Access to Health Care for the Rural Elderly

Thomas C. Rosenthal, MD
Chester Fox, MD

IN ADDITION TO THE USUAL CHALlenges of chronic disease and functional decline, the rural elderly also face geographic isolation. Sixty-one million people live in the rural United States, a number that exceeds the entire population of the United Kingdom, Spain, Italy, or France.[1] Nearly 15% of the US rural population is aged 65 years or older. As they age, the rural elderly confront several barriers to obtaining medical care. To a far greater degree than their urban counterparts, rural primary care physicians are expected to provide urgent care, rehabilitation, outreach, and specialty care (in collaboration with distant urban specialists) for their patients. Health care outcomes for the rural elderly, as with other groups in the United States, are influenced more by social position, insurance status, clinician access, and economic status than by geography.[2] When differences in outcomes between rural and urban health care have been demonstrated, they generally relate to an imbalance of volume, staff support, equipment, and choice. In this article, we examine practice patterns and describe social, policy, and research issues influencing care for the rural elderly.

Demographics of Rural Elderly

The US Office of Management and Budget defines nonmetropolitan populations as areas other than a metropolitan statistical area or a county with fewer than 50 000 persons, not adjacent to an urban county. Because rural/urban is a continuous variable, a dichotomous classification may obscure details that are unique to specific locales.

Twenty-four percent of US citizens live in nonmetropolitan communities but the proportion of those aged 65 years or older is greater in rural than in metropolitan areas. Except for a few instances of rural retirement communities in the southeastern and western United States, the rural elderly tend to age in place while younger citizens are more likely to migrate to urban areas.[2] Nationwide, only 7% of the rural elderly are nonwhite. Fewer than 1% of blacks live in nonmetropolitan areas and, of these, 43% live in the rural Southeast.[2]

As in urban regions, men older than 65 years are in the minority (41%), and even more so when older than 80 years (26%). Nonmetropolitan elderly are less likely to have a high school education and are more likely to be poor. Lower lifetime earnings result in lower monthly Social Security benefits, which are less likely to be supplemented by private pensions or part-time work. Paradoxically, the rural elderly are more likely to own a home, but these dwellings are more often substandard.[2]

Metropolitan and nonmetropolitan elderly are equally likely to live alone (50%) and to be married (66%), but rural elderly are more likely to report a functional problem and to rate their health as poor. Farm-residing elderly persons describe better health, but only 4% of the rural elderly now live on farms.[1] It seems likely that the lower financial resources of the rural elderly would lead them to delay seeking health care. For instance, elderly patients with osteoarthritis report that their fear of medical care expense is often greater than the severity of their physical symptoms.[3]

Availability of transportation has been a major determinant of access, particularly for specialty care, since the 1920s.[3,4] But, like all of the factors discussed here, access is a complex balance between disease severity and transportation. In rural Iowa, residents with financial resources report the major determinant of their access to health care is the ability to drive. However, as the elderly age, contact with physicians increases, suggesting that severity of illness may also be correlated with increased efforts to seek health care.[1]

Funding Rural Health Services

Medicare pays rural physicians and hospitals less for the same services and is a larger share of the payer mix. While accounting for 35% of the health spending in rural areas, Medicare pays out 18% less annually per rural beneficiary than urban beneficiary.[1] A partial explanation of lower charges are less extensive workups attributable to less available diagnostic services. However, when all of the Medicare rate adjustments (wage index, case-mix index, indirect medical education, and disproportionate share) are applied, average rural hospital payments are 40% less than urban hospital payments and 30% less for physician payments (TABLE).[1] Managed care has been slow to penetrate rural markets.[5] In 1999, 20% of the urban elderly were enrolled in managed care plans vs only 2.45% of rural elderly. As with urban elderly, rural Medicare managed care enrollees may complain of access problems.[5,6]

Geriatric Clinician Supply

Numerous programs have been developed to train generalist physicians to practice in rural communities. These range from selected rotational experiences to full-time residency training af-

Author Affiliations: Department of Family Medicine (Dr Rosenthal), Clinical Family Medicine, Lake Plains Rural Health Network (Dr Fox), State University of New York, Buffalo (Drs Rosenthal and Fox), and the *Journal of Rural Health*, Buffalo, NY (Dr Rosenthal).
Corresponding Author and Reprints: Thomas C. Rosenthal, MD, Department of Family Medicine, State University of New York, 462 Grider St, Buffalo, NY 14215 (e-mail: trosenth@acsu.buffalo.edu).
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filiated with urban academic centers.[7,8] Rural training programs have limited capacity and career placement in rural communities is variable. A preexisting commitment to work in a rural setting appears to be the best predictor of which residents will ultimately locate in a rural area. Thus, the value of such training programs may be to provide support to trainees with this orientation, rather than to recruit physicians who had little prior interest in rural medicine.[9]

Fifty-seven percent of all physicians practicing in rural counties are generalists, and 60% of these are family physicians.[7] Rural internists and pediatricians are more likely than their urban counterparts to provide hospital and consultative services. Physician values that relate to a choice of rural practice include regard for personal relationships, sense of duty, and enjoyment of wholistic care.[7] Telemedicine, area health education centers, and other programs that facilitate communication between rural physicians and tertiary care clinicians continue to expand, although there have been few empirical studies of their effect on patient outcomes. In rural Kansas, one telemedicine program produced savings of $980 per patient-care episode, and improved patient compliance.[10]

The prevalence of clinically defined mental health problems among rural adult populations is similar to that among their urban dwellers. However, 76% of the designated Mental Health Profession Shortage Areas in the United States are located in nonmetropolitan areas.[1,11] In a study of rural residents with mood disorders, nearly half received care exclusively from a generalist physician.[12]

Rural generalists are aware that problems not dealt with by them, or their office team, are often not dealt with at all. This results in longer hours of more intense work.[23] The rural physician, who usually lives in the community, may oversee a care team that often extends to church groups, occupational groups, social cliques, hobbyists, and ethnic kinships. The multiprofessional office team can catalyze support activities by providing effective coordination.[23] These efforts may be enhanced by the business community, hospital, public health, social service departments, and mental health clinicians who can often reshape medical care in a rural community to meet evolving demands.

Table. US Rural and Urban Comparisons of Health-Related Factors[1,2]*

	Rural	Urban
All Americans	24	76
Older than 65 y	14.6	11.9
Older than 85 y	1.5	1.1
Portion of population older than 65 y in minority group	7	12
High school or more education	47	56
Annual household income (1995)	$27 700	$36 000
Below 200% of federal poverty level	49.8	37.9
Rate health as poor	35	24
Functional disability	40	34
Medicare payments per person	$4477	$5487
Medicare physician payments per person	$1151	$1498
Medicare managed care	2.45	20
No. of physicians per 100 000 persons	120	290
No. of nurse practitioners per 100 000 persons	24.7	20
No. of physician assistants per 100 000 persons	11.9	11.6

*Values expressed as percentages unless otherwise indicated. Rural is a nonmetropolitan area and urban is a metropolitan area.

Inpatient Services

Rural Medicare beneficiaries experience marginally higher rates of hospitalization, but living more than 30 minutes from a hospital decreases admission rates by 15%.[13,14] Hospitals have a major role in providing health services and are an essential part of the social and economic vitality of rural communities. The 2200 nonmetropolitan hospitals, due in part to their small size, are sensitive to public policy shifts. Successful rural hospitals are characterized by involvement in primary care networks, provision of long-term care beds and rehabilitation services, and receipt of more than 50% of total revenues from noninpatient sources such as laboratory and ambulatory clinical activities.[15] It is probably true that not every rural hospital now operating is essential, but whether government programs merely delay closure of nonsustainable institutions or truly sustain essential services is controversial.

Rural long-term care is characterized by more nursing home beds per elderly population and use of 17% fewer home health services.[16,17] Overall, 6% of rural elderly live in institutions compared with 5.1% of urban elderly.[2] Living alone is the leading risk factor associated with nursing home placement but the rural/urban difference is due to limited rural availability of assisted living options.[2] Combined with a national trend toward earlier hospital discharge, poor access to home health care has placed a demand on rural hospitals to develop ambulatory rehabilitation services.[18] Also, higher placement rates of skilled nursing demands more Medicaid financing. Thus, in states with mandated local share for Medicaid funding, rural counties face a greater long-term care burden.

One successful program, swing beds, initiated in 1982, allows rural hospitals access to Medicare Part B financing to increase the accessibility of rehabilitation services. Rural hospitals are funded to keep patients who meet criteria for nursing and rehabilitation care after they exceed the Medicare's budgeted length of acute stay. Sixty percent of eligible US rural hospitals participate. The average length of stay in swing beds is 19 days and they provide 4% of total annual revenues for participating hospitals. Forty-seven percent of patients are discharged directly home after their swing bed stay.[19]

After hospital discharge, rural families identify more unmet care needs than urban dwellers and these needs are more likely to persist, unmet, 3 weeks later.[20] As a result, rural informal (family and friends) caregivers spend more time providing in-home care and experience more out-of-pocket expense than urban caregivers.[21,22]

Studies that demonstrate better outcomes if elderly patients are treated for myocardial infarctions (and other conditions) in high-volume hospitals, usu-

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ally urban, are seldom able to factor for patient choice, clinician triage, or social or economic status.[24] Large geographic service areas, small sample cells, and workforce variables complicate data aggregation across communities. Outcomes relate to balances of all these factors as well as volume, staff support, and equipment. Financial viability of rural hospitals is also a complex mix of factors. A hospital that abandons care of any one condition may find that a marginal decrease in admissions results in bankruptcy. Closing a hospital to one class of diagnoses may result in the community losing access to emergency and maternal services. Such an absence of prenatal service has been linked to increased rates of neonatal morbidity.[25]

Improving Care for the Rural Elderly

Health services research must expand to incorporate these rural issues. Policy assessments should include the impact of Medicare payment programs on rural infrastructure and senior access. Privatization of Medicaid will have different effects in communities with low health maintenance organization penetration. We suggest several specific questions for policymakers as they address barriers to rural care for the elderly. Can care for specific illnesses be made equivalent regardless of geography? Are barriers to best care standards economic, geographic, organizational, logistic, or interpersonal? Do health beliefs influence the competing alternatives between local care and tertiary care? What rural workforce models foster best care practices? Is local control more efficient and efficacious than centralized control?

In the United Kingdom, geriatricians often serve as consultants to primary care physicians, reflecting a deliberate strategy to spread geriatric skills as widely as possible, so that the highest standards of care are widely disseminated.[26] In the United States, by contrast, geriatricians spend most of their time in direct patient care. Unfortunately, this prevents geriatric specialists from diffusing their skills into the general medical community. As a result, appropriate protocols and standards may not find their way into general practice, as many rural generalists have little opportunity to partner with a geriatric specialist.

Rural health care is vastly different than at the start of the last century, when most physicians could provide their patients the full range of known medical interventions. Today, rural health care is inextricably interwoven with urban health care and a full range of health services requires urban linkages. At the same time, policy that is exclusively focused on the needs of urban patients may have unintended consequences for rural citizens. Policymakers must consider the impact on the rural community prior to implementation of health policy changes whether by government or by a health maintenance organization. To be inclusive, a health care system requires integration of primary, rehabilitation, and long-term care services with hospitals, physicians, and communication networks. The rural elderly deserve best care standards, delivered within the context of the unique communities, low-population density, and interdependency that characterizes rural life.

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