
ACCESS TO QUALITY HEALTH SERVICES IN RURAL AREAS— LONG-TERM CARE

by Linnae Hutchison, Catherine Hawes, and Lisa Williams

SCOPE OF PROBLEM

- Access to quality health services was identified as the top ranking rural health priority in a national survey of state and local rural health leaders and stakeholders.¹
- By the year 2030, the elderly population will double; one-fifth of the U.S. population will be over age 65.²
- Approximately 75 percent of those over 65 suffer from at least one chronic illness.³
- Nearly 22 percent of the nation’s elderly reside in rural areas.⁴
- Rural elderly represent a larger proportion of the rural population than the urban population.⁴
- The elderly in rural areas have access to fewer and a narrower range of long-term care services.^{5,6}

GOALS AND OBJECTIVES

The goal of Healthy People 2010’s Access to Quality Health Services focus area is to improve access to comprehensive, high-quality health care services. Included in this focus area is improving access to long-term care (LTC). In a national study, this focus area was the top-ranked rural health priority among state and local rural health leaders.¹ This review addresses the following objective and focuses specifically on the unique challenges faced by the rural elderly in accessing these services, including access to nursing homes, assisted living, home health, hospice, and home and community-based services.

- 1-15. Increase the proportion of persons with long-term care needs who have access to the continuum of long-term care services.⁷

PREVALENCE

This discussion first provides a brief profile of the American elderly; it then examines the long-term care continuum outside the acute hospital setting and includes two main categories of services classified as residential and non-residential, as well as the roles of the informal care provider.⁸

An Aging Society

The United States is poised for what has been described in

By the year 2030, this age group is expected to double to 70 million.²

the literature as a “gerontological explosion” as a confluence of factors will significantly increase the ranks of the elderly population over the next 50 years.⁹ In 2000, persons over age 65 totaled 35 million; by the year 2030, this age group is expected to double to 70 million (an increase from 12.4 percent to 20 percent of the total population).² Of particular note is the growth in the oldest old population (those over 85), which is expected to increase five fold between 2000 and 2050.¹⁰ Overall, this “graying of America” is attributed to advances in medicine, improvements in health, and aging of the baby boom generation (defined as those born between 1946 and 1964).^{11,12}

Profile of the Rural Elderly

Long-term care is a particularly important concern for rural areas given the proportionately larger number of elderly in rural areas than in urban areas.

Proportionately, there are a larger number of elderly in rural areas than in urban areas.⁴

According to the 2000 census, 12.3 percent of the urban population was over age 65 compared to 12.8 percent of the rural population.⁴ Of

the nearly 35 million elderly over age 65, 21.6 percent of this group resides in rural areas.⁴ Moreover, rural elderly are older than urban elderly, with the age increasing as one moves along the continuum from urbanized to rural areas.^{13, 14} Rural areas are also home to a greater proportion of the oldest old population segment, comprising 7.8 percent of the population over age 60 in nonmetro areas compared to 7.5 percent in metro areas.¹⁵

The key predictors of institutionalization are health status, sociodemographic factors, and the role of social support networks.^{16, 17, 18}

The indicators used in assessing health status and the need for and degree of long-term care services include perception of

Rural and urban elders differ in their perception of health, number of medical conditions, utilization of preventive services, and response to functional limitations.

health, number of medical conditions, cognitive status, functional status, and the number and severity of impairments in activities of daily living (ADLs) and instrumental activities of daily living (IADL). Several national studies have found rural-urban differences for some measures of health among elderly populations.

Rural and urban elders differ in their perception of health, number of medical conditions, utilization of preventive services, and response to functional limitations. A number of studies found that rural elderly are more likely to report a lower or worse perception of health than their urban counterparts.^{19-21, 22, 23} Rural elderly are also more likely to have chronic conditions such as arthritis, hypertension, diabetes, and heart disease.²⁴⁻²⁶ The research is mixed on rural-urban differences in functional status, with some studies finding a higher number of functional limitations among nonmetro, nonfarm rural areas when compared across four locales.^{19, 25, 27} Other studies found rural and urban elderly have similar functional status.^{21, 23} The reasons for the mixed results may be attributed to variations in rural-urban

classification schemes employed or possibly rural culture itself. One study suggests rural elderly may view aging differently than urban dwellers, discounting functional limitations as a normal part of aging and reporting fewer limitations.²⁸

Understanding the socioeconomic status (e.g., education and income levels) of the rural elderly is also important in predicting utilization of services; higher education and incomes are associated with more positive health self-assessments.²⁹ Rural elderly are less educated and poorer than their urban counterparts, with 21 percent of rural elderly classified as poor compared to 10.1 percent of the general population 65 and older.^{30, 31} Nearly half of rural elders live below 200 percent of the federal poverty level compared to roughly one-third of urban residents.³²

Residential Providers

Assisted Living

Assisted living has emerged as one of the fastest-growing segments of the long-term care market, providing care for those seniors who are unable to remain in their homes but do not require the depth of care found in nursing homes. Despite the growth of assisted living services, understanding the availability and utilization of these services is complicated by the lack of a national definition of assisted living facilities (ALFs), the lack of national licensing standards, and limited research on the breadth, scope, and quality of this industry in rural versus urban areas.^{33, 34} A national study of assisted living in rural areas found that assisted living is predominantly an “urban industry,” with roughly 76 percent of ALFs located in metro areas.³³ Rural ALFs tend to differ

significantly in the mix of privacy and services, with rural facilities more likely to offer a combination of low privacy and limited services compared

Assisted living is predominantly an “urban industry,” with roughly 76 percent of ALFs located in metro areas.³³

to urban facilities.³³ While assisted living is suggested as a less expensive alternative to nursing home care, the cost may be prohibitive for many low-income rural seniors.^{33, 35}

Nursing Homes

Nursing homes serve as an important provider of long-term care services to the chronically ill and disabled, especially in rural areas where other service options are limited. While many services are lacking in rural areas, nursing homes remain the notable exception, with 40 percent of all nursing homes in rural areas.³⁶ Rural areas have the highest rate of nursing home use, with 12 percent of the

Rural areas have the highest rate of nursing home use.¹³

population over age 75 in nursing homes in 2000 compared to 8.2 percent in urban areas.¹³ Rural nursing home residents and facilities differ from their urban counterparts

along a number of dimensions. Rural nursing homes have fewer beds, have a larger percentage of homes below the Centers for Medicare and Medicaid Services (CMS) suggested nurse-staffing thresholds, and offer fewer specialized services such as Alzheimer’s units.¹³ Compared to their urban counterparts, rural nursing home residents are older, have fewer functional limitations, similar cognitive impairment, and are more likely to be dependent on Medicaid.¹³

While quality of care in nursing homes is a national issue, few studies have investigated how quality differs across the rural-urban continuum. In a recent national study, 10 of 19 indicators of potential quality problems were higher in nursing homes located in rural areas, denoting potentially more quality-of-care problems in nonurban areas.³⁶

Non-residential Care Providers

Home Health

Home health (HH) fosters and promotes independence while providing necessary medical care in patients’ homes for those with chronic

disease or those recovering from an acute incident. Overall, rural home health agencies (HHAs) differ substantially from urban HHAs in organizational structure and provision of services.³⁷ When compared to urban HHAs, rural HHAs are smaller, more sparsely located, more likely to use health aides, and less likely to offer a wide range of ancillary services (e.g., physical and occupational therapy, as well as social services).^{37, 38}

Rural and urban home health patients differ in a number of ways, with rural patients more likely to have long-term care needs versus urban beneficiaries who are more likely to need post-acute care.³⁹ One study found that rural home health patients tended to have more ADL and IADL disabilities, significantly more intractable pain, more neuro/emotional/behavioral status problems, terminal conditions, and slightly more chronic conditions (1.98 versus 1.77), although the difference was not statistically significant. At discharge, rural residents were less likely to have their goals met and more likely to have a poor prognosis.²⁵

Home and Community-based Services (HCBS)

Coburn observed that the “landscape of long-term care is changing, forcing increased reliance on private funding for services, expansion of nonresidential care alternatives, increasing in-home care options, and attempts to integrate care across the acute and LTC system.”³⁴ The 1915c waiver program allows states to offer a wide range of services including *homemaker/home health aide services, personal care services, adult day health, habilitation, case management, respite care, and “other” services* (such as home-delivered meals or transportation services).^{8, 40} All 50 states offer some form of HCBS; however, there is variation in the programs offered.⁸

While it is generally agreed that rural elderly have access to a narrower range of and fewer alternatives to HCBS and confront greater barriers in accessing care, the degree to which these constraints affect utilization is complex.^{5, 6, 41} Rabiner et al. found that residents in the northeast and those living in moderately densely populated areas were more

predisposed to using *some* HCBS than those living in remote areas.²⁸ Predictors of increased use of HCBS include white race, urban residence, payment source, access to transportation, and greater functional impairment.⁴²

Adult day care and respite services are programs under the home and community-based services umbrella. Adult day care or adult day health services are designed to address the social and health needs of elderly at risk for institutionalization.⁴¹ Respite services provide necessary relief for informal caregivers and may be in-home or facilitated through an adult day center.⁴³ In a study of the conflicts encountered by informal caregivers in providing care to elders, researchers found rural caregivers worked more hours at work, in the home, and in providing care in comparison to urban dwellers. This is attributed to the lack of formal services in rural areas.⁴⁴

Hospice

A 1996 Gallup poll found that 90 percent of Americans prefer to receive care in their homes if diagnosed with a terminal illness.⁴⁵ Hospice facilitates this preference by providing end-of-life care for patients, as well as providing necessary support for the patient's family. Of the 2,154 hospices nationwide, the majority are in urban areas (1,314 in urban versus 840 in rural areas).⁴⁶ According to a national study, rural hospices tend to be smaller and are more likely to be hospital-based whereas urban hospices are more often stand alone. The rate of hospice utilization, defined as the number of hospice deaths per 1000 beneficiaries, varied significantly between rural and urban areas, with rural areas having the lowest rates (22.9 percent in urban areas compared to 15.2 percent in rural areas not adjacent to an urban area).⁴⁷ The groups least likely to use hospice services were minorities, rural, the old, and those who had a low income.⁴⁷⁻⁵³

Informal Care Providers

The majority of long-term care is provided by the informal network of unpaid caregivers, an estimated 91 percent being family members.⁵⁴ Fifty percent of

those without an informal family network reside in nursing homes, compared to 7 percent of those with a family

network.⁵⁵ Approximately 86 percent of the elderly at highest risk

for nursing

home placement (i.e., limitations in more than three ADLs) receive care from informal care providers.⁵⁶

There is limited recent research examining rural-urban differences in use of informal versus formal providers. An older national study comparing the amount of formal and informal assistance disabled elders receive found that rural elders are less likely to receive formal assistance and more likely to use informal caregivers.⁵⁷ More recent literature suggest rural elderly may face increased difficulty in accessing the familial informal network as adult children may live at greater geographic distance or outmigrate to urban areas.⁵⁸

The majority of long-term care is provided by the informal network of unpaid caregivers.⁵⁴

IMPACT

The mental and physical health of the aging population is a key determinant in estimating the demands on the long-term care system. Compared to the urban elderly, the rural-aged population experiences more morbidity.⁵⁹ Rural elders between 55 and 75 have a lower risk of mortality compared to their urban counterparts.⁶⁰ While expanded *quantity* of life is an indicator of improvements in health and technology, the *quality* of life is an essential consideration in choosing, designing, delivering, and evaluating long-term care services.

BARRIERS

The major barriers to long-term care for the rural elderly are lack of providers, limited knowledge of available resources, isolation, socioeconomic factors, lack of availability and coordination of services, and the rural culture itself.⁶¹⁻⁶⁴ The rural response to disability and illness may also be different. One national study found rural elderly more likely to discount functional limitations, which the author attributes to attitudes of independence, better health

status than their older peer group, and fear that reporting of limitations could result in institutionalizations.²⁸

PROPOSED SOLUTIONS

Proposed solutions are presented by the barriers addressed: structural, geographic, knowledge and communication, and economic.*

Structural Barriers

A number of communities have implemented innovative programs that are designed to address the issue of provider shortages and lack of provider support. One such example—Cooperative Care in Wautoma, Wisconsin—focuses on reducing turnover by emphasizing caregiver buy-in. Members receive higher wages, paid time off, holiday pay, health insurance, and other benefits previously unavailable to them. Overall, the benefits are improved access to a sustainable pool of trained providers. Another innovative approach is the Rural Minority Geriatric Care Management Model in South Carolina, which utilizes geriatric coordinators—a new type of paraprofessional. Serving as patient advocates, these coordinators provide case management, outreach, and coordination of services for rural elderly. In recognition of the challenges faced by informal caregivers in providing care, the National Family Caregiver Support Program was launched in 2001 as part of the Older American’s Act. This program provides grants to states to develop programs to assist family caregivers in providing care to elderly members in the home.

Geographic Barriers

Geographic barriers are a significant hurdle for rural residents and providers. The Georgia Mobile Day Care Program developed an innovative approach in the use of mobile day health services wherein the providers capitalize on existing community infrastructure to bring day care to otherwise underserved areas. In this program, the shared staff travels up to 50 miles per day to a program site, such as a community senior center. Other programs bridge distances via information technology. Telehealth,

video monitoring, and e-health platforms have been utilized in a variety of settings including home health, hospice, elder education, and mental health counseling as a means to address geographic barriers as well as provider shortages.^{65, 66}

Knowledge and Communication Barriers

Consumer decisions regarding health care and long-term care are often made in crisis mode, without a full understanding of the range of resources available. Coordination and integration of services, as well as case management, are effective means to bridge this gap and improve care for the elderly populations.⁶⁷ In rural areas, the hospital may play the dominant role in coordination by virtue of its position as the health care hub and experience with managed care.⁶⁸ The Community Based Case Management Program of the Margaret R. Pardee Memorial Hospital in North Carolina is an example of this model. The program coordinates the functional, spiritual, medical, psychosocial, and pharmacological concerns of those over age 45, with the intent of coordinating services to avert more expensive care needs. A well-known model—the Program of All-Inclusive Care for the Elderly (PACE)—is a multidisciplinary approach with the goal of preventing or delaying institutionalization by providing coordination of health and social services.⁶⁹

Economic Barriers

For many, long-term care often represents the single largest lifetime expenditure for care services. As noted earlier, cost is a key barrier for rural elderly and community developers. A number of programs have been developed to promote affordable assisted living in areas that otherwise lack the economic base to support such services. The Robert Wood Johnson Foundation (RWJF) and the NCB Development Corporation have been instrumental in promoting the development of affordable assisted living in underserved areas through the *Coming Home* Program.⁷⁰ Another innovative approach to assisted living development in rural areas is to pool resources and share costs with a rural hospital.⁷¹

SUMMARY AND CONCLUSIONS

The aging of Americans represents one of the most significant concerns facing the United States health system as it is challenged to provide a range of services that meet the diverse needs of the elderly, ranging from community-based options to residential alternatives. Rural areas—with a disproportionately large elderly population and lacking necessary resources to provide sufficient long-term care services—may face even greater challenges in providing a network of services. Ultimately, improving access to LTC services in rural areas requires addressing a range of factors from the system constraints to the unique rural barriers that impact provision of services and treatment seeking. Coordination of care, improved communication between providers and patients, the use of innovative technologies to bridge distance barriers, increased focus on recruitment and retention of LTC workers, support for informal care networks, and efforts to improve affordability are a few of the components essential to improving access to LTC services in rural areas.

MODELS FOR PRACTICE

The following models for practice are examples of programs utilized to address this rural health issue.

*Note: The full literature review contains website addresses for many other solutions not included in the Models for Practice section.

REFERENCES

1. Gamm, L.; Hutchison, L.; and Bellamy, G. Rural Healthy People 2010: Identifying rural health priorities and models for practice. *Journal of Rural Health* 18(1):9-14, 2002.
2. *Older Americans 2000: Key Indicators of Well-Being*. Hyattsville, MD: Federal Interagency Forum on Aging Related Statistics, 2000.
3. Calkins, E.; Boulton, C.; and Wagner, E. *New ways to care for older people: Building systems based on evidence*. New York, NY: Springer Publishing, 1999.
4. U.S. Census Bureau. *Age and Sex: 2000*. <http://factfinder.census.gov/servlet/GCTTable?_ts=91533140790>January 7, 2004.
5. Barnes, N.D. Formal home care services: Examining the long-term care needs of rural older women. *Journal of Case Management* 6(4):162-165, 1997.
6. Coburn, A.F.; Keith, R.G.; and Bolda, E.J. The impact of rural residence on multiple hospitalizations in nursing facility residents. *The Gerontologist* 42(5):661-666, 2002.
7. U.S. Department of Health and Human Services. *Healthy People 2010*. 2nd ed. With Understanding and Improving Health and Objectives for Improving Health. 2 vols. Washington, DC: U.S. Government Printing Office, November 2000.
8. Institute of Medicine (IOM). In: Wunderlich, G.S. and Kohler, P.O. (eds.) *Improving the Quality of Long-term Care*. Washington, DC: National Academy Press. Institute of Medicine, Committee on Improving Quality in Long-term Care: Division of Health Care, 2001.
9. U.S. Department of Commerce. *We, the American Elderly*. U.S. Department of Commerce, Economics and Statistics Administration, U.S. Census, September 1993.
10. U.S. Census Bureau. *U.S. Interim Projections by Age, Sex, Race and Hispanic Origin*. Washington, DC: U.S. Census Bureau, March 18, 2004. <<http://www.census.gov/ipc/www/usinterimproj>>May 2004.
11. U.S. Department of Commerce. *Aging in the United States—Past, present, and future*. n.d. Washington, DC: U.S. Department of Commerce, Economics and Statistics Administration, Bureau of the Census. <<http://www.census.gov/ipc/prod/97agewc.pdf>>June 24, 2004.
12. U.S. Department of Commerce. *Aging in the Americas into the XXI Century*. n.d. Washington, DC: U.S. Department of Commerce, Economics and Statistics Administration, U.S. Census.

-
13. Phillips, C.D.; Hawes, C.; and Leyk Williams, M. *Nursing homes in rural and urban areas, 2000*. College Station, TX: The Texas A&M University System Health Science Center, School of Rural Public Health, Southwest Rural Health Research Center, 2003.
14. Eberhardt, M.; Ingram, D.; Makuc, D.; et al. *Urban and Rural Health Chartbook. Health, United States 2001*. Hyattsville, MD: National Center for Health Statistics, 2001.
15. Economic Research Service. *Rural Population and Migration: Table 1*. 2002. United States Department of Agriculture. <www.ers.usda.gov/briefing/population/elderly/figure4.htm>May 2004.
16. Coward, R.T.; Horne, C.; and Peek, C.W. Predicting nursing home admissions among incontinent older adults: A comparison of residential differences across six years. *The Gerontologist* 35(6):732-743, 1995.
17. Dykstra, P.A. Loneliness among the never and formerly married: The importance of supportive friendships and a desire for independence. *Journals of Gerontology Series B, Psychological Sciences and Social Sciences* 50(5):S321-329, 1995.
18. Russell, D.W.; Cutrona, C.E.; de la Mora, A.; et al. Loneliness and nursing home admission among rural older adults. *Psychology and Aging* 12(4):574-589, 1997.
19. Cutler, S.J., and Coward, R.T. Residence differences in the health status of elders. *Journal of Rural Health* 4(3):11-26, 1988.
20. Economic Research Service, *Rural Population and Migration: The Rural Elderly*. U.S. Department of Agriculture, 2002.
21. Braden, J., and Van Nostrand, J.F. Long-term Care. In: Van Nostrand, J.F. (ed.), *Common beliefs about the rural elderly: What do national data tell us?* Hyattsville, MD: National Center for Health Statistics, DHHS Publication No. (PHS) 93-1412. *Vital and Health Statistics* 3(28), 1993.
22. Mueller, K.J.; Schoenmann, J.A.; and Dorosh, E. The Medicare Program in Rural Areas. In Ricketts, T.C. III, ed. *Rural Health in the United States*. New York, NY: Oxford University Press, 1999.
23. Eggebeen, D.J., and Lichter, D.T. Health and well-being among rural Americans: Variations across the life course. *Journal of Rural Health* 9(2):86-98, 1993.
24. Norton, C.H., and McManus, M.A. Background tables on demographic characteristics, health status, and health services utilization. *Health Services Research* 23(6):725-756, 1989.
25. Schlenker, R.E.; Powell, M.C.; and Goodrich, G.K. Rural-urban home health care differences before the Balanced Budget Act of 1997. *Journal of Rural Health* 18(2):359-372, 2002.
26. Gamm, L.; Hutchison, L.; Dabney, B.J.; et al. *Rural Healthy People 2010: A companion document to Healthy People 2010*. College Station, TX: The Texas A&M University System Health Science Center, School of Rural Public Health, Southwest Rural Health Research Center, 2003.
27. Dansky, K.H., and Dirani, R. The use of health care services by people with diabetes in rural areas. *Journal of Rural Health* 14(2):129-137, 1998.
28. Rabiner, D.J.; Konrad, T.R.; DeFries, G.H.; et al. Metropolitan versus nonmetropolitan differences in functional status and self-care practice: Findings from a national sample of community-dwelling older adults. *Journal of Rural Health* 13(1):14-28, 1997.
29. Rogers, C.C. Rural health issues for the older population. *Rural America* 17(2):31-36, 2002.
30. Coward, R.T.; McLaughlin, D.; and Duncan, R.P. *An overview of health and aging in rural America*. In: Coward, R.T., Brill, G., and Kukulaka, G. (eds.) *Health Services for Rural Elders*. New York, NY: Springer Publishing, 1994.

-
31. Ham, R.J.; Turner Goins, R.; and Brown, D.K. *Best practices in service delivery to rural elderly*. West Virginia University Center on Aging, 2003.
32. U.S. Census Bureau. *Annual Demographic Survey March Supplement*. Washington, DC: U.S. Census Bureau, 2004. <http://ferret.bls.census.gov/macro/032003/pov/new01_100_01.htm>January 2004.
33. Hawes, C.; Phillips, C.; Holan, S.; et al. *Assisted living in rural America*. College Station, TX: The Texas A&M University System Health Science Center, School of Rural Public Health, Southwest Rural Health Research Center, 2003.
34. Coburn, A.F. Rural long-term care: What do we need to know to improve policy and programs? *Journal of Rural Health* 18 Suppl:256-269, 2002.
35. Mollica, R., and Jenkins, R. *State assisted living practices and options: A guide for state policy makers*. The Coming Home Program: A Project of the Robert Wood Johnson Foundation, September 2001.
36. Phillips, C.D.; Hawes, C.; and Leyk Williams, M. *Nursing home residents in rural and urban areas, 2001*. College Station, TX: The Texas A&M University System Health Science Center, School of Rural Public Health, Southwest Rural Health Research Center, June 2004.
37. Franco, S.J., and Leon, J. *Rural home health agencies: The impact of the Balanced Budget Act*. Bethesda, MD: The Project HOPE Walsh Center for Rural Health Analysis, April 2000.
38. Kenney, G.M., and Dubay, L.C. Explaining area variation in the use of Medicare home health services. *Medical Care* 30(1):43-57, 1992.
39. Sutton, J.P. *Characteristics of rural home health users and implications for payment reform*. Bethesda, MD: The Project HOPE Walsh Center for Rural Health Analysis, 2000.
40. Centers for Medicare and Medicaid Services (CMS). *Home and Community-based Services Waiver Program*. CMS, 2003. <www.cms.hhs.gov/medicaid/1915c/history.asp>August 2004.
41. Krout, J.A.. *Rural Aging Community-based Services*. In: Coward, R.T. et al. (eds.) *Health Services for Rural Elders*. New York, NY: Springer Publishing, Inc.:84-107, 1994.
42. Wallace, D.C., and Hirst, P.K. Community-based service use among the young, middle, and old old. *Public Health Nursing* 13(4):286-293, 1996.
43. Robinson, K.M.; Kiesler, K.F.; and Looney, S. Effect of respite care training on the knowledge, attitude, and self-esteem of volunteer providers. *American Journal of Alzheimer's Disease and Other Dementias* 18(6):375-382, 2003.
44. Horwitz, M.E., and Rosenthal, T.C. The impact of informal caregiving on labor force participation by rural farming and nonfarming families. *Journal of Rural Health* 10(4):266-272, 1994.
45. Drew, M., and Irwin, M. Providing hospice care in rural Texas. *Texas Medicine* 97(8):52-55, 2001.
46. Medicare Program: Hospice Wage Index for Fiscal Year 2004, Table C-Impact of Hospice Wage Index Change. *Federal Register* 68(189), September 30, 2003.
47. Virnig, B.A.; Moscovice, I.S.; Durhan, S.B.; et al. Do rural elders have limited access to Medicare hospice services? *Journal of the American Geriatrics Society* 52(5):731-735, 2004.
48. Talamantes, M.A.; Lawler, W.R.; and Espino, D.V. Hispanic American elders: Caregiving norms surrounding dying and the use of hospice services. *Hospice Journal* 10(2):35-49, 1995.
49. Gordon, A.K. Deterrents to access and service for blacks and Hispanics: The Medicare hospice benefit, healthcare utilization, and cultural barriers. *Hospice Journal* 10(2):65-83, 1995.

50. Kinzbrunner, B.M. Ethical dilemmas in hospice and palliative care. *Support Care Cancer* 3(1):28-36, 1995.
51. Medicare Payment Advisory Commission (MedPAC). *Medicare beneficiaries' costs and use of care in the last year of life*. Washington, DC: MedPAC, 2000.
52. Medicare Payment Advisory Commission (MedPAC). *Report to Congress: Medicare beneficiaries' access to hospice*. Washington, DC: MedPAC, 2002.
53. Virnig, B.A.; Kind, S.; McBean, M.; et al. Geographic variation in hospice use prior to death. *Journal of the American Geriatric Society* 48(9):1117-1125, 2000.
54. National Center for Health Statistics. *Health, United States, 1999: Health and aging chartbook*. DHHS publication no. (PHS) 99-1232-1. Washington, DC: U.S. Department of Health and Human Services Public Health Service National Center for Health Statistics: xiii, 166, 1999.
55. National Academy on Aging. *Facts on Long-term Care*. Washington, DC: National Academy on Aging. <<http://geron.org/NAA/ltc.html>>October 2004.
56. Stone, R. *Long-term care for the elderly with disabilities: Current policy, emerging trends, and implications for the twenty-first century*. New York, NY: Milbank Memorial Fund and American Association of Homes and Services for the Aging: viii, 87, 2000.
57. Clark, D.O. Residence differences in formal and informal long-term care. *The Gerontologist* 32(2):227-233, 1992.
58. Glasgow, N. Rural/urban patterns of aging and caregiving in the United States. *Journal of Family Issues* 21(5):611-631, 2000.
59. Yawn, B.; Bushy, A.; and Yawn, R. (eds.) *Exploring rural medicine: Current issues and concepts*. Thousand Oaks, CA: Sage Publications, 1994.
60. Smith, M.H.; Anderson, R.T.; Bradham, D.D.; et al. Rural and urban differences in mortality among Americans 55 years and older: Analysis of the National Longitudinal Mortality Study. *Journal of Rural Health* 11(4):274-285, 1995.
61. Congdon, J.G., and Magilvy, J.K. Home health care: Supporting vitality for rural elders. *Journal of Long Term Home Health Care* 17(4):9-17, 1998.
62. Bull, C.N.; Henderson, M.C.; Boothe, A.; et al. Access and issues of equity in remote/rural areas. *Journal of Rural Health* 17(4):356-359, 2001.
63. Travis, S.S., and McAuley, W.J. Pre-existing medical conditions in adult day services: An examination of nonmetropolitan and metropolitan admissions. *Journal of Gerontology* 54A(5):M262-M266, 1999.
64. Davis, D.C.; Henderson, M.C.; Booth, A.; et al. Health beliefs and practices of rural elders. *Caring* 11(2):22-28, 1992.
65. Doolittle, G.C.; Yaezel, A.; Otto, F.; et al. Hospice care using home-based telemedicine systems. *Journal of Telemedicine and Telecare* 4(1):58-59, 1998.
66. Sumner, C.R. Tele-psychiatry: Challenges in rural aging. *Journal of Rural Health* 17(4):370-373, 2001.
67. Coward, R.T., and Cutler, S.J. Informal and formal health care systems for the rural elderly. *Health Services Research* 23(6):785-806, 1989.
68. Bolda, E.J., and Seavey, J.W. *Rural Long Term Care Integration: Developing Service Capacity. Working Paper #22*. Portland ME: University of Southern Maine, Edmund S. Muskie School of Public Service, Maine Rural Health Research Center, 2000.

69. Beidler, S.M., and Bourbonniere, M. Aging in place: A proposal for rural community-based care for rural elders. *Nurse Practitioner Forum* 10(1):33-38, 1999.

70. Robert Wood Johnson Foundation. *National Program Report. Coming Home: Affordable Assisted Living*. Robert Wood Johnson Project, August 2004. <<http://www.rwjf.org/reports/npreports/cominghomee.htm>>October 2004.

71. Egger, E. New concept makes assisted, independent living facilities feasible in rural areas. *Health Care Strategic Management* 18(8):10-11, 2000.

Chapter Suggested Citation

Hutchison, L; Hawes, C.; and Williams, L. (2005). Access to Quality Health Services in Rural Areas—Long-term Care. In Gamm, L. and Hutchison, L. (eds.) *Rural Healthy People 2010: A companion document to Healthy People 2010*. Volume 3. www.srph.tamhsc.edu/centers/rhp2010. College Station, TX: The Texas A&M University System Health Science Center, School of Rural Public Health, Southwest Rural Health Research Center.