Supporting the Rural Health Care Safety Net

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This report is part of the Urban Institute's *Assessing the New Federalism* project, a multiyear effort to monitor and assess the devolution of social programs from the federal to the state and local levels. Alan Weil is the project director. The project analyzes changes in income support, social services, and health programs. In collaboration with Child Trends, the project studies child and family well-being.

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Assessing the New Federalism

Assessing the New Federalism is a multiyear Urban Institute project designed to analyze the devolution of responsibility for social programs from the federal government to the states, focusing primarily on health care, income security, employment and training programs, and social services. Researchers monitor program changes and fiscal developments. In collaboration with Child Trends, the project studies changes in family well-being. The project aims to provide timely, nonpartisan information to inform public debate and to help state and local decisionmakers carry out their new responsibilities more effectively.

Key components of the project include a household survey, studies of policies in 13 states, and a database with information on all states and the District of Columbia, available at the Urban Institute's Web site. This paper is one in a series of occasional papers analyzing information from these and other sources.

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Supporting the Rural Health Care Safety Net

Introduction

The policy- and market-driven changes in the health care sector taking place across the country are not confined to metropolitan areas. Rural communities are experiencing changes impelled by many of the same forces that are affecting urban areas. Because the structure of the health care system, the characteristics of the population, and other facts of rural life differ in significant ways from the urban experience, the market and policy effects of these forces in rural areas can be quite different from the effects in urban areas. It is therefore important to consider explicitly the impact of competitive forces and public policy developments on rural health care systems and the patients and communities they serve.

Changes in the health care sector are threatening many providers, both rural and urban. The consequences of the failure of a provider, however, whether it be a health facility or a health professional's practice, are potentially greater in rural areas. Because alternative sources of care in the community or within reasonable proximity are scarce, each provider likely plays a critical part in maintaining access to health care in the community. For this reason, in most rural communities all providers should be considered part of the health care safety net—if not directly through their care for vulnerable populations, then indirectly through their contribution to the stability of the community's health care infrastructure. Moreover, the health care infrastructure in a rural community is likely to be a mainstay of the community's economy. Closure of a rural hospital, in particular, can represent a serious threat not only to health but also to the economic well-being of the community.

As both the private and public sectors seek greater efficiency in health care delivery, the rural safety net, like its urban counterpart, is having to adapt in order to survive. This report discusses the challenges faced in the health care sector in several communities. It describes the ways in which governments and individual providers

in these communities have attempted to strengthen rural health delivery systems and ensure access to essential health services, particularly for the low-income population. The experiences of the communities discussed here highlight universal concerns in the rural health care sector and show the diversity of approaches to addressing these problems.

Methods

This report is based on case studies of rural communities in five states—Alabama, Minnesota, Mississippi, Texas, and Washington. These states were selected to represent a broad range of pressures facing rural providers, as well as to show the variety of government and provider responses to these pressures. Site visits took place over the period May–September 1998, with two to three days spent at each site. The authors interviewed hospital and clinic administrators, physicians, health department directors, county social services directors, and county commissioners, using a standard set of questions developed for each category of respondent. An obvious and important caveat to the findings presented here is that the authors visited and collected information on rural communities in which there were providers to interview; consequently, the findings do not capture the situation of individuals who live in areas far removed from a hospital or even a physician.

This study of the rural health care safety net is part of the Urban Institute's *Assessing the New Federalism* project, a multiyear effort to examine changes in social policies for low-income families—and the effect of such changes—as the federal government shifts more authority over social services and health programs to the states. In this project, Urban Institute researchers conducted intensive case studies of 13 states, of which the 5 states in this study are a subset, and fielded a household survey in each of the 13 states. Both the case studies and the survey were conducted in 1996–1997 and are being repeated in 1999–2000 in order to monitor changes in welfare and health care policies and trends in the well-being of families in the wake of these changes.[1]

One of the areas of study in the first round of site visits was the urban health care safety net. Two reports focused on 17 metropolitan areas within the 13 focal states, outlining the threats to and responses of providers serving the urban poor (Norton and Lipson 1998a, 1998b). This study of rural safety net providers offers a complementary perspective on issues of health care access for vulnerable rural populations, highlighting the challenges, assets, and supports of rural health systems. The report primarily addresses the medical care sector and, for the most part, excludes discussion of long-term care, mental health care, and dental care, among other services.

Overview of Current Issues in Rural Health

The principal concern in rural health care is maintaining the availability of necessary services within the community. A critical debate now under way centers on what constitutes necessary services, a debate that can be seen most explicitly in the various recent proposals supporting a "limited-service" model for rural hospitals. Rural hospitals, at the same time, are in many cases responding to community needs by broadening rather than narrowing the range of services they provide, adding such

services as renal dialysis and outpatient surgery. While a limited-service model may be the most efficient approach to health services delivery from a regional perspective, viewed from the local perspective the hospital fills more roles than just provider of health care, and many communities are reluctant to see any diminution in the hospital's function or stature. Furthermore, rural communities fear that a limited-service hospital may be more likely to be bypassed by wealthier, insured residents, leaving the local hospital with a larger share of its patient population uninsured or publicly insured. Finally, the limited-service model requires that the local hospital establish a referral relationship with a larger facility, something rural hospitals may be reluctant to do in some cases for fear of losing local control over health care services.

The desire to have services available locally is fueled both by the importance of access to health care to individuals in the community and by the importance of the health care sector to the local economy. For health care access, local availability is most critical for vulnerable populations, such as the elderly and the poor, who would be least able to travel to obtain services that were not available locally. For the local economy, local availability and control of services ensures that expenditures made on health care are retained by the community. These expenditures, estimated nationally at more than $3,000 per capita per year (Cordes 1997), represent local resources as well as state and federal funds that come into the community in the form of reimbursement for services and direct support for local health care institutions. Finally, without a local health care system, communities may find it difficult to bring in new residents or to attract and retain new businesses and the jobs they represent.

To maintain local health services, communities face the related issues of recruitment and retention of health care professionals and of ensuring the financial viability of local hospitals. Physicians are reluctant to locate in communities without a hospital. Conversely, without a strong physician practice, hospitals find it difficult to attract patients. Historically, the availability of primary care physicians has been the main constraint. As the practice of medicine becomes more complex, hospitals are finding that even the lack of specialists can be detrimental. The increasing prevalence of managed care in urban areas is changing the parameters of professional recruitment in rural areas. Urban managed care has led to increased demand for primary care providers. Rural health systems find that competition for these professionals has increased, making it even harder to persuade physicians to locate in rural areas, particularly because rural hospitals, with their smaller patient base, are less able to match the financial incentives offered by urban hospitals. The flip side of the increased competition for primary care providers, however, is the increased willingness of specialists to come to rural communities as demand for their services falls under urban managed care.

A rural hospital, whether full or limited service, must cope with the constraints imposed by its rural location. The low population density in rural areas has many implications for health care. The population required to support a given service, such as a hospital or a particular physician practice, is spread over a much greater area. Low volume can mean high average costs, a factor that rural health officials feel is not always taken into account in reimbursement. For some services, low patient volume may affect quality or the public perception of quality, encouraging some residents to look outside the community for such services and, in turn, exacerbating the

volume problem. Distances to providers, particularly specialty providers, are likely to be longer, as are response times for emergencies and travel time for home health providers. Transportation to providers is critical given the greater distances involved, but public transportation systems are usually lacking, and the demands on private transportation may be greater.

The demographic and socioeconomic profile common to rural communities also influences the demands placed on the health care system. Rural areas in general have greater concentrations of elderly people than do urban areas. An older population is more likely to have chronic health care needs, which can place a heavy burden on communities that may already face provider shortages, and older people may be less able to travel to obtain health care services. Occupational health issues are different; for example, where agriculture dominates the economy, farming accidents represent a challenge for emergency medical systems. Poorer access to mass media and lower educational levels may hamper health education efforts, with the result that rural residents may be less familiar with preventive health measures and less aware of public programs.

Patterns of insurance coverage are also different in rural areas. A higher level of self-employment, such as independent farming, and smaller firm size generally mean that employer-sponsored health insurance is less common. Individually purchased insurance coverage is more likely to have a higher deductible and more limited benefits, meaning that many people who are not actually uninsured may be underinsured. Coverage for prescriptions may be lacking, and the higher poverty level may mean that prescription drug costs are beyond the means of some rural residents. The older age structure and higher poverty level mean that public insurance programs are more important, but the social structure of rural communities may make the stigma attached to participation in public programs greater, particularly in the case of Medicaid.

The importance of public insurance—Medicare for the elderly and Medicaid for the poor—makes rural providers more dependent on revenues from these programs than are their urban counterparts and so potentially more vulnerable to changes in public policies. Rural communities have long felt that reimbursement rates under public programs are based on a faulty assumption of lower costs in rural areas and so biased against rural areas. Rural areas contend that they must compete with urban areas for health care professionals and so must offer competitive salaries. High provider turnover means that recruitment costs are a recurring rather than occasional expense. Rural hospitals, faced with a smaller patient base over which to spread fixed costs, argue that reimbursement rates pay insufficient attention to this constraint. Newer technologies, such as telemedicine, that hold the promise of improving access to specialists are also subject to a perceived rural bias; reimbursement policy lags behind technology development, and rural line charges for electronic communications represent an additional hurdle for local providers.

Uninsured patients in rural areas turn to the same providers that uninsured patients use in other areas—community health centers, hospital emergency rooms, local health departments, and private providers. In rural areas, however, the number of providers is usually limited, and so the differences between the providers used by the uninsured and those used by the insured are fewer than in larger communities.

The result is that the safety net in rural areas generally includes almost all providers in the community; that is, the health care infrastructure in a rural community is the safety net, and to maintain one is to maintain the other. Assuring low-income rural residents access to health care through public programs increases the potential number of paying patients served by rural providers and the probability that these providers will prosper. Thus, adequate support of public programs for low-income rural residents provides support to the local health care system and benefits the whole community.

The Study Communities

Site visits were made to 11 counties in the five study states. Locations were chosen based on a number of factors, including population density, percentage of population below the poverty level, health status indicators, and availability of health care services (table 1). The states and counties visited appear below.

State	Counties Visited
Alabama	Greene, Perry, Pickens
Minnesota	Cottonwood, Stevens
Mississippi	Holmes, Noxubee
Texas	Childress, Hale
Washington	Ferry, Stevens

This section describes the sociodemographic characteristics, health status, and insurance coverage of the five study states and 11 study counties. Table 1 provides a summary of selected sociodemographic characteristics of each state and of the study counties. Table 2 shows infant mortality rates, and table 3 provides information on insurance status. Where available, differences between rural and urban areas in the state are shown for each indicator, and national rural-urban statistics are provided on all tables for comparison. In all tables and discussion, the urban designation refers to counties in the state's metropolitan statistical areas (MSAs); non-MSA counties are defined as rural.

Sociodemographic Information

In general, rural areas have an older population base and higher rates of poverty. There are wide variations across the states in these indicators, however, and individual counties within states may vary from this profile.

Urban populations are growing more rapidly than rural populations in both the country as a whole and the study states. As table 1 indicates, between 1990 and 1996 the urban population of the United States grew by 9.7 percent, while the rural population fell by 1.9 percent. A similar trend can be seen in the five study states, where the rural population is either decreasing or growing at a slower rate than the urban population in the state. This trend is most pronounced in Mississippi, the most rural of the study states, where the urban population increased by 23.8 percent while the rural population declined by 2.6 percent. The smallest difference in rural-

Table 1 *Sociodemographic Characteristics of State Metropolitan Statistical Areas (MSAs) and Non-MSAs*

Data Category	Population per Square Kilometer, 1996	Population, 1990 (000s)	Population, 1996[a] (000s)	Population Growth, 1990–96 (%)	Population over 65, 1995 (%)	Population below FPL, 1996[b] (%)	Population's Racial Composition: White, 1996 (%)	Black, 1996 (%)	Hispanic, 1996[c] (%)
U.S. Total	29.0	248,708	265,284	6.7	12.8	14.5	82.8	12.6	10.7
U.S. Total, MSAs	n/a	194,178	211,785	9.7	12.3	14.1	n/a	n/a	n/a
U.S. Total, Non-MSAs	n/a	54,530	53,498	–1.9	14.8	16.5	n/a	n/a	n/a
Alabama	32.5	4,041	4,287	6.1	13.0	16.4	73.2	25.8	0.8
MSAs	n/a	2,723	2,894	6.3	12.5	14.3	n/a	n/a	n/a
Non-MSAs	n/a	1,317	1,394	5.8	14.0	20.8	n/a	n/a	n/a
Greene County	5.9	10	10	–2.3	15.8	n/a	18.8	81.1	0.2
Perry County	6.8	13	13	–1.4	15.1	n/a	34.7	65.0	0.3
Pickens County	9.1	21	21	1.4	15.6	n/a	56.8	42.9	0.3
Minnesota	22.6	4,375	4,649	6.3	12.4	10.5	93.6	2.7	1.6
MSAs	n/a	2,960	3,247	9.7	10.6	8.7	n/a	n/a	n/a
Non-MSAs	n/a	1,415	1,401	–1.0	16.6	15.4	n/a	n/a	n/a
Cottonwood County	7.4	13	12	–2.8	22.4	n/a	98.9	0.1	0.6
Stevens County	7.0	11	10	–4.0	16.2	n/a	97.4	0.6	0.6
Mississippi	22.4	2,574	2,711	5.3	12.3	21.8	62.7	36.3	0.7
MSAs	n/a	776	960	23.8	10.8	17.4	n/a	n/a	n/a
Non-MSAs	n/a	1,798	1,751	–2.6	13.1	24.2	n/a	n/a	n/a
Holmes County	10.9	22	21	–1.0	13.3	n/a	23.1	76.7	0.2
Noxubee County	6.9	13	12	–1.6	12.8	n/a	30.1	69.5	0.2
Texas	28.2	16,986	19,091	12.4	10.2	18.5	84.7	12.2	28.8
MSAs	n/a	13,867	16,099	16.1	9.2	18.1	n/a	n/a	n/a
Non-MSAs	n/a	3,119	2,992	–4.1	15.6	20.5	n/a	n/a	n/a
Childress County	4.1	6	8	28.1	18.7	n/a	87.7	11.6	19.6
Hale County	14.0	35	37	5.3	12.3	n/a	92.8	6.0	46.1
Washington	32.1	4,867	5,520	13.4	11.6	13.0	89.4	3.4	5.8
MSAs	n/a	3,976	4,580	15.2	10.9	10.5	n/a	n/a	n/a
Non-MSAs	n/a	891	940	5.5	14.7	21.7	n/a	n/a	n/a
Ferry County	1.3	6	7	13.7	10.4	n/a	80.7	0.3	1.8
Stevens County	6.0	31	39	24.8	11.4	n/a	93.0	0.3	2.1

Source: Gaquin and Littman 1998.
a. 1996 population numbers are from the Census Bureau's mid-year population estimates.
b. Three-year merge of March 1996, 1997, and 1998 Current Population Surveys.
c. Hispanic persons may be of any race.

Table 2 *Infant Mortality Rates* in the Study States*

State/County	Infant Mortality Rate, 1992–94 (%)
US Total	8.3
Alabama	10.3
Greene County	12.8
Perry County	12.4
Pickens County	6.8
Minnesota	7.2
Cottonwood County	9.1
Stevens County	3.7
Mississippi	11.5
Holmes County	14.4
Noxubee County	19.2
Texas	7.5
Childress County	12.0
Hale County	10.7
Washington	6.5
Ferry County	12.1
Stevens County	7.8

Source: Gaquin and Littman 1998.
*Deaths of infants under one year of age per 1,000 live births.

urban growth is seen in Alabama, where the rural population increased by 5.8 percent and the urban population grew only slightly faster at 6.3 percent.

Nationally, 14.8 percent of the population living in rural areas in 1995 were over age 65, compared with 12.3 percent in urban areas. This trend is reflected in the study states as well. Texas has the smallest statewide proportion of residents over the age of 65 (10.2 percent) but the largest gap among the study states between the percentage of people over age 65 in urban (9.2 percent) versus rural (15.6 percent) areas. Minnesota has the highest proportion of elderly in rural areas (16.6 percent); in one study county, Cottonwood, 22.4 percent of the population are over age 65. In contrast to the national and state trends, five of the study counties had a lower proportion of elderly residents than their state's rural average. In Washington, both study counties had a smaller proportion of elderly residents than the state's average.

In addition to the higher concentrations of elderly, rural counties tend to have higher levels of poverty than urban counties. Nationally, in 1996, 14.5 percent of the overall population were living below the federal poverty level (FPL); 16.5 percent of the rural population and 14.1 percent of the urban population lived in poverty.[2] The statewide proportion of the population in poverty in the study states ranged from a low of 10.5 percent in Minnesota to a high of 21.8 percent in Mississippi. In all five states, the rural poverty rate exceeded the urban rate by an average of 6.8 percentage points. The gap was largest in Washington, where 21.7 percent of rural residents and 10.5 percent of urban residents lived in poverty. Statewide averages often conceal regional differences even among rural counties. For example, poverty rates among the counties of the Mississippi Delta, a 13-county region along the state's western border, while not uniform across the region, may run as high as 40 to 50 percent

Table 3 *Current Insurance Coverage in the Study States, Nonelderly Population, 1997*

	U.S.		Alabama		Minnesota		Mississippi		Texas		Washington	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Employer sponsored	60.6	69.7	59.4	71.5	68.2	80.2	55.6	65.2	48.5	60.0	53.0	69.2
Other private	6.5	4.9	4.4	3.8	8.6	4.6	5.9	4.6	7.1	4.1	8.5	6.5
Medicaid/other public	13.3	11.1	14.5	10.9	11.7	8.9	17.0	14.3	15.7	11.7	17.1	14.5
Uninsured	19.6	14.3	21.8	13.9	11.5	6.3	21.6	16.0	28.7	24.2	21.4	9.9

Source: 1997 ANF National Survey of America's Families.

(Howell 1997). Counties in southern Alabama are generally poorer than those in the northern part of the state.

For the most part, the ethnic composition of the study counties mirrors the composition of the total state population. The predominantly white populations of Minnesota and Washington (93.6 percent and 89.4 percent, respectively, in 1996) were reflected in these states' rural counties. In Cottonwood and Stevens Counties in Minnesota, the proportion of the population that was white was 98.9 percent and 97.4 percent, respectively; and in Ferry and Stevens Counties in Washington, the white proportion of the population was 80.7 percent and 93.0 percent. In Texas, which has a large Hispanic population (28.8 percent of the total state population), the concentration of Hispanics is generally greater in rural counties, although it varies by county, comprising 46.1 percent of the population in Hale County but only 19.6 percent in Childress County. In Alabama and Mississippi, rural counties have larger concentrations of African Americans than the state as a whole. In Greene, Perry, and Pickens Counties, Alabama, 81.1, 65.0, and 42.9 percent of the population, respectively, are African American, compared with 25.8 percent in the state. Similarly, in Holmes and Noxubee Counties, Mississippi, 76.7 and 69.5 percent of the population are African American, compared with 36.3 percent for the state as a whole.

Health Status

Rural areas of a state generally tend to fare worse than urban areas on health status indicators such as infant mortality rate, low birth weight, and morbidity. Infant mortality rates for the study states and counties are shown in table 2 as an indicator of health status. Infant mortality rates are higher than statewide averages in all but 2 of the 11 study counties. In these two, Pickens in Alabama and Stevens in Minnesota, and also in Stevens County, Washington, the infant mortality rate is lower than the national average of 8.3 percent.

Rural counties as a whole are worse off than nonrural counties on most age-adjusted health indicators. Morbidity patterns frequently vary across regions or counties and often reflect the demographic structure of the population. Other morbidity differences may reflect dietary differences or the ethnic composition of the population. For example, Cottonwood County, with a very high proportion of elderly, has the fourth highest rate of deaths from cardiovascular disease in Minnesota. Southern Alabama counties (including Greene and Perry), with their higher African American populations, have higher rates of hypertension, stroke, and kidney

disease. In Washington, concentrations of American Indians in certain counties, including the study counties, contribute to higher rates of infant mortality, infectious disease, and chronic health problems (Northeast Tri-County Health District 1995).

Insurance Coverage

Nationally, 11.7 percent of the nonelderly population are covered by Medicaid and other public programs.[3] An estimated 15.4 percent of the nonelderly population have no health insurance coverage. In general, rural residents are less likely to have health insurance coverage; 19.6 percent of rural residents are uninsured, compared with 14.3 percent of urban residents (table 3). Lower rural coverage rates are associated with higher poverty in rural areas but also with the prevalence of part-time employment or self-employment in the rural economy. Nationally, employer-sponsored coverage is lower in rural areas than in urban areas. In areas of high self-employment, insurance coverage rates may obscure the problem of the adequacy of coverage. Respondents in several counties reported that many self-employed people purchase policies with a high deductible, which makes coverage more affordable but may leave families with inadequate coverage for routine care.

Insurance coverage varies across the study states as well, with the proportion of the state population uninsured ranging from a high of 24.9 percent in Texas to a low of 7.8 percent in Minnesota. In all of the study states, rural uninsurance rates exceed urban rates. The difference is greatest in Washington, where 21.4 percent of rural residents are uninsured, compared with only 9.9 percent of urban residents. In Minnesota, both rural and urban uninsured rates are significantly lower than the overall national rate. Rates in Texas are much higher than the national averages for both rural and urban areas, but the difference between the rural and urban rates is smaller than in the other study states. Reliable estimates of insurance coverage are not available at the county level.

Medicaid

The higher poverty rate in rural areas means that rural residents, if insured, are more likely to be publicly covered than are urban residents. Nationally, public programs cover 13.4 percent of the nonelderly population in rural areas but only 11.1 percent in urban areas. This pattern holds true in all of the study states. The proportion of the rural population covered by public programs ranges from a high of 17.1 percent in Washington to a low of 11.7 percent in Minnesota. The rates in the urban areas of the study states are lower in all states, with a high of 14.5 percent in Washington and a low of 8.9 percent in Minnesota.

Medicaid is the dominant form of public insurance for the nonelderly. Restrictions on Medicaid benefits also vary across the study states. In Alabama and Mississippi, there are limits on the number of inpatient days, physician office visits, and non-emergency outpatient visits. There are fewer annual limitations on services in the other study states. In rural areas where a higher proportion of the population is covered by Medicaid, limitations on services for Medicaid recipients could potentially

increase the demand for uncompensated care and exacerbate the financial difficulties of local providers.

State-Only Programs

Both Minnesota and Washington have state programs for poor and uninsured residents who are not eligible for Medicaid. Uninsured Minnesotans with incomes under 275 percent of the federal poverty level who meet other eligibility requirements are eligible to buy subsidized health insurance under MinnesotaCare. MinnesotaCare enrollment rates in rural counties range from an estimated 10.8 percent of the eligible population to 1.5 percent. The study counties of Stevens and Cottonwood fall in the middle of this range at 4.2 percent and 4.8 percent, respectively (Yawn and Krein 1996). Washington has a similar initiative called the Basic Health Plan (BHP), which offers subsidized insurance aimed primarily at uninsured, low-income working families. About 3 percent of the population of rural counties is enrolled in the program (University of Washington 1996). In 1997, there was a long waiting list (up to 85,000 people) to join the program. Even though additional funds from the state legislature have since eliminated the waiting list, the perception of long lines remains and deters people from applying (Bureau of National Affairs 1998).

The other study states have few programs, other than Medicaid, to provide health insurance for the low-income population. In Texas, counties are legally responsible for indigent care. Counties rely heavily on local health departments and hospital districts to provide health care to the uninsured, and most uninsured individuals receive care through county public hospitals. Seventeen counties participate in the County Indigent Health Care Program in lieu of establishing a hospital district (Wiener et al. 1997). In Mississippi and Alabama, there are no public programs beyond Medicaid to extend health insurance to the uninsured.

Managed Care

Within the insured population, both public and private, the prevalence of managed care is low in rural areas relative to urban areas. In 1995, 25 percent of the U.S. population living in urban areas was enrolled in health maintenance organizations (HMOs), compared with only 1 percent of the population living in rural areas (Area Resource File 1997). For Medicaid recipients, participation in managed care is increasingly becoming mandatory, although enrollment is less often mandatory for rural beneficiaries than for their urban counterparts. Between 1995 and 1996, 10.5 percent of rural Medicaid beneficiaries were enrolled in HMOs and prepaid health plans, compared with 27.1 percent of urban Medicaid beneficiaries (Rural Health Research Center 1997).

The move to managed care in Medicaid has most often focused on large urban areas, and the introduction of these programs into rural areas has proceeded slowly. Rural managed care programs frequently begin under a primary care case management (PCCM) model rather than a full-risk model and are often phased in over time (Slifkin et al. 1998). For example, in 1993, the Texas legislature approved, on a pilot basis, moving Aid to Families with Dependent Children (AFDC) and related popu-

lations into mandatory Medicaid managed care through its STAR (State of Texas Access Reform) program. In 1995, the program began to move statewide, and it has largely been implemented in and around cities such as Austin, Fort Worth, Houston, and Lubbock (Wiener et al. 1997). Hale County is included in the Lubbock area program. The program will gradually be extended to other areas of the state.

While Minnesota is known as a leader in managed care, many of the state's rural areas have been introduced only relatively recently to managed care through the Medicaid and MinnesotaCare programs. Under recent state legislation, counties may choose to enroll their Medicaid recipients in the state Prepaid Medical Assistance Plan (PMAP), which primarily consists of Twin Cities–based HMOs, or create their own local managed care system under a County-Based Purchasing (CBP) model. Under CBP, counties develop a provider network and receive capitation payments from the state, thereby assuming financial risk. Several counties, including Stevens County, are opting for the CBP model as a way to maintain local control of their Medicaid funds and preserve the local health care system. At this writing, counties had until October 1999 to implement a CBP model, although counties will be able to switch from PMAP to CBP in the future.

Washington moved its AFDC population into managed care through its mandatory program, Healthy Options, beginning in 1992. Between 1992 and 1994, Washington enrolled about 380,000 Medicaid recipients into managed care plans. By 1995, about 7 percent of the population in rural counties was enrolled in Healthy Options (University of Washington 1996).

Medicaid managed care is less extensive in the other two study states. In Mississippi, HealthMACS, the state's mandatory PCCM program for AFDC and AFDC-related programs, began in 1993, and it is being extended in stages to all 82 Mississippi counties. As of June 1998, 33 counties had implemented the HealthMACS program (Mississippi Medicaid Division 1998). Implementation of HealthMACS began in Noxubee and Holmes Counties just before the site visit. In Alabama, managed care, in the form of HMOs, has not penetrated rural counties to any large extent. However, the Medicaid program had established a PCCM program (Patient First) in 51 of the state's 67 counties as of FY 1998. A "maternity waiver" program is also operating in 43 rural counties (including Pickens and Greene), in which the state Medicaid agency pays a contractor—often a local health department—a global fee to provide obstetrical care to enrollees (Alabama Medicaid Agency 1998).

State and County Health Care Sector Overviews

In each study state, the study team interviewed hospital administrators, directors of rural and community health centers, and local health department officials in two or three counties. As can be seen in the description of the local health care sector of each county, the experience of rural health systems is far from uniform, even for counties in the same state that presumably face the same policy, program, and reimbursement regimes.

Alabama

Greene, Perry, and Pickens Counties: Site visits were made in three rural Alabama counties—Greene, Perry, and Pickens—in the Tuscaloosa region in the west central part of the state. Greene and Perry Counties are south of the unofficial boundary that divides the state into its northern and southern regions; Pickens is considered a northern county. The Tuscaloosa area is notable for the coordination seen among many of the region's providers. Under the state public health system, rural counties are grouped into multicounty regions led by a single director who coordinates the activities of individual county health departments. In the private sector, Family Health Services (FHS), a federally funded[4] community health center organization, operates clinics in 17 counties, including Greene and Perry, and links many of the primary care providers in the region. Many hospitals in the area cooperate through the Rural Alabama Health Alliance (RAHA). Not all local providers participate in these groups, and a certain level of competition was in evidence in the sites visited.

The three counties present three very different pictures of rural health care. In general terms, the Greene County health sector could be characterized as struggling, in spite of the revenues the hospital receives from a dedicated 1 percent county sales tax. Respondents noted that many white residents bypass local providers to go to Tuscaloosa, just 35 miles away, while black residents are more likely to use the local hospital. The Perry County health sector has recently been strengthened by a change in management at the hospital[5] and by the arrival of new physicians. Finally, the Pickens County health sector appears strong, in part because of a large and stable complement of physicians and strong county financial support in the form of a 1.5 percent county sales tax.

Each of the study counties has a community hospital, a local health department, and several physicians. Pickens County has a thriving hospital (a RAHA participant) and 18 private physicians. In contrast, the hospitals in Greene and Perry Counties are smaller, with less deep physician coverage. Both reportedly cross-subsidize acute care with revenues from their nursing homes, and neither participates in RAHA. Residents in all three counties are within a 30- to 60-minute drive of Tuscaloosa or Selma, where specialty care and tertiary hospital care are available. Low-income patients with complex needs that cannot be addressed at the local hospital are often admitted to Druid City Hospital in Tuscaloosa, which, many respondents noted, accepts patients regardless of insurance status.

Family Health Services plays a key role in the delivery of primary care services in both Greene and Perry Counties. In Greene, the FHS clinic employs all of the physicians in the county, including one physician with a J-1 visa.[6] The one private physician in town recently retired. About one-fourth of FHS patients are covered by Medicaid, and almost half are uninsured. In contrast, in Perry County, the FHS clinic employs just two of the several physicians in the county. Recently a husband and wife, both physicians on J-1 visas, established a practice based out of the hospital. In addition, two office-based physicians practice in the community. With the influx of new doctors, competition for patients has increased, and the FHS clinic reports that it is operating under capacity. Approximately 75 percent of the clinic's patient load is uninsured, and the clinic likely represents the major source of care for

this population. In Pickens County, most ambulatory care is provided by private physicians, either in private practice or at the hospital. About one-third of Pickens County physicians hold J-1 visas; two have stayed beyond their three-year commitment. Of the providers interviewed, none reported that they turned away patients because they could not pay—in part, it was reported, because the providers recognize that patients have few, if any, alternatives.

Some primary care services were also available at the local health departments in all of these counties, but recent changes in reimbursement for such services have resulted in a curtailment of some programs. Specifically, Patient First, the Medicaid managed care program, has led to a reduction in early and periodic screening, diagnosis, and treatment (EPSDT)[7] services provided at the local health departments in all three counties. The effect of the maternity waiver program varies by county. In Greene, the local health department provides case management services under a subcontract to a nearby hospital that holds the waiver for a multicounty region. In Pickens, however, the local health department has not been allowed to compete for the waiver, and at the time of our visit it was not certain whether it would be asked to provide services under a subcontract.

Respondents in each county reported that barriers to care exist beyond lack of insurance. Although FHS has a van service and Medicaid covers some transportation costs, there is no public transportation, and getting to care is a frequent problem, particularly for county residents who live outside the county seats where most of the services are located. Some people, apparently out of pride, are unwilling to seek services because they do not have insurance or money to cover their bill.

Minnesota

Cottonwood and Stevens Counties: Site visits in Minnesota were made to Cottonwood County in the southwestern corner of the state and Stevens County in the west central part of the state. (The authors also visited Glacial Ridge Hospital in Pope County, located between Cottonwood and Stevens.[8]) Basic health care services are widely available in both counties, but the apparent similarities in the two health care sectors mask significant differences in their approaches to health care.

The local health care system in Cottonwood County includes two hospitals, one in the county seat of Windom and the other about 25 miles to the northwest in Westbrook; several primary care physicians and nonphysician practitioners; and the local health department. The providers are located predominantly in the southern part of the county near Windom; the northern part of the county, including Westbrook, is a designated partial-county medically underserved area. Specialty and tertiary care are available 90 miles away in Sioux Falls, South Dakota, or twice that far away in Rochester, Minnesota. Residents must also travel to a neighboring town about 30 minutes away for pediatric care because there are no pediatricians in the county.

In Stevens County, health services are available through the hospital, a physician clinic attached to the hospital, an independent physician group practice, and the local health department. Access to primary care is seen as good, with about 10 medical professionals practicing in Morris, the county seat and home to half of the county's

population. Most primary care and basic hospital services are readily available, and the local ambulance service is seen as very good.

In both Cottonwood and Stevens, the hospitals are survivors of a recent string of hospital closures in the region, and administrators at each facility said they were in solid financial shape. Support for all three within the counties is strong, although none currently receives county financial support. Community support in Westbrook comes in the form of an annual fundraiser. In Windom, the county participated in the development of one physician's clinic during a period in which the hospital was floundering because there were not enough physicians in town of long enough tenure to provide the continuity of care that county residents wanted. Residents considered the hospital a "Band-Aid" station and often looked elsewhere for care. The physician population has now stabilized, and residents' perception of the hospital has improved greatly.

All three hospitals are run in affiliation with urban systems. The Stevens County facility was a county hospital until 1985, when it converted to nonprofit status. It is run under a management contract with the Allina Health System in Minneapolis–St. Paul. Both the Windom and Westbrook hospitals are run under management contracts with the Sioux Valley Health System in Sioux Falls. Although, as is also apparent in Texas, many rural hospitals are wary of the intentions of urban systems in their alliances with rural hospitals, both Allina and Sioux Valley were seen as supportive of their rural partners.

Where the two counties differ markedly is in the degree of cooperation among providers within each county. A countywide working group of health care providers in Cottonwood County meets regularly to address county and provider needs. In addition to the hospitals, the county has independent clinics in the county seat of Windom and one rural health clinic. In contrast to the collaborative efforts undertaken in Cottonwood, in Stevens there is strong competition among medical providers, particularly between the two medical groups, a competition that has been heightened by the coming of Medicaid managed care. In addition, the hospital is pursuing a competitive approach toward other local providers, in part because of the competitive pressures it apparently feels from nearby hospitals. Some observers spoke positively about the presence of competition, noting that it raises the standards of all providers and strengthens provider recruitment efforts, while others emphasized the tension that has arisen.

The counties also differ in their approach to Medicaid managed care. As discussed above, Minnesota counties may choose the state-run Prepaid Medical Assistance Plan or develop their own managed care system under a County-Based Purchasing model. Cottonwood feared that CBP would entail too great a financial risk for the county government, ultimately placing the taxpayers at risk, and so has chosen to adopt a version of PMAP that allows county-level input into the contracting process. Stevens County, in conjunction with six nearby counties, decided to adopt the CBP approach, in part because of the poor track record of HMOs in the county. Under CBP, proponents argue, the county will be better able to coordinate services by applying capitation dollars where they are most needed, without HMO middlemen, and will be more responsive to the circumstances of local providers. Detrac-

tors, however, are concerned that the county may not have the expertise to manage the level of risk that it is assuming.

Although there are well-developed health care systems in both counties, barriers to access remain. Health insurance, especially employer-sponsored insurance, is less common in rural Minnesota than in urban areas of the state, largely because part-time work and self-employment are more common. When health insurance is purchased, respondents noted that people often select a high-deductible plan because of its affordability. As in most rural areas, there is no public transportation system. For those without access to private transportation, a private van service is available on an appointment basis to ferry people to providers, local or distant. Cottonwood County also subsidizes a volunteer program that uses retirees to provide routine medical transportation. Beyond transportation, pride was mentioned as a barrier to care for those without private insurance. Medicaid and other forms of public assistance carry a stigma; thus, public health officials noted that people who qualify for programs may choose not to enroll.

Mississippi

Holmes and Noxubee Counties: Site visits were conducted in central Mississippi in Holmes County in the Delta, the poorest region of Mississippi, and in Noxubee County, a non-Delta county. In each county, ambulatory and some hospital services are available, although, as is true in most rural areas, residents must travel to nearby urban areas for tertiary hospital and specialty care. Holmes residents generally go to Jackson or Canton, about an hour's drive away; Noxubee residents usually go south to Meridian or north to Columbus or Starkville, each 30 minutes to an hour away. The major barriers to care in both counties are, first, lack of insurance, and second, transportation. Lack of knowledge about public programs and about preventive health care were also cited as contributing to low utilization of health care services.

Holmes County is one of the poorest counties in Mississippi. It has two hospitals, one located in the county seat of Lexington and one in Durant, 12 miles to the east. The two hospitals cooperate in some areas, most closely on the provision of ambulance service to the county, but generally could best be described as rivals rather than as competitors or collaborators. The hospital in Lexington is the larger of the two. Originally a county facility, it was purchased in 1986 by the Methodist Healthcare System, based in Memphis, Tennessee. It employs six physicians, including two who recently transferred from the hospital in Durant, and it is in solid financial shape. The Durant facility is owned by the University Hospital in Jackson. It is run essentially as a department of the University Hospital in Jackson, and this relationship shields it from routine financial concerns.

Ambulatory care is provided by the county's 14 primary care physicians, some in private practice and some working in hospital-affiliated rural health clinics. In addition, county residents have access to the federally funded Mallory Community Health Center, which provides a full range of primary care and ancillary services and has on staff the only board-certified pediatrician in the county. Mallory provides care on a sliding fee scale and is the county's major provider of ambulatory care for the uninsured; 50 to 60 percent of its clients are uninsured. Its chief source of revenue

is its federal grant; it receives a small amount of funding from the state but no local funds.

Noxubee County, while better off economically than Holmes, is also among the poorest counties in Mississippi. It has a little more than half the population of Holmes. Available health services include a hospital located in the county seat of Macon, a federally funded community health center, three rural health clinics (two of which are associated with the hospital), and the local health department. The community health center is located in the town of Shuqualak, half an hour south of Macon, and is staffed by two physicians. It is part of a network of three clinics based in Meridian, an hour to the south. Primary care is also provided by the private physicians in the county. Uninsured patients are most frequently seen in the Shuqualak clinic, although some private physicians will accept uninsured clients either as charity, for reduced fees, or with payment over time. Respondents noted that it is the older physicians who are more likely to accept charity patients as part of their responsibility to the community.

Noxubee General Hospital is a county facility. Unlike the hospitals in Holmes County, which are affiliated with larger systems, Noxubee General is on its own. It receives no financial support from the county beyond its tax-exempt status, and it relies on revenues from its nursing home to support its acute care unit. For this reason, it actively pursues all options for improving its financial status. For example, it recently reduced the number of acute care beds that it staffs in order to participate in the swing beds program.[9]

As in Alabama, Mississippi counties are organized into health districts for public health services. Noxubee and Holmes are in separate districts but are facing many of the same problems, including chronic underfunding by the state and a drop in Medicaid-funded EPSDT services as Medicaid has moved to managed care. Changes in Medicare home health policies have led to reductions in this area of service and revenue as well. In both Noxubee and Holmes, the consensus seems to be that the future for local health departments lies in population-based services. Nonetheless, in Holmes County in particular, the local health department remains the major provider of immunizations, particularly for the African American population, and an important provider of family planning services for both blacks and whites.

Texas

Childress and Hale Counties: Site visits in Texas were made to Hale and Childress Counties, located in the Panhandle region of the state about two hours to the south and three hours to the southeast of Amarillo, respectively. A distinctive factor in this region is the great distances involved; as a consequence, travel and transportation, in addition to lack of insurance, can represent serious barriers to care. Van services are available in each county for medical transportation, although fees are charged and can be prohibitive. Hale County is located between Amarillo and Lubbock, and its health care system shows the influence of these urban areas. Childress County is much farther from urban influences, and its hospital, in particular, has taken on the role of a regional provider.

There are two hospitals in Hale County, one in Plainview and the other half an hour to the south in the smaller town of Hale Center. Ten physicians practice in the county and all participate in the county's indigent health care program, a state- and county-financed program for low-income residents not eligible for Medicaid. The county lost its designation as a medically underserved area in 1997.

Hale County's two hospitals are using different paths to financial security. Covenant Hospital of Plainview is part of a system created by the recent merger of two Texas hospital systems, Methodist[10] and St. Mary's. Respondents reported that the long-running rivalry between these two systems had been having a destabilizing effect on the rural health care market in the region, and there were hopes that this merger would help defuse tensions. The Plainview facility had been suffering from financial difficulties and low occupancy and was looking to its new management to turn the situation around. Hi-Plains Hospital in Hale Center, in contrast, is one of the only remaining independent hospitals in the region. It was started as a cooperative hospital; its members pay dues and receive "dividends" in the form of discounts on services. It is currently operating with a positive margin, but it sees its financial status threatened by declining Medicaid revenues, as the Medicaid managed care pilot program moves into the Lubbock area, and by the possibility of a change in its disproportionate share hospital (DSH)[11] allocation.

Hospital care for the uninsured is most often provided by the University Medical Center in Lubbock. The federally funded community health clinic in Plainview, the South Plains Health Provider, is the major provider of ambulatory care for the uninsured, but some such care is also available through private physicians under the county indigent care program. South Plains is part of a six-clinic network that operates in a 20-county area and is staffed by three physicians, a dentist, and a nurse practitioner. Nearly half of its clients are uninsured; one-fourth are covered by Medicaid. At the time of the site visit, clinic officials reported that the clinic was just beginning to emerge from a steep decline.

The local health department in Hale County is supported jointly by the county and the city of Plainview; 50 percent of its revenues come in the form of state grants for specific services. Like the other local health departments visited, under the changing reimbursement structure it is moving away from direct patient care services and into more population-centered activities.

The Childress County Regional Medical Center is located in Childress town center and has an attached rural health clinic. Although it provides a wider range of services than most of the other hospitals visited, it still relies on hospitals in Lubbock and Amarillo for some specialty and tertiary care. It is financially stable and operates primarily on patient revenues. Like most Texas county hospitals, it has hospital district taxing authority, and it raises about $100,000 annually from this source, although it does not consider these funds critical to its survival. A private, for-profit family practice clinic with four physicians is located next door to the hospital. The private group has a strong working relationship with both the hospital and the rural health clinic, and physicians at the private clinic help staff the hospital's emergency room. Hospital officials noted that most uninsured patients are seen at the rural health clinic or at the hospital, not at the private clinic.

The site visit also included the hospital in neighboring Hall County. Like Childress, it has hospital district taxing authority, raising some $260,000 annually, but unlike Childress, it relies on these funds to keep its doors open. It serves a predominantly Medicare clientele. Its location on the highway between Childress and Lubbock means that its emergency room and trauma capability are important to the community's health.

Where Hi-Plains has chosen independence and Covenant has chosen affiliation with an urban system, Childress Regional Medical Center has chosen to be part of a loose network of 21 rural hospitals called the Panhandle Coalition. The Coalition was formed partly in response to a perceived encroachment into rural hospital service areas by urban hospitals in the region. Legislation passed in May 1997 encouraged the establishment of a statewide rural health care system, and it allows the Coalition to work to form its own regional health plan to compete with urban managed care plans.

Washington

Ferry and Stevens Counties: The two counties visited in northeastern Washington, Ferry and Stevens, are two of the poorest and most sparsely populated counties in the state.[12] These counties are grouped for administrative purposes with Pend Oreille County, just to the east of Stevens, as a Tri-County area, and intercounty collaboration is good. The successful delivery of health care in both counties relies on the good working relationship among providers, hospitals, and the local health department and on the economies of scale that have been achieved through shared programs. As in the other study counties, lack of insurance and—for those who do not live in town—transportation represent serious barriers to care. In addition, respondents noted that a general distrust of government and the desire to avoid the mainstream that characterizes many residents in eastern Washington keeps many people who would otherwise qualify for state aid from applying for Medicaid and other benefits. Rural residents may turn to some of the state's alternative care providers, including naturopaths, massage therapists, and chiropractors, to meet their health care needs.

Ferry County is more geographically isolated than Stevens. The Kettle Mountain Range separates it from Stevens County and from the nearest urban area, Spokane, which is more than a three-hour drive away. With its one hospital and four physicians, it has few health care resources within the county, and access to health care services outside the county may be limited during the winter months because the terrain is mountainous and roads are impassable at times. Helicopter service is available in emergencies to transport patients to Colville in Stevens County or to Spokane.

Ferry County Hospital, in the town of Republic, was built in 1975. In 1989, it became a public hospital district facility with taxing authority; annual tax revenues of about $100,000 go to pay off the large debt that the hospital has accrued. The hospital's uncompensated care burden, hospital officials report, is close to 17 percent of revenues. Hospital finances are tight, and revenues from the hospital's nursing home beds are critical to its financial security. In addition to its on-site clinic, the hospital

operates a satellite clinic, open four days a week, in a nearby town. At the time of the site visit, officials spoke of plans to open a second clinic on an Indian reservation, pending approval from the Indian Health Service. None of the physicians or two midlevel professionals in Republic works full-time, and the hospital and its clinics are the only health services available in the county, except for the Indian Health Service. Because of the geographic isolation of the county, closure of any of these facilities would have a major effect on access.

The health care system in neighboring Stevens County is more robust, with two hospitals, a community health center, and a large multispecialty group physician practice. Twenty-two physicians practice in Stevens County, more than 18 of them in the county seat of Colville alone. A wide range of specialty services is available, most provided by specialists in Colville but some by visiting specialists from Spokane, just under two hours away.

Stevens County's two hospitals are located a little more than half an hour apart—Mt. Carmel Hospital in Colville and St. Joseph's in Chewelah. Both have belonged to the Providence Services health system since the early 1990s. The two hospitals have been competitors, but collaboration has increased in recent years. Mt. Carmel, with 32 beds, is financially stable and carries an uncompensated care burden of less than 1 percent of revenues. It is able to offer a wide range of services because of the number of specialists available in town, allowing it to compete with Spokane hospitals in many areas. It collaborates with both the local health department and the community health center located in Chewelah. St. Joseph's Hospital, with 25 beds, is less stable and has, in fact, been in danger of closing twice, most recently in 1988 as a result of debts associated with the construction of a new facility. At that time, it received financial assistance from the Dominican system to which it then belonged. The Providence system is also willing to help the hospital in hard times, but it puts no money into the hospital on a regular basis. Uncompensated care at St. Joseph's runs close to 25 percent of revenues.

Little commercial managed care exists in the two counties, but all three hospitals have contracts under the Medicaid managed care program, Healthy Options. Ferry County Hospital used to be paid a capitated rate, but given its small pool of patients it is now paid fee-for-service. Mt. Carmel's largest Medicaid managed care contract is capitated, and it reports losses under this arrangement, particularly for deliveries. It also has some fee-for-service contracts under Healthy Options. The vast majority of St. Joseph's managed care contracts are paid under fee-for-service arrangements. The private clinics in Stevens County report that capitated arrangements are more profitable for them than fee-for-service; the community health center, on the other hand, reports reduced revenues under capitation, leaving it fewer resources to serve the uninsured.

The Tri-County Health District provides core public health services to both Ferry and Stevens residents. It does not provide primary care or prenatal services, and since the advent of Medicaid managed care it is no longer responsible for EPSDT services. The Health District seems to have been less adversely affected by Medicaid managed care than local health departments in the other study states. As Medicaid moved to managed care, officials at the Health District successfully lobbied, on the grounds of choice and confidentiality, for the right to continue to pro-

vide family planning, immunizations, and testing for sexually transmitted diseases and tuberculosis under Medicaid and to bill fee-for-service for these services. Funding for local health departments has decreased overall, but Medicaid revenues have actually increased, probably as a result of the addition of a program to provide support services to new mothers. Public health is primarily a county responsibility in Washington, although some state funds are available for targeted programs.

Challenges Facing the Rural Health Care Safety Net

Across the country, as the health care delivery system becomes increasingly market-oriented, the financial balancing act that has allowed providers to meet the needs of privately insured residents as well as those of the Medicaid and uninsured populations is increasingly threatened. Many rural communities are struggling to maintain their health care services as they confront the ongoing changes in the health care system nationally and locally. The small size of rural systems greatly increases their vulnerability to change; the study communities demonstrate that one poor administrative decision, the prolonged illness of a provider, or the decision of a physician to leave a hospital can have large effects on the stability of the whole local health care system.

The challenge to rural communities is to establish and sustain a health care system that provides, either directly or through arrangement, easy access to routine services, reasonably sure access to specialty services, and reliable and quick access to emergency services. The components of such a system can vary, but they typically include a hospital in the county with established referral patterns for services it does not offer, an adequate number of primary care providers, transportation where needed for routine care and readily available for emergency care, and public health services. This section discusses each of these components and the challenges they are facing in the study counties.

Hospitals

In urban areas throughout the country, hospitals are beginning to cede their central role in the health care system as technology and cost considerations make outpatient the preferred setting for many treatment schedules. With a few exceptions, the hospitals in the study communities offer primary hospital care only, treating the less severely ill in-house and referring the more severely ill to larger facilities. As more treatment moves to an outpatient setting, rural primary care hospitals have few opportunities to make up the inpatient volume because sicker patients are referred on and the population in the service area is limited. As table 4 shows, outpatient visits increased at all but one of the study hospitals over the period 1991–1996; at six hospitals, outpatient visits more than doubled. Despite the strength of this trend, only two hospitals in the study thought they could be replaced entirely by an outpatient facility. All the others believed that it was critical to maintain some inpatient capacity to meet the needs of their communities.

Even as these forces encourage a reconsideration of the role of the hospital in the treatment of patients, they serve to highlight the role of the hospital as an organizing principle for health care in rural areas. More so than in urban areas, where there are separate and well-developed markets for physician services, outpatient services, home health, and nursing home care, the hospital serves as the sine qua non of local health services in rural communities. The hospital itself may take a leadership role, or it may simply serve as a focus for other community leaders, such as physicians or the local health department, in structuring the health care system.

The site visits included 14 hospitals in the 11 study counties plus 2 in adjacent counties. These hospitals ranged in size from 8 to 68 acute care staffed beds, with most staffing around 30 beds; occupancy rates ranged from about 17 percent to 75 percent. Most counties have just one hospital, although four of the study counties have two. Seven are public facilities, either county-run or supported by a hospital district. None is for-profit, but most of the private hospitals are affiliated with a hospital system or a university, either directly or through a management contract.

The efforts of the physicians in Pickens County (Alabama) are the most striking example of the centrality of the hospital in the organization of a rural health care system. In the mid-1970s, the county supported with tax revenues the construction of the current centrally located hospital to replace two small hospitals located at either end of the county. When the new facility ran into financial difficulties in the mid-1980s, local physicians were asked to take over its management. Physicians now oversee the hospital as its board of directors and also largely control the local health department. Local respondents noted that the physicians are not paid for their ser-

Table 4 *Outpatient Visits in the Study Hospitals, 1991–1996*

Hospital	Outpatient Visits,1991	Outpatient Visits, 1996	Percent Increase, 1991–96
Alabama			
Greene County Hospital	4,554	10,521	131.0
Pickens County Medical Center	8,872	21,180	138.7
Minnesota			
Glacial Ridge Hospital	5,541	7,908	42.7
Stevens Comm. Memorial Hospital	3,410	34,725	918.3
Westbrook Health Center	748	6,545	775.0
Windom Area Hospital	9,170	12,932	41.0
Mississippi			
Univ. Hospitals and Clinics—Durant	3,150	5,457	73.2
Methodist Hospital of Middle Mississippi	20,007	15,320	–23.4
Noxubee General Hospital	3,699	5,352	44.7
Texas			
Childress Regional Medical Center	7,466	24,789	232.0
Hi-Plains Hospital	2,184	2,455	12.4
Hall County Hospital	3,046	5,819	91.0
Methodist Hospital, Plainview	14,010	60,602	532.7
Washington			
Ferry County Memorial Hospital	4,121	5,099	23.7
Mt. Carmel Hospital	19,807	26,533	34.0
St. Joseph Hospital and Health Care Center	9,578	13,476	40.7

Source: 1991 and 1996 AHA Annual Survey of Hospitals.

vices to the health department or the hospital but do it because they are committed to the community and need a hospital in order to maintain their practices in the county. The hospital also currently supports three medical students, some of whom practice in local physician offices.

In Cottonwood County (Minnesota), the hospital was losing patients to other counties because of difficulties in retaining a physician. Local respondents said that many county residents preferred to go out of town for care rather than to have to establish a relationship with a new physician every year. The hospital, with county support, established a clinic on-site with attractive financial arrangements in order to recruit and retain physicians. With the establishment of a stable physician cadre, county residents have renewed their loyalty to the facility. Hospital officials regularly meet with other local health care providers, including other hospitals, nursing homes, hospices, health professional educators, and the local health department, as the Minnesota Healthcare Provider Taskforce to share information about services provided or planned in order to avoid areas of overlap. Future plans were to discuss potential areas for shared services, particularly in the area of staff training. Preparing for the coming of Medicaid managed care was also a topic of discussion.

In almost all of the counties visited, the hospital administrator was active in the recruitment of private physicians. As will be discussed below, the establishment of rural health clinics was a preferred recruitment tool, and these clinics are often located on the local hospital campuses. It appeared from the study counties that the smaller the local health care infrastructure, the more directly the hospital was involved in the maintenance of that infrastructure, particularly through the recruitment of health professionals.

Services

The range of services that can be supported by a rural hospital is limited by the size of its service area population, and this limitation represents one of the greatest challenges that rural hospitals face. The hospitals in the study counties generally relied on a local primary care physician for core services, usually a general or family practitioner, but augmented his or her capabilities by making arrangements with other, nonlocal providers. The core services each hospital offers depend primarily on the capabilities of their physicians. For example, a hospital will offer obstetrics if the local family or general practitioner delivers babies. To expand their range of services, almost all of the hospitals had a program of visiting specialists or, as some administrators called it, outreach. Such programs generally involve regularly scheduled visits, usually weekly or biweekly, by specialists from other counties, often from a nearby urban area, and represent a means of sharing a needed service among several communities, none of which alone would have sufficient demand to employ a specialist full-time. Services such as cardiology and ophthalmology were frequent visiting specialties, reflecting both the older age structure of the population and the availability of Medicare reimbursement.

In order to support a visiting specialist program, the hospital must have appropriate staff, such as nurses qualified to assist in the various specialties and physicians able to monitor recovery, as well as the necessary space and equipment for proce-

dures. Windom Area Hospital (Cottonwood County, Minnesota) had just completed renovations to convert unused inpatient rooms into space dedicated to its visiting specialist program. In Washington, Mt. Carmel Hospital used in-town specialists to provide care at the hospital; these same specialists traveled to Chewelah to work at St. Joseph's. Methodist Hospital (Hale County, Texas) has an active visiting specialist program and was considering hiring a full-time cardiologist who could not only cover the needs of its patients but also provide services on a visiting basis to smaller hospitals nearby.

The visiting specialist programs offer the hospital a means of meeting community needs and of keeping patients loyal to the institution by offering needed services on-site, if not in-house. They also encourage residents in the hospital's service area to look to their local hospital rather than to an urban competitor for all but a few services. It was not always possible for the hospitals in the study counties to establish such programs. One Alabama hospital noted that the likely candidate for a visiting surgeon was the surgeon to whom the hospital had been referring patients for many years and he was not likely to be willing to modify the current arrangement. At one Texas facility, the opposition of the local physician to visiting specialists kept the hospital from developing a program. Managed care arrangements also may weaken visiting specialist arrangements if, as at one Minnesota hospital, the candidate for visiting specialist is not on the panel of the plan to which most community members belong. In this case, managed care arrangements have the effect of further reducing the size of the population that could be served by any one specialist.

Each of the study hospitals operated an emergency room. For many rural residents, the emergency room offers several important features critical to access, including extended hours and a greater assurance of accepting the uninsured. Many rural hospitals are the only health care facility for many miles around. For those located on major highways, such as Hall County (Texas) Hospital and University Hospital and Clinics—Durant (Holmes County, Mississippi), the trauma capability of the rural hospital emergency room may be seen as vital not just for local residents but also for regular users of the highway. Ensuring coverage of the emergency room can be a problem. Emergency room duty rotates among local physicians, and in towns with a limited number of physicians it can become burdensome. Administrators noted that emergency room coverage was a factor discouraging physicians from locating in rural areas and so contributed to recruitment and retention problems. Some study hospitals have begun paying local physicians to take emergency room duty; Stevens County (Minnesota) Hospital had contracted for emergency room coverage in order to improve its ability to recruit physicians.

Some of the services that hospitals would like to be able to provide in their communities could be made available via telemedicine. Most of the study hospitals had some telemedicine capability, but none were using it for real-time teleconsultations between local patients and remote physicians. Most respondents felt that its value lay in continuing education for providers or in consultations that did not require the patient and the provider to be present at the same time, such as teleradiology. Problems of scheduling were said to hamper real-time encounters, and the reimbursement mechanisms available do not yet provide the incentive for greater use of this type of telemedicine. Respondents saw the potential of telemedicine to improve the diag-

nostic capability for local providers but did not think that telemedicine would reduce the need for physicians locally.

Hospital respondents stressed the importance of offering the services the community needs most, either directly or in cooperation with other local providers, as a way of being seen by the community as a provider of first resort rather than as a place to go only in an emergency. Unless they can maintain that status, hospitals fear that more affluent, insured residents with relatively easy access to transportation may bypass the local hospital on the way to an urban facility where the quality or the amenities may be perceived to be higher. For example, the Pickens County (Alabama) Medical Center has easy access to hospitals in Tuscaloosa, but it offers a wide range of services both in-house and on a visiting basis, and local respondents said that county residents turn to it first for health care needs. In contrast, Greene County (Alabama) Hospital reportedly was frequently bypassed by more affluent residents on their way to Tuscaloosa.

This potential change in utilization patterns has implications for providers, patients, and the community. As insured patients seek services elsewhere, the local hospital may be left with a higher proportion of uninsured or publicly insured, threatening its financial security. If the local health care system were to falter or fail altogether, the consequences would be more severe for the elderly, who may need more frequent care and who may have difficulty traveling, and for the uninsured and underinsured poor, who may have difficulty paying for the care they need. Respondents noted that not only health care dollars leave the community with insured patients; commerce patterns may also be affected as patients and their families shop where they get their medical care, extending the adverse effects to parts of the local economy beyond just the health care sector.

Links with Other Providers

Because a rural hospital cannot offer all the services its community may need, it must have a reliable referral system for problems beyond its capabilities. Each of the hospitals visited had established referral networks. For some, the nearest referral point is a larger rural hospital, but for most the nearest urban market is the referral center. Most administrators said the decision about when and where to refer to a larger facility was generally made by the physician based on what was best for the patient. Transportation and other constraints faced by the patient and his or her family were often taken into consideration. For the uninsured, referrals were often made on the basis of established relationships with physicians at the receiving hospital. Often these physicians had trained in the community or had practiced there under a rural recruitment program. Many of the study hospitals were members of a hospital system or operated under a management contract with a larger institution; one was part of a university system. In no case was it reported that the system alliance or management contract required that referrals be made to system tertiary care centers. It appeared that the larger system relied on the good relations it established with the rural institutions to ensure that the bulk of referrals came its way.

The regional health care market can be either supportive or competitive from the rural hospital's point of view. In the larger region of many of the study communi-

ties, there were tertiary facilities that were viewed as trying to "steal" patients from the rural providers, and at all levels of care—hospital and ambulatory—providers seemed reluctant to refer to these facilities. Other tertiary centers were seen as supportive of rural providers, and referrals flowed both ways between the institutions—to the tertiary facility for more advanced treatment and back to the rural provider for follow-up. As discussed above, in one Texas market the competition between two urban systems was seen as destabilizing the rural hospitals in their larger catchment area, while in Minnesota the supportive relationship of an urban system with its rural affiliates appears to have led to gains in stability and access without threatening rural hospital survival. The structure of the links in the study communities varies from ad hoc to full management contracts. Some alliances are clearly defensive, such as the Panhandle Coalition in Texas, while others are more nearly a coming together of equals for mutual benefit, as seen in the Rural Alabama Health Alliance.

Challenges to Financial Security

The reported financial situation of the hospitals visited ranged from thriving to nearly desperate. Looking across the states, it is clear that there is no one factor determining the stability of rural health sectors; rather, a constellation of financial, environmental, community, and personnel factors, both locally and within the larger market, work together to create each community's unique situation. The direct effect of patient and other revenues is paramount; the effect of the other factors on the system is chiefly through their indirect effect on the finances of the hospital.

The rural hospitals in the study counties rely on patient revenues and, in some cases, local or state financial support. Patient revenue is a function of patient volume and reimbursement rates. A stable physician cadre is critical to attracting patients. A hospital's ability to recruit and retain medical personnel is thus critical for maintaining patient volume and revenues. Retention of personnel is also important, not only to nurture patient loyalty but also to minimize physician recruitment expense.

Rural providers have been less affected than their urban counterparts by reimbursement changes accompanying commercial managed care because managed care penetration is much less extensive. Much greater stress has come from the downward pressure on Medicaid and Medicare. All hospitals, even the profitable ones, were worried about the reimbursement changes in Medicare under the 1997 Balanced Budget Act, particularly those affecting revenues from outpatient departments and skilled nursing facilities. Outpatient services make up a large and growing part of the hospital revenues, often including visiting specialist programs, and several hospitals reported that they support their inpatient service with revenues from their skilled nursing facilities. Reimbursement changes will affect hospitals in proportion to the share of these services in their revenue mix and the share of patients in their service area covered by Medicare. These shares are generally higher in rural hospitals than in urban ones and are likely to rise with the continuing move to outpatient care and the aging of the population.

Changing reimbursement policies are affecting providers in all of the study areas more or less equally, but where hospitals have the financial support of their communities (usually, but not always, in the form of a dedicated tax) the health care system

is likely to be in a better position to adjust to the pressure. Some communities do not provide ongoing financial support but have offered assistance to facilities in times of financial difficulty, as was seen, for example, in Stevens County (Minnesota). Having a dedicated tax stream does not, however, guarantee freedom from financial stress, as was evident in Greene County (Alabama) and Hall County (Texas).

A skillful administrator, one who is adept at identifying and implementing appropriate federal and state programs, can achieve success even where strong financial or other support is lacking in the community. Noxubee (Mississippi) General Hospital, for example, is a county facility but receives no county financial support. Its administrator aggressively pursues programs to assist the hospital, adapting the facility as required to meet program criteria. At the other extreme, because rural health systems have a relatively small number of providers, bad luck in personnel can derail a provider's plans. The prolonged illness of a physician in Hale County (Texas), for example, severely affected inpatient census and total patient revenues at the hospital.

The uncompensated care burdens of the hospitals in the study counties were generally under 10 percent but ranged from insignificant to nearly 25 percent of revenues. Respondents credit the expansion of Medicaid in the early 1990s with a lower demand for charity care, and all say that no one is refused care for lack of ability to pay. Underinsurance is a more important source of uncompensated care for rural hospitals than is likely the case for most urban facilities. Hospital officials attributed much of their uncompensated care burden to unpaid copayments, often a result of the high deductibles common in plans in rural areas, where many people buy individual policies or catastrophic coverage only. Administrators report that pursuing collections must be done diplomatically because in a small town everyone is your neighbor. On the other hand, rural pride was cited as leading many self-pay patients to actually pay.

Rural hospitals with large uncompensated care burdens, like their urban counterparts, can qualify for DSH payments. Allocation methods vary among the states, but certain federal regulations apply to all hospitals. One hospital administrator noted that the federal qualifications—for example, those pertaining to trauma capability—can be particularly difficult for small hospitals to meet. The range of services that must be provided in order to qualify, and the documentation required, can be burdensome, and some respondents asserted that they are not necessarily related to the quality of the care offered. Other administrators echoed this sentiment with respect to other federal programs designed to help rural hospitals.

The relative importance of all of these factors varies widely across the study counties, giving each health system a unique set of constraints and opportunities to contend with. In general, it appears that rural health systems are better off in Minnesota than in the other study states, and it is likely that there are Minnesota-specific characteristics, such as a low rate of uninsurance, that contribute to this relative strength. It would be a mistake, however, to think that only state-specific factors are at work. The fact that each of the other study states has both struggling and thriving rural hospitals and their associated health care systems suggests that many factors must be considered. As the study counties show, only some of the constraints these systems face are easily amenable to policy intervention.

Ambulatory Care Providers

Ambulatory care in the study counties was provided by physicians in private practice, physicians employed by either a hospital or a community or rural health clinic, midlevel professionals working under these physicians, and health professionals at the local health department. In general, hospital physicians cared for all county residents who presented at the hospital because all of the hospitals had policies of not turning anyone away for lack of ability to pay. The major provider of ambulatory care to the uninsured varied by community, but private-practice physicians were more likely to treat insured patients, and uninsured patients were usually seen at either the emergency room or the local community or rural health clinic.

The local health department typically provided care primarily to the poor, but in many communities it appeared to be the preferred provider for everyone for certain services, such as immunizations or family planning. As the number of providers increased in a community, so did the apparent likelihood of a sorting of patients among providers according to insurance status. For example, in Lexington, Mississippi (Holmes County), which has a hospital with an on-site rural health clinic and a federally funded community health center in addition to four private clinics, the community health center sees the bulk of the uninsured. In contrast, in Childress, Texas, which has a hospital with an on-site rural health clinic and a private physician practice but no community health center, it is the rural health clinic that serves the uninsured.

Often the greatest challenge in rural areas is to recruit and retain qualified health care providers. Responsibility for this task was taken most often by the local hospital, particularly in the smaller communities. In these cases, rural health clinics were common because, as is described below, they are frequently used as a physician recruitment tool. In communities where there is no hospital and ambulatory care is provided at the community health center, as in Shuqualak, Mississippi (Holmes County), recruitment is the responsibility of the clinic administration. Where care is provided at a satellite rural health clinic of a hospital, as at Ferry County (Washington) Memorial Hospital's clinic in Curlew, the hospital again assumes recruitment responsibility.

Physicians and Other Health Professionals

A good match of physician and community is critical. Rural physicians generally come from outside the community, and short tenure is an ongoing problem and expense for rural communities. Skill, diligence, and luck are all reported as important in attracting and retaining a physician. Both hospital and clinic administrators stressed the importance not only of working hard to find the right mix of skills and personality in a physician recruit but also of working hard after the physician's arrival to see that both the physician and his or her spouse are integrated into the community. The importance of seeing that the physician's spouse is happy in the community was mentioned in all of the study counties. A well-matched physician who along with his or her spouse and family is integrated into the community is more likely to stay and provide the stability and continuity of care that is so important to rural hospitals and rural residents.

Health professionals, especially physicians, face real challenges, both personal and professional, in practicing in a rural area. The following discussion is primarily from the point of view of physicians, but the challenges are similar for other health professionals as well.

Physicians coming from outside the area need to adjust to the ways of a new and usually smaller community. From a personal perspective, the difficulties range from the possible lack of accustomed amenities to meeting the needs of the physician's family, such as employment for the spouse and good schools for their children. While one might expect that foreign-born physicians, such as those who come into the community under the J-1 visa program (described on pages 34–35), might have more difficulty adapting, that did not appear to be the case. Some physicians choose to live in nearby urban areas, but, as respondents noted, physicians who only commute into the town for their jobs do not become part of the local community and may, as a consequence, fail to gain the full trust and respect of their patients.

Professional adjustment can be equally difficult. Rural practice is very different from the urban practice for which most physicians are trained. A broader range of services must be provided, and there may be less technological or professional backup, putting more responsibility on the often newly trained physician. For many physicians, this aspect of rural practice is a plus, but for others it can be daunting. The short-term challenge is to match the provider looking for such an independent practice with the right rural setting. The long-term challenge is to redesign medical training so that physicians are better prepared to take on the particular demands of rural practice, a goal that RAHA is working to achieve in Alabama.

Even for physicians who find themselves suited to rural practice, there are ongoing difficulties. Where the number of providers in a community is limited, there are fewer colleagues to whom one can turn to discuss professional matters and thus fewer opportunities for learning from one's peers. Fewer providers also means that each provider will be asked to take call more frequently, and vacations and sick leave will always be difficult to schedule. On the other hand, as the number of providers increases, so does the competition for patients, and fewer patients can mean lower income. Finally, given the higher proportion of Medicare and Medicaid enrollees and uninsured, physicians in rural areas may find themselves subject to state or federally determined reimbursement schedules on the one hand and asked to provide more charity care on the other.

Where physician supply is limited, some hospitals and clinics have come to rely on midlevel practitioners, such as physician assistants, nurse practitioners, and certified nurse midwives. At Methodist Hospital (Holmes County, Mississippi), certified nurse midwives run the obstetrical service. The community health center in Stevens County (Washington) staffs its satellite clinics entirely with physician assistants. The level of responsibility given to midlevel professionals in rural practice can be much greater than in urban practice, and these professionals, too, must be ready to address a broad range of problems with a relatively low level of supervision. In many areas, the demands placed on these professionals are being recognized, and they are being given greater leeway in their practice. Changes in state practice acts that have allowed midlevels greater prescriptive authority, such as Alabama passed in 1995,

have made midlevel practice more feasible in rural areas where there may be less frequent contact with supervising physicians.

Community Health Centers

A mainstay of the safety net in rural areas, as in urban areas, is the community health center. By charter, these clinics must serve everyone without regard to ability to pay and, as noted above, most receive federal grants to support care for the uninsured. All but one of the clinics interviewed was located in a town with a hospital, although many had branches in smaller towns where there were no other health care providers. Most seemed comfortable with their role as the major provider of care for the uninsured and had established relationships, either with the hospital in town or with a larger hospital in a nearby urban area, for care that was beyond their capacity to provide. Finding specialty, diagnostic, or inpatient care for their mostly uninsured clients, nonetheless, was reported as an ongoing problem.

The clinics must cope with the difficulties faced by all health care institutions of recruiting and retaining physicians, but their difficulty is exacerbated by their limited budgets. The clinics in this study noted that federal grant levels have been stagnant over the past several years, even while costs and the number of uninsured patients have been rising. For those that treat a large number of Medicaid or Medicare patients, the phaseout of cost-based reimbursement presents a serious problem that is likely to compound the problem of flat federal funding.

Local Health Departments

In rural areas, with an often limited number of alternative providers, local health departments have been important sources of patient care. Most of the local health departments reported that they used to provide a substantial amount of primary care for the uninsured, cross-subsidized by Medicaid revenues for immunization and EPSDT services and by Medicare revenues for home health. Recent changes in Medicare's home health policy (both in qualification for service and in reimbursement) and the expansion of Medicaid managed care, often combined with declining county budgets, have forced the local health departments in most communities to refocus their programs. Other Medicaid providers have taken over provision of many of the patient care services formerly provided to Medicaid enrollees by local health departments, although in some cases local health departments have contracts with Medicaid managed care providers to continue to provide some services. For example, in Stevens County (Minnesota), the local health department was active in developing the county-based plan for Medicaid managed care and expects to continue its involvement in maternal and child health activities. In Cottonwood County (Minnesota), which is a PMAP county, the local health department has a contract with the HMO. In contrast, in Holmes County (Mississippi), referrals to the local health department for EPSDT services under Medicaid vary by individual physician.

The large drop in EPSDT activities and the changes in home health service qualification requirements have potentially serious consequences, not only for small rural health departments as their revenues decline but also for area residents whose health care problems, health officials fear, may not be identified or addressed in a timely

manner as historical patterns of care are disrupted. Many local health department officials were also worried about the effect of the changes on their homebound elderly patients because recent changes in the Medicare home health policy have led or may lead to staffing and service cuts by all home health providers—local health departments, community health centers, hospitals, and private agencies. The challenge for local health departments in rural communities is to identify the gaps that are being left as the delivery system evolves and to find ways to fill these gaps. In the transition to a new structure of reimbursement, both in public insurance and under managed care, counties must find ways to meet their communities' public health needs without relying on cross-subsidization from public program reimbursements.

Other Health System Components

Having a sufficient number of providers available is critical, but in rural areas, where the distance to a provider can be great and where there is no regular system of public transportation, communities must also consider how patients will get to the providers that are available. All of the study counties had emergency medical systems for transporting patients in emergency situations, often subsidized by the county. Usually for a fee, they also had transportation available by appointment for routine care or for appointments with specialists outside of the community. Respondents frequently noted that the fee and the lack of alternative transportation represented a serious barrier to access. No county seemed to feel that it had completely addressed the transportation problem for its residents.

A second serious and unresolved problem identified by respondents is the lack of affordable prescription drugs, not only for the uninsured but also for the underinsured. Medicare recipients are a large proportion of the rural population and also typically have high medication demands. For many, the cost of pharmaceuticals puts treatment of chronic problems out of reach. Medicaid recipients fare somewhat better; in all states, prescription coverage is part of the Medicaid benefit package, although some states impose limits on the number of prescriptions that can be filled in a given time period.

Respondents in several of the study counties reported that informing rural populations about both the importance of preventive care and the availability of public programs is more difficult in rural than in urban areas and hinders optimal use of the health care resources that are available. The higher level of poverty and the lower level of educational attainment in rural areas mean that mass media offer a less effective way of getting needed information about health and health programs to the population. Respondents noted that in many communities the only way to get information to all households reliably is to go door to door. Literacy is lower and fewer households have television or subscribe to a newspaper; mailed flyers are often ignored.

Finally, the combination of rising managed care awareness (if not actual penetration) and the desire of rural areas to control their own health care systems has led some local systems to consider the effect that managed care might have in their communities. The CBP-PMAP decision that Minnesota counties faced is a good example. While some counties were comfortable with outside managed care firms con-

tracted by the state (with county input), others wanted to retain local control of provider networks. In Texas, the possible control of managed care by urban-based providers provided at least partial impetus for the formation of a coalition of rural hospitals in the Panhandle region. Whether controlled locally or from outside, the implementation of managed care in rural areas is hampered by the smaller population base over which managed care organizations can spread risk. Further expansion of managed care into rural areas is likely to be difficult until the issues of choice, risk, anti-trust, network adequacy, and local control can be addressed.

Efforts to Improve or Preserve the Rural Health Care Safety Net

Faced with an extensive array of financial pressures and other challenges, rural health providers and the communities they serve have turned to remedies that span an equally broad range. Efforts to maintain and revitalize rural health delivery systems are typically combined and executed in ways unique to each community. Nonetheless, similarities in overall approaches extend across nearly all rural health care markets. Approaches to strengthening rural health care delivery systems can be divided into external supports and internal strategies. The two approaches are not mutually exclusive, and indeed they are generally interdependent in that the success of an internal strategy often relies on external support. As this study has defined it, external support consists of local taxes, state and federal aid, and private programs or donations. Internal strategies adopted by health care facilities include increasing or stabilizing the supply of physicians in the community, changing the scope of services, forging cooperative relationships with other rural providers, and merging or establishing links with providers outside the community.

External Support

Because of the difficulties associated with delivering health care in rural areas, rural health systems frequently depend on external support, or nonoperating revenues, for their survival. External resources consist mostly of public funds and come in the form of operating subsidies or loans, special payment allowances, and programs designed to maintain or increase the supply of health care providers. Private efforts, such as prescription drug programs, also play a small role. Reliance on these external supports varies by community and fluctuates over time. Both the generosity of the locality and the state and the aggressiveness with which a provider or community pursues available resources also determine the level of external support available to the community.

Local Funding

In recognition of the value to the community of maintaining its own hospital, many local governments levy taxes, issue bonds, or make loans in order to prevent hospital closure and to allow routine operations to continue. Hospitals use local

monies to reduce debt, make capital expenditures, and offset operating losses, including the costs of charity care. Of the 16 hospitals visited, at least 7 receive local tax subsidies generated by a county sales tax. County support of hospitals appeared fairly common in both Alabama and Mississippi. In Minnesota, Texas, and Washington, the four public hospitals visited are hospital district facilities with taxing authority, usually carried out through a property tax. Texas hospitals with taxing authority are legally responsible for providing care for uninsured county residents, either through the hospital directly or by arrangement with other providers. Local support can also be nongovernmental, such as the hospital cooperative model in Texas or community donations, especially during times of financial crisis or building projects.

Hospital experiences with local funding varied widely across the study communities. For many of the study hospitals, local financial support helps cover the uncompensated care losses and is critical for survival. Most hospital administrators expressed the belief that their communities considered their money well spent on the hospital, and indeed communities had voted to continue taxes that were set to expire in order to continue to support the hospital. One administrator felt, however, that the cost of running the hospital and the value that it provided to the community in the availability of emergency services and in its contribution to the local economy were not fully understood by local officials and expressed the fear that support might not continue. Another believed that, given the option, county residents would vote to close the hospital in order to have lower taxes. Finally, there were administrators who thought that their hospitals would survive without local levies.

State and Federal Funding

Local funding comprises a relatively small share of the budget of rural hospitals in this study. The financial status of rural delivery systems hinges much more on federal and state programs that fund both insurance and the health care delivery infrastructure. Medicare and Medicaid are the two most important insurers in rural areas. Community health centers and physician recruitment programs are key federal and state efforts to improve the health care infrastructure. While all of the study states use both public insurance and direct support of infrastructure to some degree as a means of providing health care for their uninsured indigent populations, they differ in the relative importance of these two mechanisms. In general, Minnesota and Washington appear to rely more on generous Medicaid and other insurance programs as a means to increase access, while Alabama, Mississippi, and Texas place greater emphasis on building a health care safety net through direct support to hospitals and clinics.

Special Medicare and Medicaid payment policies tailored to rural providers as well as expansions in Medicaid coverage are credited with strengthening rural health care systems. Washington and Minnesota were the most active of the study states in establishing Medicaid provisions that are favorable to rural providers, although Texas also has a large Medicaid DSH program that helps support its rural hospitals. In Washington, rural hospitals may qualify for the state-sponsored Rural Hospital Assistance Program (RHAP). RHAP uses intergovernmental transfers from public rural hospitals to generate a federal match for DSH payments back to rural hospitals

(Nichols et al. 1997). RHAP funds may be used to finance new services, but they cannot be used to cover operating expenses. All of the hospitals interviewed in Washington have used RHAP funds either to purchase new equipment, such as a mammography machine, or to expand an existing clinic. At the time of the site visit, one hospital was using RHAP funds along with the federal Job Corps program to expand its on-site clinic. Washington's Medicaid program also pays certain low-volume rural hospitals—including one of those visited—on a cost basis rather than on a diagnosis-related group (DRG) basis, because cost-based reimbursement is expected to impose less financial risk on vulnerable providers.

Minnesota and Washington, in addition to their comparatively extensive Medicaid programs, have established state-only insurance programs for low-income persons ineligible for Medicaid—MinnesotaCare and Basic Health Plan, respectively. The southern states have historically had more restrictive Medicaid eligibility rules, although all three will expand their Medicaid coverage, under the Children's Health Insurance Program (CHIP). All insurance expansions have the potential to improve access to care for rural residents and reduce uncompensated care for rural providers. Because the non-Medicaid programs and CHIP may not carry the same stigma as Medicaid, officials hope that low-income rural residents, described as proud by several observers, will be more likely to apply for the benefits. As a countervailing factor, some respondents reported that welfare reform has led to a decrease in the Medicaid rolls and a concomitant increase in uncompensated care at both the hospital and the clinic levels.

Medicaid and Medicare have several payment policies designed specifically to benefit rural hospitals and physicians. At the sites visited, the rural health clinic program was perhaps the one most commonly adopted by providers. A physician practice or hospital outpatient clinic in a federally designated underserved area can qualify for cost-based Medicaid and Medicare reimbursement by meeting rural health clinic criteria, including employing a nurse practitioner, certified nurse midwife, or physician assistant on at least a half-time basis.

States in this study differ in the extent to which providers have taken advantage of the rural health clinic program. Texas has been very active in promoting and has by far the most rural health clinics of any of the 50 states. All four of the hospitals interviewed in Texas owned and operated at least one rural health clinic. Mississippi also has a large number of rural health clinics, whereas the remaining three study states have many fewer. Various reasons were given for establishing rural health clinics, although the availability of cost-based reimbursement to these clinics was frequently cited as an important recruitment tool for attracting physicians and midlevel practitioners to rural areas. Rural health clinics face a gradual phaseout of mandatory cost-based reimbursement under Medicaid by fiscal year 2004, and clinic administrators seemed wary about the impact of these changes. As noted above, these clinics assume varying roles in serving the poor, depending on the local health care market.

Federal and state governments also support rural health care delivery by directly augmenting the supply of rural health providers. One of the most prominent programs is the federal government's community health center program, which provides operating grants to primary care clinics in underserved areas, both rural and urban. These clinics, like the rural health clinics, have historically received cost-based reim-

bursement for their Medicaid and Medicare patients. As with the rural health clinics, there is significant disparity in the distribution of community health centers across the country; the southern states in this study appeared to rely more heavily on such programs than did the northern states. For example, Alabama has 15 community health centers grantees and some 70 delivery sites, whereas Minnesota has only two. Although perceived as unwelcome competition or as federal intervention in a private market by some private providers in nearly all the states, the community health centers interviewed appeared to be filling an essential role as providers of care to the medically indigent. In some communities, the community health center offers the only services within a reasonable distance.

Community health center officials in Alabama, Mississippi, and Texas expressed concern about the impending loss of Medicaid cost-based reimbursement. In contrast, the Stevens County (Washington) community health center, with six sites, appeared better able to weather the coming changes, because it receives some grant money from the state and has diversified into profitable services including home health and dental care. Reluctance to compete with private providers keeps community health centers in other communities from using home health and dental services to generate additional revenue.

Federal and state governments have supplemented the supply of primary care physicians and other health professionals in rural areas through scholarship and loan repayment programs. Although these programs are relatively small when viewed in a national context, they are important contributors to the health professional supply in many rural communities. The federal government's program, the National Health Service Corps (NHSC), had placed physicians in health professional shortage areas (HPSAs) in at least five of the counties visited, most of them in Alabama and Mississippi. Some states and communities fund similar programs. In recent years, the federal J-1 visa program has surpassed scholarship and loan repayment programs in placing physicians in shortage areas in some states. J-1 visa physicians are prevalent in the three study states in the South, less prevalent in Minnesota and Washington.

These physician placement programs have detractors as well as defenders. Detractors argue that the cultural barriers that exist between patient and physician, particularly foreign-born physicians, impede the delivery of care. Moreover, contracts are for three years only, so physician turnover is high, harming continuity of care and the reputation of clinics or hospitals that employ the physicians. Defenders argue that the program has been successful in bringing physicians to communities that would otherwise have no or insufficient health resources and that some physicians integrate well into the community and choose to remain beyond their obligation period.

Under proposed revamping of federal HPSA criteria, J-1 visa physicians would be included in the physician census for the first time. This potential change has some communities worried that they will lose their HPSA designation and the programs attached to it, such as the National Health Service Corps and the rural and community health center programs. The J-1 visa program is up for reauthorization this year and its future is uncertain (Capital Area Rural Health Roundtable 1998).

Other External Supports

Some public funding is available to support transportation and prescription drug provision for rural areas. State Medicaid programs reimburse transportation costs for medically necessary visits by their enrollees. The federal government also supports rural transportation projects. Washington, for example, has a federal Department of Transportation grant for improving rural transportation. Finally, two of the smallest hospitals visited—Ferry County (Washington) Memorial and Greene County (Alabama) Hospital—have a heliport for use in transporting patients to larger hospitals. Despite these efforts, many respondents indicated that lack of transportation remains a serious barrier to obtaining health care. They noted that transportation programs run on irregular schedules and are at times too costly.

In the counties visited, a number of public and private programs offer free or reduced-cost drugs. County health departments in Alabama and Mississippi provide some free prescription drugs to clients. The Family Health Services community health center network in western Alabama has an in-house pharmacy from which patients can receive discounted drugs. Many national pharmaceutical companies provide medications for distribution to uninsured patients, and Alabama is the third-largest recipient of one of these programs, Pfizer's Sharing to Care program. In one Washington county, community fundraisers are periodically held to purchase prescription drugs for those in need. Despite these efforts, in all five of the states visited there is an ongoing need for affordable prescription drugs.

Internal Strategies

Confronted with financial and other challenges, rural health care providers, including hospitals, health departments, and clinics, frequently display remarkable resilience. Many rural respondents expressed pride in their lean, low-cost operations. Having weathered tight financial periods and even faced closure, they remain open not only as a result of external supports but also by dint of their own internal efforts. These efforts include increasing the stock of physicians and other health professionals, tailoring facilities and services to the needs of the community, and expanding, downsizing, or diversifying as needed. Other strategies involve cooperation among rural providers and developing links with urban providers through mergers, management contracts, and joint projects.

Health Professional Recruitment and Retention

In most of the counties visited, physician supply was on the upswing as a result of the federal and state programs described above, the changing demand for physicians in urban areas, and hospital and rural and community health center initiatives. Some counties can rely on local assets such as the presence of a university in Stevens County, Minnesota, or the great natural beauty of Stevens County, Washington, to help attract physicians. Others, however, still struggle to attract providers, and retention problems mean that even communities currently well supplied with physicians must remain vigilant. Few respondents appeared to feel that the professional recruitment problem had been solved.

It was suggested by observers in Washington and Minnesota that the quality of rural physicians is improving as a result of the enhanced competition and the peer oversight that have accompanied the growing supply of physicians. Moreover, it was noted that a growing physician supply is in many ways self-perpetuating. Once a critical mass of physicians is reached, a community is more attractive to physicians that follow, especially when there is more than one practice option from which to choose. A negative consequence of physician expansion is the tension created between physician newcomers and the established, long-tenure physicians as both groups vie for patients. More established physicians in some communities, including ones visited in Minnesota, Mississippi, and Texas, have impeded physician recruitment and the development of new practices. As noted above, many established physicians see the subsidization of new physician practice startup costs through rural and community health centers as unfair competition.

One of the most common strategies that rural hospitals have used to ensure a stable and even expanding physician population is to employ doctors, offering them a predictable income and shared expenses for overhead and equipment. The practice of employing physicians is most commonly found in hospitals that operate their own rural health clinics. In fact, many hospitals open these clinics specifically as a recruitment tool. For both hospitals and clinics, physician salary is an issue, and the contribution to salary of cost-based reimbursement through rural health clinics is an important factor in their popularity.

Physician recruitment and retention efforts must also address the other issues related to rural practice that are identified above. Participation in locum tenens programs is one important recruitment tool aimed at mitigating one of the major problems facing rural providers. These programs provide temporary replacement physicians so that solo practitioners can have practice coverage during vacations or extended periods of illness or can participate in continuing education activities outside of the community.

Physicians and other professionals who are familiar with life and medical practice in rural areas are more likely to remain in rural areas once they have been recruited. All five of the study states provide support for the development of rural health professionals by requiring, facilitating, or funding training opportunities in rural areas so that students become familiar with the particular demands and satisfactions of rural medical practice, or by funding education either through scholarships for aspiring providers from rural areas or through loan forgiveness for providers agreeing to locate in rural areas. States also assist in identifying and supporting the training of local residents to become health professionals on the premise that people from rural areas are more likely to adapt well to professional practice in rural areas.

Despite the consensus that exposure to and training in a rural practice can encourage or reinforce physicians' decisions to locate in small towns, only one of the sites in the study, a hospital in Washington, had a formal residency program. At least three of the residents from this program have elected to remain in the area upon completion of their training. Establishing a family practice residency program in a rural area has become more difficult than it was in the past as a result of recent policy changes by the national residency review committee for family practice, which

raised the standards governing the number of students and teaching physicians that must be at each site.

A handful of interviewees mentioned the use of recruitment firms. A professional firm may charge fees up to $25,000, which puts their services beyond the means of many small hospitals. Given the short tenure of many recruits, the high cost of recruitment represents a significant and recurrent expense for rural health systems. Furthermore, many respondents felt that the available recruitment programs were not always designed to match communities and physicians with an eye to encouraging provider longevity in the community. It was felt that the involvement of state medical schools in the physician-community matching process would be very helpful and would result in more state-trained physicians staying in-state.

Service Expansion

Both clinics and hospitals use service expansion to enable them to meet a broader range of health care needs in their communities. Areas of expansion seen in the study communities include the construction or renovation of a physical plant, the addition of new medical services, and diversification beyond traditional acute care services. Overall, growth and expansion, as opposed to downsizing, appeared to be the more common, and seemingly more successful, route. It may be, however, that successful organizations have more resources on hand to finance the very expansions that breed additional success. Many providers were planning, were in the process of completing, or had just completed significant construction projects. Projects ranged from simple enlargement of a laboratory all the way to a planned total refurbishment of a hospital. Some of the projects were aimed at improving current facilities and services, and others added new capacity.

Another area of expansion observed among the study hospitals is in outpatient services, as evidenced by the development of satellite clinics and the expansion of on-site outpatient capacity. Most of these projects were begun before the changes in outpatient reimbursement outlined in the 1997 Balanced Budget Act.

Many of the health care providers visited were not only actively expanding their traditional acute medical services but also had diversified into other service areas, particularly long-term care. Among hospitals that had adopted this approach, most admitted that long-term care services were subsidizing other hospital services because the demand for them was higher and reimbursement for long-term care was more favorable than for inpatient care. Nearly every hospital operated a skilled nursing facility, swing beds, a home health agency, a psychiatric unit, hospice care, or a combination of these services. Some community health centers have also expanded beyond primary care to dentistry, home health care, and hospice care. As with hospitals, community health centers have used revenues from these nontraditional activities to help support core activities.

Downsizing

Compared with the significant expansion and diversification activity among rural health care providers, efforts to downsize were negligible. Despite the enactment of

the federal Critical Access Hospital[13] (CAH) program and support among many policymakers and health planners for some rural hospitals to narrow their scope of services, few of the hospitals we visited see it as in their own interest or their community's to scale back. Among the hospitals interviewed, only three thought that downsizing to meet CAH requirements was a reasonable alternative for their facility. For one hospital that no longer offers surgery or obstetrics, the CAH model was appealing, particularly the associated cost-based reimbursement. Two other hospitals thought that a rational plan for their hospital would be to maintain emergency and outpatient services while closing their inpatient beds. The other hospitals—ranging from those with a single-digit census to much larger facilities—expressed no interest in converting to a smaller-scale facility. In fact, four hospitals in three states explicitly said that, given their particular circumstances, the CAH model was a bad idea. Two primary reasons for this assessment are that cost-based reimbursement, in some cases, would mean lower revenues than those under the current diagnosis-related group (DRG) reimbursement and that the attendant loss of flexibility in treating patients and in structuring hospital services would limit the hospital's ability to meet community needs and expectations. Specifically, hospitals saw the restriction on length of stay under most limited-service-facility proposals as not in the best interests of local residents. Flexibility to respond to local needs is critical to the survival of rural facilities, given both the competition they face from larger, urban facilities and their often precarious financial position. Administrators believe that community residents want and take pride in having a full-service hospital. Respondents in Mississippi noted that the Critical Access Hospital program does not work there because hospitals are required to be a certain distance apart in order to qualify. The state is looking into getting an exemption based on economic conditions in rural areas. Should an exemption be granted, Noxubee General, for example, would need to cut its beds to 15 acute care and 10 swing beds in order to participate; hospital officials felt that the benefits of the program would justify this change.

As a result of a drop in Medicaid volume and because of reductions in home health revenues, most local health departments in the states visited had no alternative but to downsize. Cuts in their services are not so much a strategy as a necessity in the face of declining revenues. In Alabama, downsizing has included elimination of school screenings, consolidation of home health administrative offices, less use of physicians and more reliance on nurses, and cuts in nursing staff. Mississippi health departments were undergoing similar changes, including combining and reducing administrative staffs, ending school nurse programs, limiting the use of physicians and the delivery of clinical sick-care services, eliminating nurse-staffed satellite clinics, and eliminating diabetes screening programs. In Minnesota, health departments were cutting health education staff and home health aides. In Washington, the one health department interviewed had ended its child health screening activities.

Cooperative Efforts among Rural Providers

Because of their smaller size and relatively limited resources, rural health care providers frequently collaborate to ensure their continued ability to serve their communities. Although competition for patients and resources exists, especially for health professionals, rural providers display a notable willingness to band together to

lower costs, improve quality, and thereby strengthen their position in increasingly competitive and fiscally constrained markets. Cooperation with other rural providers is also a mainstay of rural hospitals' strategy to ward off encroachment by urban health care systems. This study found numerous examples of cooperation among rural health care providers.

The Rural Alabama Health Alliance, mentioned earlier, is one of the most extensive collaborative efforts among rural providers in this study. It was established in the early 1990s with the initial objective of incorporating a rural component into the graduate medical education program. Through RAHA, hospitals and physicians have built channels for enhanced communication, information sharing, and joint projects. Some RAHA providers have formed a network to bid on a capitated Medicaid maternity contract. One respondent noted that an advantage of RAHA is that providers come together as peers, which is less threatening than the networks developed by urban systems that seek to enlist rural providers chiefly to expand their own market areas. RAHA has also received a grant for telemedicine activities, which it is in the process of implementing.

A similar example of provider collaboration is the Panhandle Coalition in west Texas. The coalition consists of 21 hospitals that organized partly in response to what was viewed as overly aggressive expansion by a nearby urban hospital system into the rural providers' service areas. The coalition has received a competitive Title V grant to provide maternal and child health services, defeating its urban rival. The coalition has plans to create electronic links among the participants and to develop telemedicine capabilities, which are critical in this area characterized by great distances between providers. The group envisions that it will eventually compete for managed care contracts and accept full-risk capitation.

Community health centers and health departments in west central Alabama also exhibit a high level of cooperation and regionalization. Two health center organizations in the region merged in 1998 to form Family Health Services and now have a network of nearly 25 physicians. From the perspective of one clinic in the network, the advantages of being part of a larger organization include access to management assistance and backup physicians during scheduled vacations. Health departments in the state are organized by region, with several county health departments managed by a single director. Other administrative functions are shared among the health departments, including, most recently, home health administration.

According to respondents in two Minnesota counties, good communication and networking are common among providers. Participants in the Minnesota Healthcare Providers Taskforce, including administrators of hospitals, health departments, and long-term care facilities, meet on a monthly basis with the goal of strengthening the local delivery system, particularly in the face of escalating competition from providers in more urbanized areas. Joint projects include such activities as staff training, especially for nurses' aides. It was noted that this level of cooperation is possible in part because hospital closures in recent years have reduced competitive and related financial pressures. Other cooperative arrangements include sharing administration at two small hospitals (supported in part by a grant from the state for the regionalization of services) and cooperation on other projects such as a mobile cardiac diagnostic ser-

vice and a mammography van. Respondents stressed that administration of shared projects can be difficult and that there are limits to collaboration.

Collaboration among rural health care providers in Minnesota has accelerated under the state's Medicaid managed care policies, which have forced counties to choose between local or state control over Medicaid managed care providers in each county. Many counties have decided to pool their resources and talents to respond to this challenge.

Cooperation and regionalization among providers is widespread in northeast Washington. Through the efforts of the Northeast Washington Rural Health Group, collaboration among the health department, long-term care agencies, and other providers is encouraged with quarterly meetings and joint projects. Most health care administrators serve on the boards of other providers, which further promotes collegiality. According to observers, providers consciously choose not to duplicate the services of other agencies, a stance also taken by the Minnesota Healthcare Providers Taskforce.

In contrast, collaborative efforts in the counties visited in Mississippi are in their infancy. One respondent noted that awareness is growing among providers that they must begin to cooperate with one another, yet there are still turf battles, between community health centers and health departments and between public clinics and private physicians. Hospitals, as well, are beginning to recognize the potential gains from cooperation and are taking steps in that direction.

Urban Provider Links

For many rural providers, establishing ties to urban providers offers either an alternative or a complementary approach to rural collaboration. Although some rural providers are highly protective of local delivery systems and have found urban providers to be predatory, other rural providers view urban links—formal and informal—as necessary and beneficial and not at odds with maintaining their independence. Rural hospital interviewees reported many benefits from their association with urban systems. The urban health systems generally do not provide financial support to the rural facilities, although they may lend them money or facilitate their access to capital markets. They also serve other functions such as help in physician recruitment or access to joint purchasing contracts or employee benefits. Most provide technical assistance as needed to their affiliates. Some observers, however, mentioned management contracts that nearly led to closure because of poor management or siphoning-off of patients and resources.

Of the hospitals interviewed in Mississippi, two had been purchased by urban-based health systems. Many hospitals in the larger region that includes the Texas study counties have been linked in recent years to one of two urban-based hospital systems. In contrast, other Texas Panhandle hospitals have banded together, as discussed above, in large part to avoid affiliation with a nearby urban system that was viewed as not sufficiently attentive to rural hospital concerns. All of the hospitals interviewed in Minnesota are connected with an urban system, primarily through management contracts. In Washington, two of the three hospitals in the study are part of the Spokane-based Providence system and are overseen by a single regional board. Only two of the study hospitals reported no formal urban or rural collaborations.

Informal links include mutually beneficial arrangements of shared resources and patients. In most of the counties visited, local providers had an established relationship with a hospital in the closest city to which they made referrals—for both insured and uninsured patients. One Alabama hospital purchases used equipment at a discount from a Tuscaloosa hospital associated with the medical school; in return, it refers patients to the larger urban facility. The two hospitals are also working on a joint purchasing arrangement.

Increasingly, rural hospitals are establishing links with urban hospitals around telemedicine projects. Most hospitals that are experimenting with telemedicine appeared only somewhat enthusiastic about its potential; however, several admitted that true telemedicine, or teleconsultation, is less essential than it would be in a frontier area, where distances to specialists are greater. Some hospitals report that, to date, the main use of its telemedicine capabilities has been continuing education for its staff. Others noted that the technology is underused, in part because of a lack of reimbursement but also because visiting specialists are often a better alternative.

Conclusions

The nature of health care delivery is changing across the country. Health care policymakers are trying to ensure that, as the system changes, access to care is maintained, particularly for vulnerable populations. In urban areas, this concern is articulated as the need to preserve the safety net. In rural areas, the concern must be that the health care system itself survive because the overlap between the health care system and the safety net is almost complete. The smaller the community, the more likely it is that the same providers are serving all residents—the privately insured, the publicly insured, and the uninsured.

Living in a rural area can make access to care difficult, but in the communities visited, systems are in place to meet residents' health care needs. Low-income residents and the elderly may face barriers to care, but the study communities were making efforts to meet the needs of these vulnerable populations. If the local system were to collapse, however, the consequences would be most serious for the elderly and the uninsured poor, because younger and higher-income residents are better able to travel outside the community to get care. The question of which services need to be available locally and which could best be procured through nonlocal providers will be central as the rural health care safety net evolves to address the changing character of health care delivery across the country.

While the primary function of the health care system is to provide health services, the health sector plays other important roles, particularly in rural communities. It is often one of the largest single employers in the county and a source of civic pride. Respondents in all communities expressed the belief that the economic growth and stability of rural communities require the presence of a health care system to attract and keep residents, to attract businesses to employ local residents, to prevent the money that is earned in the community from being spent on health care in other communities, and to bring state and federal dollars into the community through Medicaid and Medicare payments to providers. A strong health care system has multiplier effects

throughout the community. The decline of a community's health system, it was claimed, often presaged the decline of the community as a whole.

These factors all support the contention that investment in the rural health care sector is an investment in the community as a whole. Rural communities, however, are faced with competing needs for investment dollars. Furthermore, regional development issues must be considered, and state support of local health systems must address the problem of competing systems in nearby towns. Once policymakers look beyond the individual communities to the larger region, trade-offs among communities are implied.

Solutions to the problems of the rural health care sector are not easy to find, in part because each community is unique and a one-size-fits-all strategy simply does not work. As the study communities illustrate, the combinations of funding mechanisms, service delivery, rural networking, urban links, and joint provider-community approaches to health sector development are as varied as the communities themselves. The current level of success achieved by the communities is also varied. The health care systems visited ranged from thriving systems where providers were either competitive or cooperative to systems that were barely surviving. As local health care stakeholders talked about how their systems have fared over the past few years and how they arrived at their current state, it was clear that even some currently successful systems were only a few years past troubled times and, by implication, could easily slip back into a less secure state. As discussed above, the size of rural systems makes them particularly vulnerable to even small setbacks, and complacency is therefore ill-advised.

From this study, two priorities for rural health care policy are clear. First, unless rural circumstances are taken explicitly into account, not only in the design of programs for rural areas but also as policy changes are made in Medicare and Medicaid, the unintended consequences for rural areas can be severe. The importance of such consideration can be seen most clearly in the toll that the Balanced Budget Act changes have taken on rural hospitals (Ernst and Young 1999) but is also evident in the effect of increased managed care penetration in urban areas on provider recruitment in rural areas. For communities with stable health care systems, such unintended consequences may be only an additional source of manageable stress on the system. For communities whose systems are struggling, the result may be the collapse of the local system.

Second, rural communities face a diverse set of constraints. Rural health systems need flexibility to respond to changing circumstances in ways that reflect the preferences of their residents and encourage them to consider the role of their community's providers in the larger regional health care system. Rather than narrowly targeted assistance strategies, a range of options is needed that would support such flexibility and would help rural systems address the particular combination of problems that they confront at a particular time.

Respondents were almost universally insistent on the need for rural communities to retain local control of their health care systems. Outside support for local control requires recognition of both the vulnerability of these systems to short-term setbacks and the flexibility needed to weather such setbacks. In the face of declining demand for inpatient services, urban hospital systems are looking farther afield to bring in new patients for their institutions. If rural systems have no alternative sources of support

during periods of stress, such as the illness or departure of a physician or an immediate need for capital investment, they will be vulnerable to acquisition by urban systems. Affiliation with an urban system can be beneficial to rural systems, but the rural system must be able to enter the affiliation with its urban partner with the assurance that its own needs, as well as those of the urban system, are taken into account. Some resistance to limited-service hospital models appears to spring from the rural system's need to maintain a strong bargaining position with respect to potential collaborators. Rural health care systems have a set of strengths and opportunities that can complement urban provider systems or other rural systems. The dominant characteristic of affiliations that appeared to best serve the interests of the study communities was that the providers and institutions involved came together as equal partners, recognizing the complementary nature of what each brought to the table.

Appendix: List of People Interviewed

Alabama

John Brandon, M.D.	Family Practice Center
Mark Causey	Family Healthcare Corporation
Robert Coker	Greene County Hospital
William Curry, M.D.	School of Medicine, University of Alabama
C. Kay Fendley	School of Medicine, University of Alabama
Fred Grady	Tuscaloosa Department of Public Health
Tunisia Lavender	Pickens County Medical Center
Ida McClenney	Perry Family Health Center
Ashvin Parikh	Linden Department of Public Health
Sumathi Paturu, M.D.	Perry Family Health Center
Tiffany Smith	Perry Family Health Center
John Wheat, M.D.	School of Medicine, University of Alabama

Minnesota

Estelle Brouwer	Minnesota State Department of Health
Rose Carsten	Cottonwood Family Services
Mike Flicker	Prairie Medical Associates
Lori Kuenn	Prairie Medical Associates
Keith Madson	Cottonwood Family Services
Steven Pautler	Windom Area Hospital
Tom Quinlivan	Westbrook Health Center
John Rau	Stevens Community Medical Center
Doug Reker	Glacial Ridge Hospital
Mark Schoenbaum	Minnesota Department of Health
Patricia Stewart	Cottonwood/Jackson Public Health Service
Linda Thullner	Minnesota State Department of Health
Sandy Tubbs	Stevens/Traverse Public Health Department

Members of the Minnesota Healthcare Provider Taskforce

Mississippi

George Bartley	Mallory Family Health Services
Thad S. Bridges	Mallory Family Health Services
Tammy Cade	Noxubee Department of Public Health
Martha Davis, M.D.	Mallory Family Health Services
Sarida Glover, RN	Mallory Family Health Services
Tommy Hughley, CPA	Mallory Family Health Services
Wilbert Jones	Greater Meridian Health Clinic, Shuqualak
Deborah Mabry	Holmes County Health Department
Debbie McDaniel	University Hospitals and Clinics, Durant

Arthur Nester	Noxubee County Hospital
Alfio Rausa, M.D.	District 3 Health Officer
Bennie L. Rayford	Mallory Family Health Services
Reginald D. Regsby, M.D.	Mallory Family Health Services
Alicia Ryals	Noxubee Department of Public Health
Carol Scruggs	University Hospitals and Clinics, Durant
Melvin Secer	Mallory Family Health Services
Frederick C. Shaw, M.D.	Mallory Family Health Services
Shirley Spencer	Methodist Health of Middle Mississippi
Thomas Waller, M.D.	District 4 Health Officer
Rosie Wilburn	Noxubee Department of Public Health

Texas

Jim Cannedy	South Plains Health Provider
John Castro	Plainview-Hale County Health District
Jody Dixon	Hall County Hospital
Michael Keller	Hi-Plains Hospital
Kelvin King	Childress Family Clinic
Joseph Langford	Covenant Health System
Jackie Latham	Hale County
Mario Martinez	Hale County Commissioner
Kay McCarty	Rural Health Clinic, Childress Regional Medical Center
Earl McDonough	Hale County Commissioner
Todd Oberhau	Covenant Health System
Deeanna Rogers	Plainview-Hale County Health District
Frances Smith	Childress Regional Medical Center
Connie Vering	Covenant Health System

Washington

Gloria Cooper	Mt. Carmel Hospital
Charlotte Hardt	AHEC, Washington State University—Spokane
Barry Hicks, M.D.	Washington State University—Spokane
Ralph Hill	N.E.W. Health Programs Association
Judy Hutton	Northeast Tri-County Health District
Gary Kohler	Ferry County Commissioner
Dorothy McBride	Northeast Tri-County Health District
Nancy McIntyre	Ferry County Memorial Hospital
Steve Meltzer	AHEC, Washington State University—Spokane
Gary Peck	St. Joseph's Hospital
Ron Rehn	Northeast Washington Medical Group
Mary Selecky	Northeast Tri-County Health District
Janet Thomas	Department of Social Services, Colville

Notes

1. For more information on the *Assessing the New Federalism* project, see Kondratas, Weil, and Goldstein (1998).

2. These and other data on state poverty rates represent a three-year merge of the March 1996, 1997, and 1998 Current Population Surveys.

3. All insurance coverage figures are preliminary estimates from the 1997 *Assessing the New Federalism* National Survey of America's Families and refer to insurance coverage at the time of the survey. Other insurance includes Medicare, the Civilian Health and Medical Program of the Uniformed Services (CHAMPUS), state health programs, and military health programs.

4. Section 330 of the Public Health Service Act authorizes federal grants to qualified primary and preventive health care service providers in designated medically underserved areas.

5. The authors were unable to visit the Perry County hospital; this information comes from other Perry County respondents.

6. Physicians from other countries who have trained in the United States are allowed to apply for a J-1 visa rather than returning to their home countries after training. The J-1 visa requires that the physician practice in a designated underserved area (HPSA, or health professional shortage area) for a minimum of three years. On completion of this service, the foreign physician may remain in the United States.

7. EPSDT (early and periodic screening, diagnosis, and treatment) is a well-child program under Medicaid.

8. The authors' interview with hospital officials in Pope County was designed only to gain a sense of the larger hospital sector in the region, so the Pope County health care sector is not discussed in detail in this report. Glacial Ridge Hospital is run as a district hospital, and it cooperates with other nearby rural hospitals in a loose alliance. The hospital, located in a summer tourist destination area, has little trouble with physician recruitment. It has had financial problems in the past associated with some poor management decisions, but it is currently financially secure. Its administrator considers its visiting specialist program critical to its financial health. Its uncompensated care burden is low.

9. Hospitals with fewer than 100 total beds are allowed to use acute care beds for skilled nursing care under Medicare and Medicaid reimbursement.

10. Not related to the Methodist system based in Memphis, Tennessee, with which the Methodist Hospital in Lexington, Mississippi, is affiliated.

11. DSH (disproportionate share hospital) programs funded through Medicaid and Medicare provide additional funds to hospitals that serve a disproportionate share of Medicaid and uninsured patients. The allocation of DSH funds is, within certain guidelines, a state prerogative.

12. Ferry and Stevens differ from many rural Washington counties in their lower proportion of Hispanic residents.

13. The Critical Access Hospital (CAH) program, formally called the Medicare Rural Hospital Flexibility Program, was established by the Balanced Budget Act of 1997. The program allows rural communities to preserve access to primary care and emergency services by designating limited-service hospitals eligible for federal grant funding. Participating hospitals must limit their inpatient capacity and meet maximum length-of-stay requirements.

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