

Department of Health and Human Services

**OFFICE OF
INSPECTOR GENERAL**

**Trends in Rural Hospital Closure
1990-2000**



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Inspector General

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OFFICE OF INSPECTOR GENERAL

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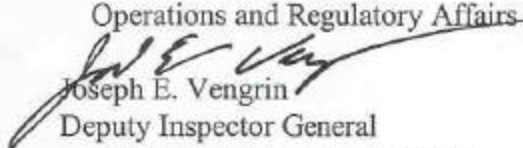
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MAY - 5 2003

TO: Jacquelyn Y. White
Director, Office of Strategic
Operations and Regulatory Affairs

FROM: 
Joseph E. Vengrin
Deputy Inspector General
for Evaluation and Inspections

SUBJECT: OIG Final Reports: "Trends in Rural Hospital Closure: 1990-2000,"
OEI-04-02-00610, "Trends in Urban Hospital Closure: 1990-2000,"
OEI-04-02-00611

Attached are two final reports that combine 11-years of hospital closure data and describe trends that are specific to hospitals that closed in rural communities as well as hospitals that closed in urban communities. The reports focus on the extent, characteristics, reasons for, and impact of hospitals that closed from 1990 through 2000.

Our review of rural hospitals that closed from 1990 through 2000 revealed that nationally:

- ▶ Two hundred and eight hospitals closed -- 7.8 percent of all rural hospitals.
- ▶ Rural hospitals that closed were generally smaller and treated fewer patients than rural hospitals nationally.
- ▶ Generally, rural hospital closures resulted from business related decisions or a low number of patients.
- ▶ Following a closure, alternative forms of health care were often available within the community.

Our review of urban hospitals that closed from 1990 through 2000 revealed that nationally:

- ▶ Two hundred and ninety-six hospitals closed -- 10.6 percent of all urban hospitals.
- ▶ Urban hospitals that closed were generally smaller and treated fewer patients than urban hospitals nationally.
- ▶ Generally, urban hospital closures resulted from competition, business related decisions, or a low number of patients.
- ▶ Hospital services were still available within 10 miles from most of the urban hospitals that closed.

This report is being issued directly in final since it contains no recommendations. You are not required to comment on the report. However, if you have any questions or comments, please call me or John Hapchuk, Director, Program Evaluation Divisions, or have your staff contact Tricia Davis at 410-786-3143.

Attachments

EXECUTIVE SUMMARY

OBJECTIVE

To summarize the extent, characteristics, reasons for, and impact of rural hospital closures from calendar years 1990 through 2000.

BACKGROUND

Hospital closures have generated concern among the health care industry, government leaders, and the general public. Of particular interest were the reasons for and impact of the closures.

In May 1989, the Office of Inspector General (OIG) released a report describing the phenomenon of urban and rural hospital closures within the United States during calendar year 1987. Many users of that information encouraged us to continue a yearly analysis to determine the rate of closure as well as trends in the characteristics and circumstances of hospitals that closed. Consequently, we conducted similar annual inspections documenting hospitals that closed through calendar year 2000.

In 1993, the OIG released a report describing trends associated with rural hospitals that closed from 1987 through 1991. Our current inspection broadens that information and focuses on the extent and characteristics, as well as the reasons for and effects of rural hospitals that closed during 1990-2000. We are issuing a separate report documenting the unique circumstances that led to urban hospital closures, "Trends in Urban Hospital Closure: 1990-2000" (OEI-04-02-00611).

To determine the extent, characteristics, reasons for, and impact of rural hospital closures during calendar year 1990-2000, we reviewed and expanded upon the information previously documented in our annual hospital closure reports. For those reports, we compiled hospital data from two Centers for Medicare & Medicaid Services (CMS) databases: the Hospital Cost Report Information System (HCRIS) and Provider of Service (POS) file. Additionally, we interviewed officials associated with each of the closed hospitals as well as representatives from state hospital and licensing agencies.

FINDINGS

Our review of rural hospitals that closed from 1990 through 2000 revealed the following:

208 rural hospitals closed -- 7.8 percent of all rural hospitals nationally at the beginning of the trend period.

- The average annual rate of closure was less than 1 percent.
- Rural bed supply was reduced by 3.7 percent (8,228 of the 220,028 rural beds nationally in 1990).

Generally, rural hospitals that closed were smaller and treated fewer patients than rural hospitals nationally.

- Rural hospitals that closed averaged fewer beds, lower occupancy rates and annual net income, and slightly lower Medicare and Medicaid utilization rates compared to rural hospitals nationally.
 - ▶ Size: 39.6 beds compared to 75.4 beds nationally
 - ▶ Occupancy: 25.4 percent compared to 35.6 percent nationally
 - ▶ Net income: \$1,488 compared to \$799,560 nationally
 - ▶ Medicare utilization: 53.9 percent compared to 55.5 percent nationally
 - ▶ Medicaid utilization: 11 percent compared to 12.1 percent nationally
- Rural hospitals that closed were used by about one-third as many patients as rural hospitals nationally. Specifically, their average daily census was:
 - ▶ Total patients: 10 patients, compared to 27 patients nationally
 - ▶ Medicare patients: 5 patients, compared to 15 patients nationally
 - ▶ Medicaid patients: 1 patient, compared to 3 patients nationally

Officials associated with most rural hospitals that closed reported the reasons to be business-related decisions or a low number of patients.

- From 1998 through 2000, 58 rural hospitals closed. Officials associated with most of those hospitals reported multiple reasons for closure; however, the primary reasons were as follows:
 - ▶ Business decisions: Twenty-five (43.1 percent) reported that the reason for closure was based on relocation, consolidation, or merger.
 - ▶ Number of patients: Fourteen (24.1 percent) attributed closure to low occupancy/low census.
 - ▶ Medicare and Medicaid reimbursements: Six (10.3 percent) reported insufficient Medicare and/or Medicaid reimbursements as reasons for closure; however, officials with five of those facilities stated that other factors, such as low occupancy, also contributed.
 - ▶ Other reasons: The remaining 13 (22.4 percent) reported various other reasons, such as competition or rising costs.

- During 1990-1997, we reported on the reasons for hospital closure in four of our annual reports (1990, 1993, 1996, and 1997); however, that information did not differentiate between urban and rural closures. During those years, hospitals (urban and rural combined) generally closed because of low occupancy, lagging revenues, rising costs, or a combination of those factors.

Following a closure, alternative forms of health care were often available within the community.

- Most rural residents had access to inpatient and emergency services within 20 miles of the closed hospital.
 - ▶ Inpatient care: In 138 of the 208 (66.3 percent) rural communities where a hospital closed, inpatient care was available within 20 miles of the closed hospital. Furthermore, residents in 185 (88.9 percent) of those communities could get inpatient care within 30 miles from the closed hospital.
 - ▶ Emergency care: In 163 of the 208 (78.4 percent) rural communities where a hospital closed, emergency care was available within 20 miles of the closed hospital. Residents in 201 (96.6 percent) of those communities could get emergency care within 30 miles from the closed hospital.
- Rural hospital openings, critical access hospitals, and rural health clinics have reduced the overall impact of rural hospital closure.
 - ▶ Hospital openings: During 1998-2000, 28 rural hospitals either opened or reopened, reducing the national impact of the 58 rural hospitals that closed during that those 3 years. Additionally, 64 hospitals (urban and rural) opened or reopened from 1990 through 1997. Prior to 1998, however, we did not identify such data specific to rural or urban classifications. Therefore, we cannot identify how many of the 64 openings were in rural communities.
 - ▶ Critical Access Hospitals: As of May 2002, 604 critical access hospitals (CAHs) were operating in rural areas across the country. The critical access classification is intended to provide an increased level of Medicare reimbursements to small rural hospitals -- potentially avoiding closure.
 - ▶ Rural Health Clinics (RHCs): Of the 58 rural hospitals that closed from 1998 through 2000, 40 of the buildings were either used for or located less than 20 miles from a rural health clinic. Furthermore, in 32 of those communities, multiple RHCs were less than 20 miles from the closed hospitals. We did not maintain such data prior to 1998.

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INTRODUCTION

OBJECTIVE

To summarize the extent, characteristics, reasons for, and impact of rural hospital closures from calendar years 1990 through 2000.

BACKGROUND

Hospital closures have generated concern among the health care industry, government leaders, and the general public. Of particular interest were the reasons for and impact of the closures.

In May 1989, the Office of Inspector General (OIG) released a report describing the phenomenon of urban and rural hospital closures within the United States during calendar year 1987. Many users of that information encouraged us to continue a yearly analysis to determine the rate of closure as well as trends in the characteristics and circumstances of hospitals that closed. Consequently, we conducted similar annual inspections documenting hospitals that closed through calendar year 2000.

In 1993, the OIG released a report that addressed trends associated with rural hospitals that closed from 1987-1991, "Trends in Rural Hospital Closure: 1987-1991"(OEI-04-92-00441). Our current inspection broadens that information and reports on the issue of rural hospital closures during 1990-2000. We are issuing a separate report documenting the unique circumstances that led to urban hospital closures, "Trends in Urban Hospital Closure: 1990-2000" (OEI-04-02-00611).

METHODOLOGY

To determine the extent, characteristics, reasons for, and impact of rural hospital closures during calendar year 1990-2000, we reviewed and expanded upon the information previously documented in our annual hospital closure reports. For those reports, we compiled hospital data from two Centers for Medicare & Medicaid Services (CMS) databases: the Hospital Cost Report Information System (HCRIS) and Provider of Service (POS) file. For each hospital that closed, we obtained cost report data accounting for the most recent full fiscal year prior to closure. Additionally, we interviewed officials associated with each of the closed hospitals as well as representatives from state hospital and licensing agencies.

We compiled data for hospitals that closed during the entire 11-year trend period -- including average number of beds, average occupancy, Medicare and Medicaid utilization, and the average number of patients affected -- by calculating weighted averages using the data we collected from our previous hospital closure reports. Due to rounding, some minor variation may exist between the data in this report when compared to the data in our annual hospital closure reports. Additionally, we compiled net income data directly from HCRIS.

To supplement the data, we contacted state licensing and certification agencies, state hospital associations, and state health planning agencies. Further, we surveyed various officials that were directly or indirectly associated with each hospital. Such officials included:

- ▶ Former hospital executives and physicians of the closed rural facilities,
- ▶ Executives from nearby hospitals,
- ▶ Local health and government officials, and
- ▶ Officials associated with parent corporations of closed hospitals.

We determined the distance from closed rural hospitals to the closest operating hospitals and emergency services using maps and mapping programs (e.g., Mapquest) in addition to the information provided by the various officials we interviewed.

We used data sets previously developed for our annual hospital closure reports to quantify rural hospitals that opened from 1998 through 2000. Prior to 1998, we did not identify such data specific to rural or urban classifications. The reported data was an aggregated total of openings and reopenings.

We analyzed the Balanced Budget Act of 1997 and the Balanced Budget Refinement Act of 1999 to determine the advantages and requirements specific to critical access hospitals. Additionally, we obtained a complete listing of Rural Health Clinics (RHCs) from CMS' Online Survey Certification Report System (OSCAR). We used SAS to quantify the approximate distance from RHCs to the rural hospitals that closed from 1998 through 2000. Distance was determined by cross referencing the zip code of each closed hospital with the zip code of each RHC.

We used the following definitions as we examined rural hospitals that closed during calendar years 1990-2000:

Rural Hospital: A facility located in a rural area that provided general, short-term, acute medical and surgical inpatient services.

Closed Hospital: A facility that stopped providing general, short-term, acute inpatient care during 1990-2000. We did not consider a hospital closed if it:

- ▶ Merged with, or was sold to, another hospital but the physical plant continued to provide inpatient acute care,
 - ▶ Converted to critical access status, or
 - ▶ Both closed and reopened during the same calendar year and at the same physical location.
-

We conducted our inspection between July 2002 and December 2002. We conducted this inspection in accordance with the *Quality Standards for Inspections* issued by the President's Council on Integrity and Efficiency.

FINDINGS

For more than a decade, the closure of rural hospitals has generated considerable public interest. This issue also generated concern among the health care industry and Congress. Specific areas of interest included the extent, characteristics, reasons for, and impact of hospital closures. Our national review of rural hospital closures that occurred from 1990 through 2000 revealed that:

- ▶ Two hundred-eight hospitals closed -- 7.8 percent of all rural hospitals.
- ▶ Rural hospitals that closed were generally smaller and treated fewer patients than rural hospitals nationally.
- ▶ Generally, rural hospital closures resulted from business-related decisions or a low number of patients.
- ▶ Following a closure, alternative forms of health care were often available within the community.

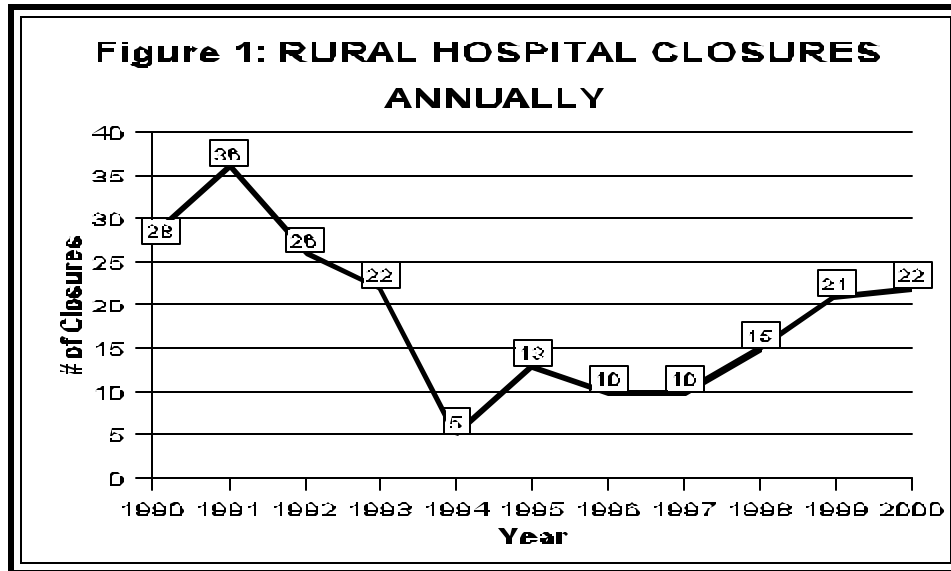
Extent and Characteristics of Rural Hospitals That Closed

Number of rural hospitals that closed

During 1990-2000, 208 rural hospitals closed. At the beginning of the trend period, 5,466 general, short-term, acute care hospitals were included nationally in CMS' HCRIS database. Of those, 2,667 (48.8 percent) were classified as rural hospitals.

Rural Hospitals in the U.S. in 1990	2,667
Rural Hospitals that Closed from 1990 through 2000	208 (7.8%)

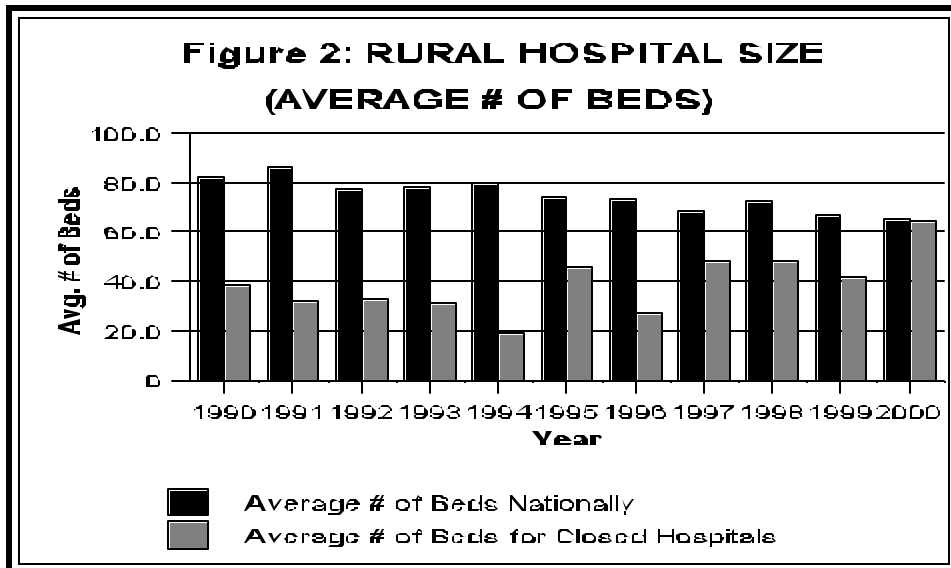
The average annual rate of hospital closure was less than 1 percent. The most closures for any given year occurred in 1991, when 36 rural hospitals closed. The lowest number occurred in 1994, when 5 rural hospitals closed. See Appendix A for state-specific data. Figure 1 illustrates the annual rate of rural closure.



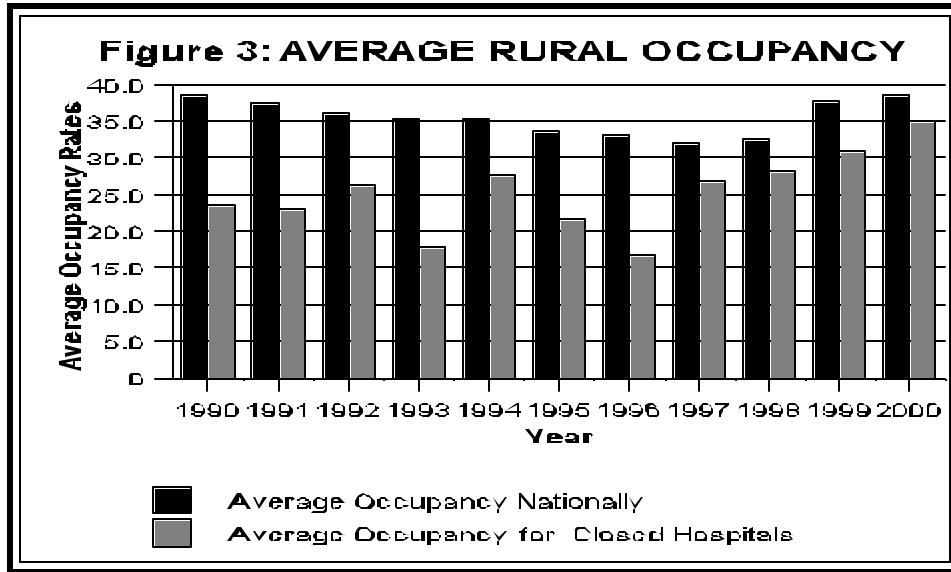
During the 11-year period, hospital closures reduced the inpatient bed supply in rural areas by 3.7 percent (8,228 of the 220,028 rural beds nationally at the beginning of the trend period).

Characteristics of rural hospitals that closed

Size: On average, rural hospitals that closed were considerably smaller than those that remained open. During 1990-2000, the closed hospitals averaged 39.6 beds compared to an average of 75.4 beds for rural hospitals nationally. An annual comparison of hospital size is illustrated in the figure below.

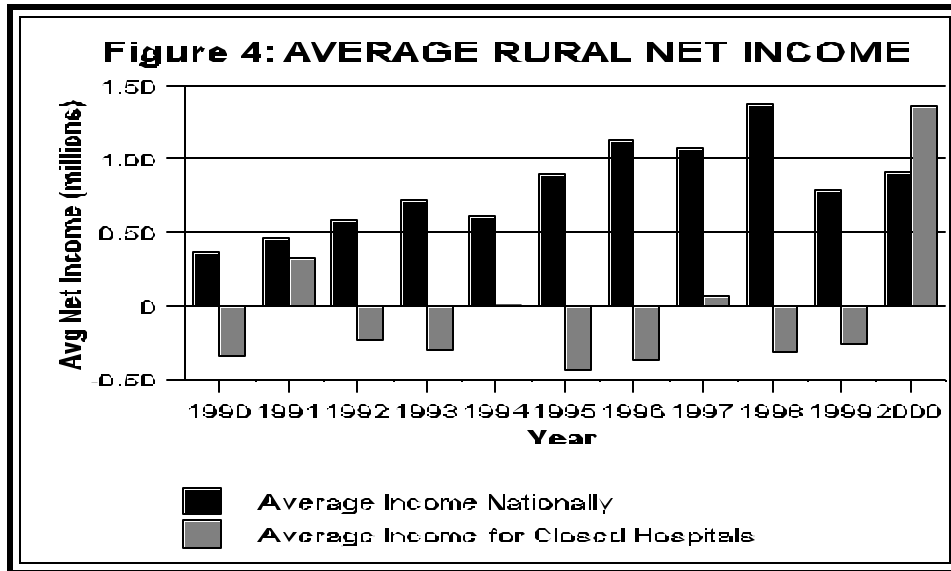


Occupancy: During the 11-year trend period, rural hospitals that closed had an average occupancy rate of 25.4 percent compared to an average of 35.6 percent for rural hospitals nationally.¹ Additionally, on an annual basis, occupancy was consistently lower for rural hospitals that closed. An annual comparison of average occupancy is illustrated in the following figure.



Net income: The average net income (the year prior to closure) for rural hospitals that closed was \$1,488 compared to an average of \$799,560 for rural hospitals nationally. A net loss for the closed hospitals occurred in 7 out of the 11 years that made up the trend period. In contrast, rural hospitals nationally averaged a positive net income for each of the 11 years. An annual comparison is illustrated in Figure 4.

¹We calculated average occupancy by dividing the actual number of patient days by the total bed days available for rural hospitals nationally (including those that closed). Then we summed the results and divided by the respective numbers of rural hospitals -- closed and nationally.



The high average net income for rural hospitals that closed in 2000 is attributed to multiple consolidations or changes in location² that occurred during that year. Those same factors contributed to a higher average size and occupancy for 2000.

Nine of the 22 rural hospitals that closed reported a positive net income for their previous fiscal year. Of those nine facilities, six closed their existing facilities to move to new, state-of-the-art buildings and three closed to consolidate services that were already under the same ownership. The following table shows the difference in size, occupancy, and net income for 2000 when the nine profitable facilities are removed from the averages.

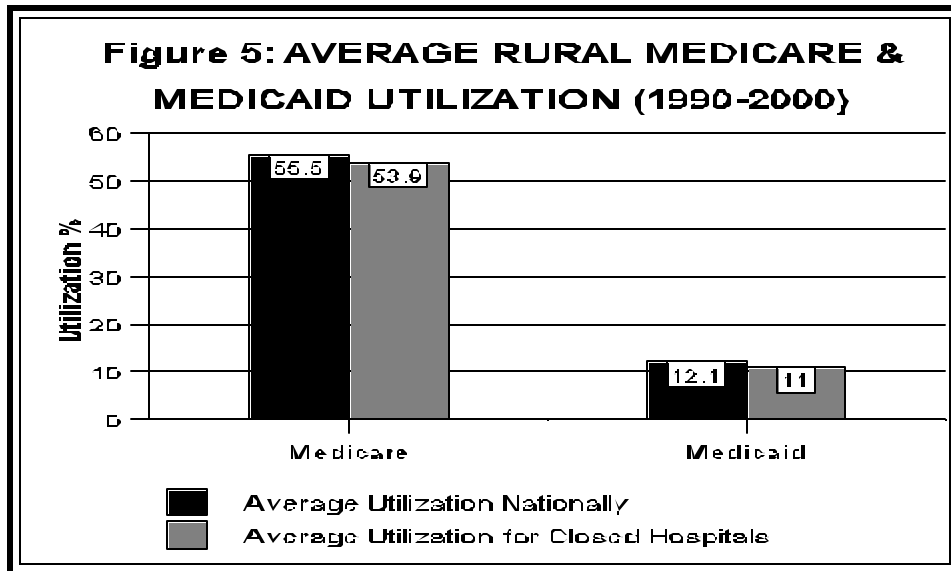
Average Occupancy, Size, and Net Income For Rural Hospitals That Closed in 2000			
	Occupancy	Size (# of beds)	Net Income
Overall Averages	35.1%	64	\$1,360,713
Averages without the Nine	29.1%	63	(\$1,399,130)

Medicare and Medicaid utilization: According to hospital cost report data for 1990 through 2000, rural hospitals that closed had slightly lower Medicare and Medicaid utilization rates than rural hospitals nationally. The average Medicare utilization for rural hospitals that closed was 53.9 percent, compared to 55.5 percent for rural hospitals nationally.³

²When a hospital changes location, we report this to be a closure; however, the closure is offset by an opening based on the new location.

³We calculated average Medicare utilization by dividing the Medicare patient days by total patient days for rural hospitals nationally (including those that closed). Then we summed the results and divided by the respective numbers of rural hospitals -- closed and nationally.

Similarly, Medicaid utilization for the closed hospitals was 11 percent, compared to the national average of 12.1 percent.⁴ See Appendix B for annual Medicare and Medicaid utilization data. Figure 5 highlights the overall average utilization rates for closed rural hospitals and rural hospitals nationally.



Number of patients affected: Consistent with their small size and low occupancy rates, rural hospitals that closed during 1990-2000 reported a low daily census in the year prior to closure.

Total patients: Nationally, rural hospitals averaged 27 patients per day in contrast to 10 patients among the rural hospitals that closed.

CLOSED RURAL HOSPITALS: TOTAL PATIENT CENSUS	
Average Number of Beds	39.56
Average Occupancy Rate	x 25.36%
Average Number of Patients Daily	10.03

Medicare and Medicaid patients: The average number of rural Medicare patients per day was 15 nationally, compared to 5 for the hospitals that closed. Furthermore, the average number of Medicaid patients per day was three nationally, in contrast to one in rural hospitals that closed.

⁴Medicaid utilization is calculated in the same way as Medicare utilization.

CLOSED RURAL HOSPITALS: MEDICARE AND MEDICAID CENSUS		
	<i>Medicare</i>	<i>Medicaid</i>
Average Number of Patients Daily	10.03	10.03
Average Medicare and Medicaid Utilization Rate	<u>x 53.85%</u>	<u>x 10.99%</u>
Average Number of Medicare and Medicaid Patients	5.40	1.10

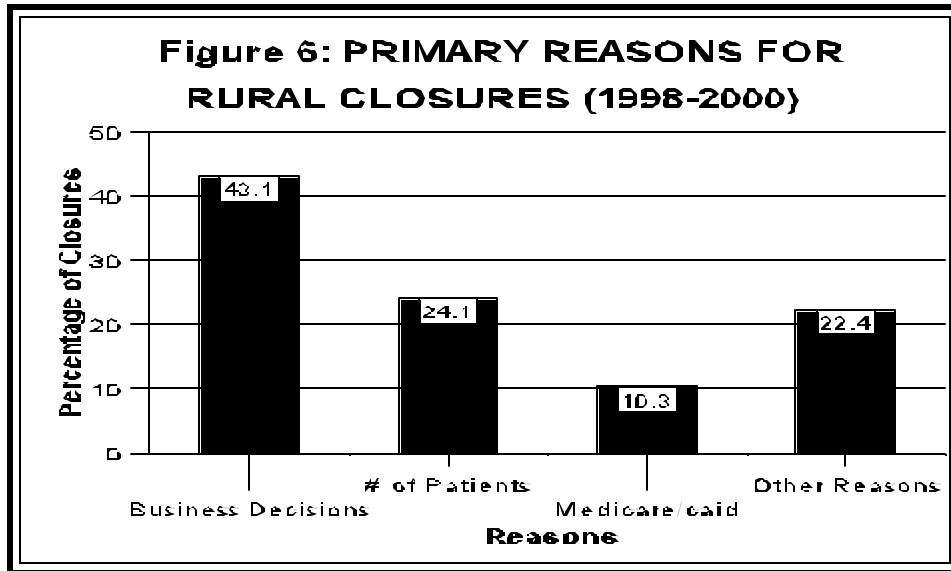
Reasons For Rural Hospital Closure

Officials reported various factors that contributed to rural hospital closures. The primary reasons, however, were business-related decisions, such as relocations, consolidations, or mergers or a low number of patients (low occupancy/low census). Additionally, hospitals closed due to other factors, including rising costs or lagging revenues.

During 1990-1997, we reported the reasons for hospital closure in four of our annual reports (1990, 1993, 1996, and 1997); however, that information did not differentiate between urban and rural closures. During those years, hospitals (urban and rural combined) generally closed because of low occupancy, lagging revenues, rising costs, or a combination of these factors. From 1998 through 2000, we collected information specific to the reasons for rural hospital closure. To determine those reasons, we interviewed senior executives, legal council, or other officials associated with the closed hospitals. Though some officials reported more than one reason for closure, the following information focuses on what they stated to be the primary reasons.

Fifty-eight rural hospitals closed from 1998 through 2000. Officials associated with 25 (43.1 percent) of those hospitals reported that the primary reason for closure was a business-related decision, such as relocation, consolidation, or merger. Fourteen (24.1 percent) of the closures were attributed to a low number of patients (low occupancy/low census). Only 6 (10.3 percent) of the hospital officials reported insufficient Medicare and/or Medicaid reimbursements as the primary reasons for closure. Of those six officials, five stated that other factors, such as low occupancy and rising costs, also contributed.

The remaining 13 (22.4 percent) hospitals were reported to have closed for various other reasons, such as competition or rising costs. Figure 6 provides a comparison of the primary reasons for rural hospital closure.



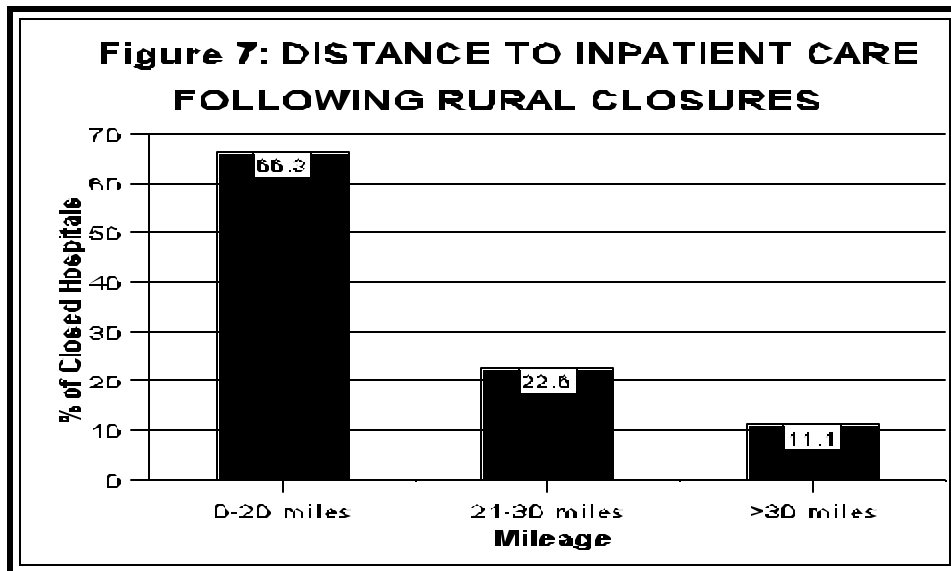
Impact of Rural Hospital Closure

Distance to inpatient and emergency care

Inpatient care: In 138 of the 208 (66.3 percent) rural communities where a hospital closed, inpatient care was available within 20 miles from the closed hospital. Furthermore, residents in 185 (88.9 percent) of those communities could get inpatient care within 30 miles from the closed hospital. For example, in 2000, a Michigan facility closed as a full-service hospital and transitioned to outpatient only. The closest full-service hospital was located 15 miles from that facility. In that case, the two facilities were under the same ownership and made this change to avoid a high percentage of overlapping services.

In the remaining 23 of the 208 (11.1 percent) rural communities where a hospital closed, full-service inpatient care was located greater than 30 miles from the closed hospital. For example, in 1992, 2 hospitals closed in Montana that were 35 and 38 miles from the closest full-service hospitals. However, one of those facilities continued to provide outpatient service along with very limited inpatient care and the other was planning to do the same.

Figure 7 shows summary information on the distances closed hospitals were from inpatient care that was still available.

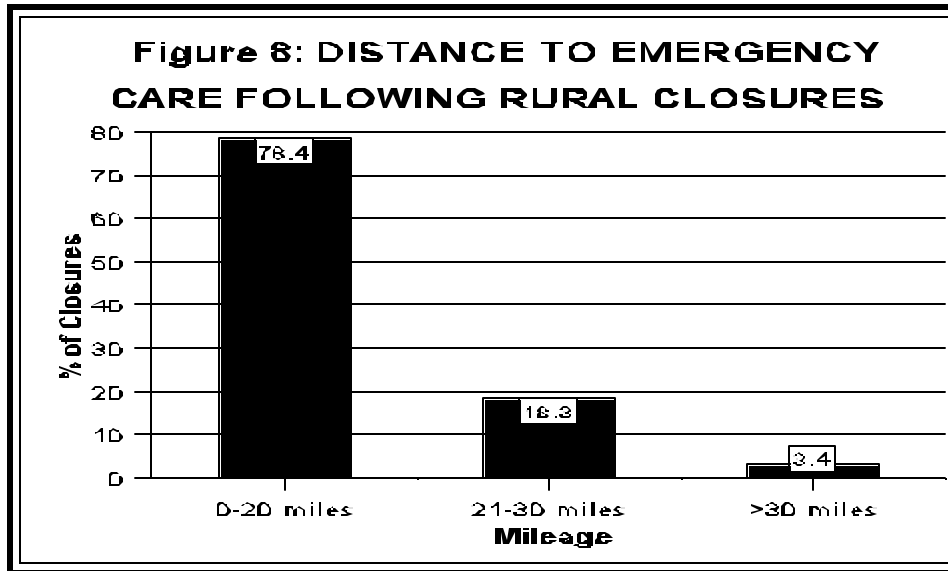


Emergency care: When hospitals close, communities potentially lose access to emergency services as well as inpatient care. In 163 of the 208 (78.4 percent) rural communities where a hospital closed, emergency care was available within 20 miles of the closed facility.

Furthermore, residents in 201 (96.6 percent) of those communities could get emergency care within 30 miles from the closed hospital. For example, an Ohio hospital that closed in 1998 was within 5 miles from the closest emergency care. In that case, the emergency care was located within a full-service hospital.

In the remaining 7 of the 208 (3.4 percent) rural communities where a hospital closed, emergency care was greater than 30 miles from the closed facility. For example, in 1993, 1 hospital that closed in Michigan was 35 miles from the closest 24-hour emergency service.

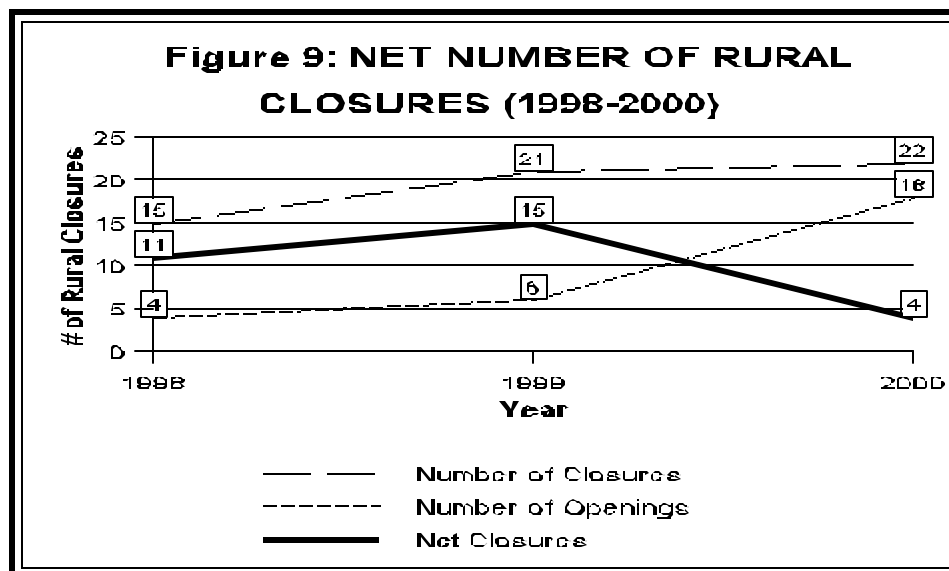
Figure 8 shows summary information on the distances closed hospitals were from emergency care that was still available.



Factors that reduced the impact of rural hospital closure

Hospital openings: Many hospitals opened or reopened in rural communities from 1990 through 2000, reducing the national impact of hospital closure. Prior to 1998, however, we did not identify such data specific to rural or urban classifications. From 1990 through 1997, 64 hospitals (urban and rural combined) opened or reopened. Those 64 hospitals are an aggregated total of openings and reopenings; therefore, we cannot identify how many of them were in rural communities.

During 1998-2000, 28 rural hospitals either opened or reopened, reducing the national impact of the 58 rural hospitals that closed during that timeframe. Figure 9 illustrates the net number of rural hospital closures for those 3 years.



As stated earlier in the report, 25 (43.1 percent) of the rural hospitals that closed from 1998 through 2000 were due to business-related decisions, such as relocation, consolidation, or merger. Of those closures, 12 (48 percent) were the direct result of relocation to newer buildings. When a hospital changed location, we reported it as a closure because the hospital had stopped providing general, short-term, acute care services in the physical plant from which it moved. However, for each of the 12 hospitals that relocated, the closure was offset by an opening of hospital services within a new building -- less than 5 miles from the old building. Therefore, impact on access to care was minimal when a hospital relocated.

Critical Access Hospitals: As of May 2002, 604 critical access hospitals (CAHs) were operating in rural areas across the country. The critical access classification is intended to provide an increased level of Medicare reimbursements to small rural hospitals -- potentially avoiding closure.

The Balanced Budget Refinement Act (BBRA) of 1999 requires hospitals classified as critical access to be more than 35 miles from another hospital; however, in rough terrain, such as mountainous or secondary roads, the requirement is 15 miles. Additionally, they must provide 24-hour emergency service, have no more than 15 acute care beds, and maintain an average length of stay of no more than 96 hours per patient.

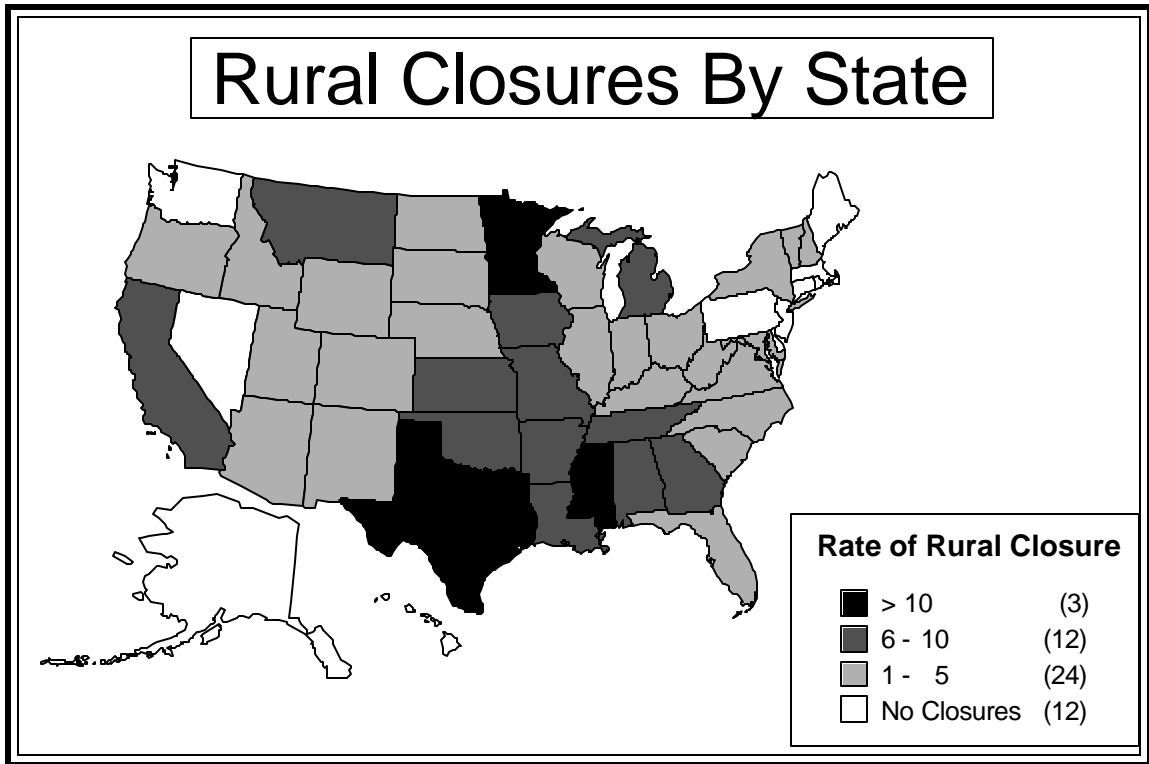
CAHs meet our definition of general, short-term, acute care hospitals. Therefore, hospitals that made this conversion were not counted as closures, and those that opened were not differentiated from other openings. Though we could not directly quantify the extent that the critical access classification reduced the impact of rural closures, the 604 CAHs operating in 2002 do provide access to hospital services in the rural areas where they are located. For example, a Wyoming hospital that closed in 1993 was able to reopen in 2000 as a CAH.

Rural Health Clinics: A variety of alternatives to hospitals were used in rural areas across the United States. For example, of the 58 rural hospitals that closed from 1998 through 2000, 40 of the facilities either converted to, or were located less than 20 miles from, a Rural Health Clinic (RHC). In 32 of the communities, multiple RHCs were less than 20 miles from the closed hospitals. For example, a rural California community lost its hospital in 1998; however, 5 RHCs were located less than 20 miles from the closed facility.

RURAL HOSPITAL CLOSURES BY STATE

During the 11-year trend period, rural hospitals closed in 39 states

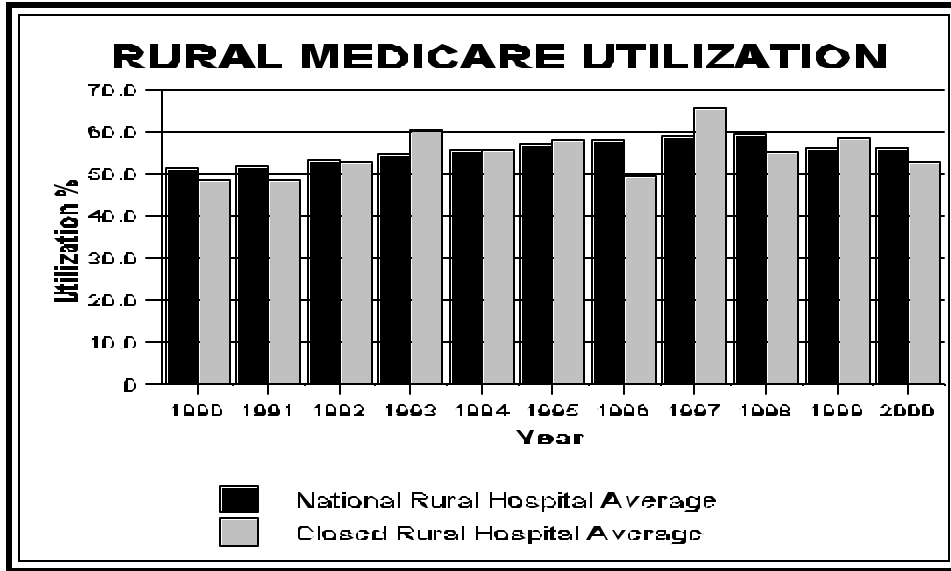
Texas had the greatest number of rural closures (24), followed by Minnesota and Mississippi (15), Kansas (10), Montana (9) and California and Louisiana (8). These 7 states account for 43 percent of all rural hospital closures from 1990 through 2000. The figure and table that follow show the frequency of rural closures for each state.



Number of Rural Hospital Closures By State (1990-2000)	
Texas	24
Minnesota	15
Mississippi	15
Kansas	10
Montana	9
California	8
Louisiana	8
Alabama	7
Iowa	7
Missouri	7
Oklahoma	7
Tennessee	7
Arkansas	6
Georgia	6
Michigan	6
North Dakota	5
Nebraska	5
Colorado	4
Illinois	4
Ohio	4
Oregon	4
South Dakota	4
Wisconsin	4
North Carolina	3
South Carolina	3
Utah	3
West Virginia	3
Florida	2
Idaho	2
Indiana	2
Kentucky	2
New Mexico	2
New York	2
Virginia	2
Wyoming	2
Arizona	1
Maryland	1
New Hampshire	1
Vermont	1

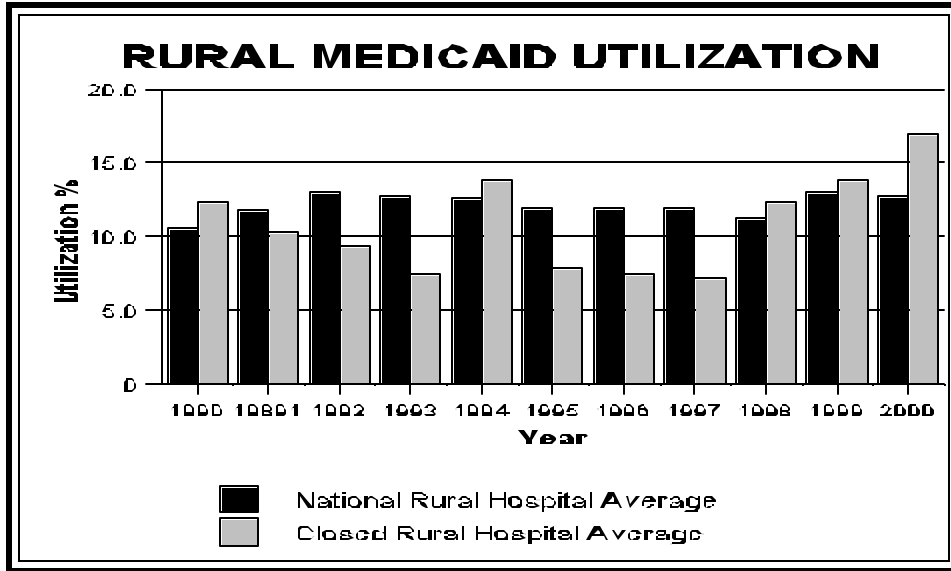
MEDICARE AND MEDICAID UTILIZATION

Medicare utilization: Rural hospitals that closed had an average Medicare utilization of 53.9 percent compared to an average of 55.5 percent for rural hospitals nationally. Medicare utilization was slightly higher among rural hospitals that closed in 4 of the 11 years, as shown in the following figure and table.



Annual Medicare Utilization Rates for Rural Hospitals											
Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
National Avg. %	51.2	51.8	53.4	54.8	55.5	57.1	58.0	59.0	59.3	56.1	56.1
Closed Avg. %	48.4	48.6	52.6	60.4	55.4	58.1	49.2	65.6	55.2	58.5	52.9

Medicaid utilization: Rural hospitals that closed had an average Medicaid utilization of 11 percent compared to an average of 12.1 percent for rural hospitals nationally. Although these averages are comparable, the yearly statistics show some variation as shown in the following figure and table.



Annual Medicaid Utilization Rates for Rural Hospitals											
Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
National Avg. %	10.6	11.8	13.0	12.7	12.6	11.9	11.9	12.0	11.3	13.0	12.7
Closed Avg. %	12.3	10.3	9.3	7.5	13.8	7.8	7.4	7.2	12.3	13.8	17.0

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