hospitals. It excludes hospitals on American Indian reservations, Regional Treatment Centers and all federal hospitals including hospitals run by the Department of Veterans Affairs.

<sup>2</sup> Most Minnesota hospitals are required by law to submit a comprehensive annual summary of financial, utilization, and staffing information to HCCIS. Less comprehensive data are reported by psychiatric hospitals and regional treatment centers. Federal hospitals are exempt from reporting to HCCIS.

<sup>3</sup> Urban/rural distinctions are based on Metropolitan Statistical Areas (MSA). To be designated an MSA by the Census bureau, an area must have one city with 50,000 or more inhabitants, or a Census Bureau-defined urbanized area (of at least 50,000 inhabitants) and a total metropolitan population of at least 100,000 to be designated as urban. This definition classifies hospitals by county. Because of this, some hospitals that are fairly distant from population centers may be categorized as urban.

<sup>4</sup> Data does not include hospitals that were open for less than 6 months in a given year.

<sup>5</sup> The number of beds a hospital is licensed to have is not necessarily the same as the number of beds that the hospital actually operates.

<sup>6</sup> American Hospital Association. Hospital Statistics. ed. 2003.

<sup>7</sup> For the purposes of this report, a hospital is considered part of a system if it is owned or operated by a company that manages or owns other health provider facilities or healthcare-related enterprises.

<sup>8</sup> Twin Cities refers to the seven county metro area, which includes the counties of: Ramsey, Hennepin, Scott, Carver, Washington, Dakota and Anoka.

<sup>9</sup> Figures reported in this section represent full-time equivalents (FTEs) that are included in Salaries in Wages only. Contract and consultant FTEs are not included in the Figures.

<sup>10</sup> US Census Bureau. Analysis of Census data found that Minnesota's population grew faster in the later half of the 1990s at an average annual rate of 1.1 percent (1995 to 2000) compared with 1 percent (1989 to 1994).

<sup>11</sup> Valley Hospital at Hidden Lakes, located in Hennepin county, and Lakeside Medical Center, Inc., located in Pine County, are for-profit.

<sup>12</sup> Total margins are usually larger than operating margins because they include non-operating income in their calculation. For instance in 2001, the average total margin for Minnesota hospitals was 4.40 percent while the operating margin was 3.58 percent.

<sup>13</sup> Another way of assessing the financial performance of hospitals is by scrutinizing their profit and operating margins on an institutional level, thereby taking into account the performance of affiliated clinics and nursing homes. On average, margins on an institutional level are lower than margins calculated on a hospital level. For instance, the total margin for all Minnesota hospitals in 2001 was 4.4 percent when calculated on a hospital level and 2.7 percent when calculated on an institutional level.

<sup>14</sup> Counties outside the Twin Cities metro area.

<sup>15</sup> Net patient revenue is total hospital charges for patient care adjusted for discounts and uncollectible for different payers.

<sup>16</sup> It is important to note the recent increase in the number of rural hospitals that have qualified as Critical Access Hospitals (CAH). By the end of 2002, 45 rural hospitals were CAHs. Becoming a CAH allows hospitals to obtain alternative reimbursement for Medicare and to have staffing flexibility. In light of this, the share of revenue from Medicare as a proportion of the total revenue for rural hospitals may increase. For more information on CAHs visit the "Critical Access Hospital" section of the Minnesota Department of Health's Rural Health and Primary Care website: <http://www.health.state.mn.us/divs/chs/rhpc/cah/news.html>

<sup>17</sup> American Hospital Association. Health Forum Annual Survey Data, 1980-2001. This Figure represents charity care adjusted at the hospital level by a cost to charge ratio.

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