If Hospitals Close, Then What?

by Jeanne M. Lambrew and Glenn Wilson

If these or other rural hospitals were to fail, what would happen to these communities? Or more realistically, what should these hospitals and their communities do?

Suppose the hospital in a small, rural community of 2,000 population were forced to shut down? And suppose that community were fairly isolated from other communities and had the average array of other providers, including a county health department and nursing and rest homes. And suppose that the town's only physician were thinking of moving to the city to join a big lucrative practice.

Suppose all that, and consider four questions: (1) What minimum set of services is needed locally? (2) How can these essential services be organized? (3) How much money is needed to support them? (4) And what recommendations for structure and services might be considered by a typical rural community?

To determine what sort of care a rural area should have in the absence of a general, acute-care hospital, researchers in health policy at the Cecil G. Sheps Center for Health Services Research interviewed a group of health care professionals and officials for a discussion of the minimum services that should be available in all rural communities. That led to development of several models and configurations for a rural health service if a hospital were to close. Tables 5 through 7 show the results of this exercise, and Table 6 shows how figures were derived.

Minimum Services

For the most part, health experts say minimum services should include two categories: emergency services and primary care services. *Emergency services* have a particular importance in rural communities because of the distance from urban and rural hospitals alike. Citizens who had been used to the security of an emergency room for years before losing a hospital perceive the need for local emergency services more acutely than do people in places where there never had been a hospital.

Emergency services identified as both essential and feasible to provide in small settings are:

- stabilization of acute conditions and cardiac management;
- emergency baby deliveries;
- treatment of lacerations and shallow wounds;
- immobilization of fractures;
- X-ray and laboratory services.

To ensure access to emergency services, an on-call physician or mid-level provider (a nurse practitioner or physician assistant), who could at least stabilize a patient and provide advanced life support until transport to a hospital, should be available or on duty 24 hours a day. The local Emergency Medical System (EMS) should operate at a sophisticated and responsive level. An Emergency Medical System is an organized network of personnel, vehicles, equipment, and facilities which provides medical care to those with unexpected or emergency needs. EMS means

Jeanne M. Lambrew is a research associate for the N.C. Rural Health Research Program within the Cecil G. Sheps Center for Health Services Research at UNC–Chapel Hill. Glenn Wilson is professor of social medicine at UNC–Chapel Hill.

more than simple transportation, and a secondary, perhaps volunteer system to shuttle non-emergency cases to and from the nearest hospital or physician's office would be needed.

Primary care services are those often-used services that are organized for the treatment of acute but non-emergency illness, for chronic disease management, and for health maintenance. This includes treating minor conditions ranging from colds, backaches, and infections, to minor accidents, and low-intensity surgical procedures.

The network of different types of health care providers in the county as well as regional and urban hospitals in nearby counties can often be linked with a primary care center in a rural community to ensure access to a broader range of services. Such a situation occurred in Warren County after the hospital closed in 1985. The community health center began providing primary care services in the vacated hospital facility, and currently the renovated hospital building houses both the community health center and the local health department. This new arrangement has attracted more physicians than the county has ever had before—a total of 10.

Inpatient beds may not be needed in every rural community, though they can be beneficial. Inpatient beds benefit the local nursing homes and rest homes which depend on local hospitals to treat those cases which aren't severe enough to refer to bigger hospitals. However, the need depends on the community, and if a good network with a larger hospital is in place, inpatient beds might not be needed at all.

A locally owned, rural primary-care clinic is the best option to deliver essential services. But such clinics might consider developing an administrative relationship with the closest large or mid-sized hospital. Management could be provided by the larger hospital because it offers both expertise in management and access to a full array of services. In turn, the larger hospital would benefit from the referrals from the rural community.

Provisions should be made for around the clock services. In addition to regular workday office hours, a realistic scenario would be for extended clinic hours to be from 5 p.m. to 10 p.m. on weekdays and from 9 a.m. to 1 p.m. on Saturdays. Emergency care at other hours (early morn-

—continued on page 92

Table 5. Minimum Hours and Staffing for a Rural Community Primary Care and Emergency Care Center

	Regular Hours	Evening Hours	Saturday Hours	On-Call Hours
Hours Open	9AM–5PM	5PM–10PM	9AM–1PM	Weekdays: 10PM–9AM Saturday: 1PM–9AM Sunday: 9AM–9AM
Minimum Staffing				
Health Providers	2	1	1	1
Certified Medical Assistant	2	1	1	0
Office Manager/Billing	1	0	0	0
Receptionist	1	1	1	0

Prepared by Jeanne Lambrew and Glenn Wilson, N.C. Rural Health Research Program, Cecil G. Sheps Center for Health Services Research.

Table 6. Cost Estimates for a Hypothetical Rural Community Primary & Emergency Care Center

		Number of Personnel	Salary	Costs
Health Providers				
OPTION 1:	Physicians	2	$80,000	$160,000
OPTION 2:	Physicians	2	$80,000	$160,000
	Mid-Level Providers	2	$40,000	$80,000
OPTION 3:	Physicians	3	$80,000	$240,000
	Mid-Level Providers	1	$40,000	$40,000
PROVIDER COSTS:			OPTION 1	$160,000
			OPTION 2	$240,000
			OPTION 3	$280,000
Non-Provider Personnel				
Certified Medical Assistant		2	$24,000	$48,000
Office Manager/Billing Person		1	$20,000	$20,000
Receptionist		1	$16,000	$16,000
NON-PROVIDER COSTS*:				$84,000
OPTIONS 1 & 2: Other Costs				
Office Expenses				$68,200
Medical Supplies				$33,800
Medical Equipment				$15,000
Liability				$36,800
Other				$48,600
OPTIONS 3: Other Costs				
Office Expenses				$102,300
Medical Supplies				$50,700
Medical Equipment				$22,500
Liability				$55,200
Other				$72,900
OTHER COSTS:			OPTIONS 1 & 2	$202,400
			OPTION 3	$303,600
TOTAL COSTS:			**OPTION 1**	**$446,400**
			OPTION 2	**$526,400**
			OPTION 3	**$667,600**

Assumptions for Calculation of Costs:

1) **Number of personnel, hours and salaries** are rough estimates.

2) **Non-personnel costs** are averages reported for the the South Atlantic Region in the American Medical Association's *Socioeconomic Characteristics of Medical Practice 1989.*

* Total non-physician staff costs calculated were $84,000, between 27–52% lower than the AMA's averages. Although some of the discrepancy might come from the AMA model's lack of control for rural or regional variations, the estimate above excludes other non-provider personnel such as custodial staff or a telephone answering service.

Prepared by Jeanne M. Lambrew and Glenn Wilson, N.C. Rural Health Research Program, Cecil G. Sheps Center for Health Services Research

Table 7. Size of Community Needed* to Support A Clinic with Operating Costs of $500,000

Revenue per Visit	Number of Visits	Community Size
$30	16,667	3,546
$40	12,500	2,660
$50	10,000	2,128

* Assuming that patients make 4.7 visits each year (the 1988 average of patient-doctor contacts in the South) and that 100 percent of patients can pay their bills in full or are fully covered. These assumptions are not realistic, but the table indicates the considerations in planning a community clinic.

Source: Prepared by Jeanne M. Lambrew and Glenn Wilson, N.C. Rural Health Program, Cecil G. Sheps Center for Health Services Research

ing and weekends) could be handled through an on-call system (see Table 5).

Several staffing configurations could serve such a center. At least two physicians for a clinic in a community of roughly 2,100 residents, or up to two or three physicians in combination with nurse practitioners or physician's assistants in a community of about 3,150 population, probably are the minimum number of health care providers needed for a community clinic. Though more physicians would be preferable since their turnover rate is somewhat lower than other health professionals, physicians are more expensive and difficult to recruit.

Funding to Support Essential Services

Depending on the number of physicians in the clinic, operating it might cost anywhere from an estimated $446,400 to $667,600 per year (see Table 6). This appraisal includes rough estimates of North Carolina salaries and expenses based on the average expenses for physicians in the South Atlantic region in 1989. This estimate does not include any capital costs for building renovation or major equipment purchases. Because these are figures attached to a hypothetical case, they may fit only a few communities in North Carolina. On the other hand, they do illustrate some of the costs and considerations that would be involved in running such a clinic.

The size of the community necessary to support a clinic with an annual budget of $500,000 is between 2,083 and 3,472, based on the national average of 4.8 contacts with a physician per person per year (see Table 7). This means that if most of the residents in the area used the clinic—and that all those patients were insured or otherwise could pay their bills—the patient revenues would support the clinic.

But that assumption is highly unrealistic. While a high proportion of patients might patronize the center, others still would go elsewhere. In the rural South, the number of physician contacts may be lower. And there is no evidence to support an assumption that most would have health coverage or the ability to pay their bills in full. Without sufficient patient use or patient payment, outside support would be necessary. Such outside support might come in the form of subsidies from local governments, from the state, or from other health care institutions. In any case, subsidies would be a major public policy questions for the General Assembly and local governing agencies to debate.

Is such a proposal realistic? Dr. Thad Wester, deputy state health director, believes such a strategy could be developed only by a consensus of "the existing private health care provider system, community leaders, local government" and others. "Such a direction would have a profound impact on the medical and health care for the involved community for many, many years," says Wester.