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Rural Healthy People 2010: Identifying Rural Health Priorities and Models for Practice

Dedication

The lives of millions of people have been affected by the events of September 11, 2001. For everyone, those events have brought reflection upon what is important both in day-to-day life and for the future. Paul Ambrose, MD, MPH, Luther Terry Health Policy Fellow at the U.S. Department of Health and Human Services (DHHS), was a strong supporter of rural health care in his tragically short career as a physician. After his medical school training at Marshall University and a residency at Dartmouth, Dr. Ambrose received his master's degree from Harvard. He served as a member of the Council on Graduate Medical Education (COGME), an advisory council to the U.S. Congress on residency training and physician workforce needs.

Before and during his fellowship at DHHS, Dr. Ambrose strongly believed that there needed to be a rural focus to the Healthy People 2010 initiative. The Office of Rural Health Policy's interest in working with the School of Rural Public Health at Texas A&M University to develop a rural-focused companion piece to Healthy People 2010 was spurred on by the encouragement of Dr. Ambrose. The Rural Healthy People 2010 project is dedicated to Dr. Ambrose, who died on September 11 in the crash of American Airlines Flight 77 at the Pentagon.

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Larry Gamm, Ph.D., Linnae Hutchison, M.B.A., Gail Bellamy, Ph.D., and Betty J. Dabney, Ph.D.

"Grounded in science, built through public consensus, and designed to measure progress" (U.S. Department of Health and Human Services, 2000, p. 1), Healthy People 2010 has identified 467 objectives in 28 focus areas to target health improvement across the nation. Healthy People 2010 is intended to stimulate and support action on these objectives by national, state, and local governments and by numerous health provider and community-based organizations (U.S. Department of Health and Human Services, 2000).

These consensus objectives and the subsequent development of measurements and targets have grown out of the work of the Healthy People Consortium—an alliance of more than 350 national organizations and 250 state public health, mental health, substance abuse, and environmental agencies—and the activities of thousands of national, state, and local participants who are addressing Healthy People 2010 objectives in America's states and communities.

The two major goals of Healthy People 2010 are to increase the quality and years of healthy life and to eliminate health disparities. Both of these goals are of paramount importance for rural America. As in many national initiatives, however, there is growing evidence

For further information, contact: Larry Gamm, Southwest Rural Health Research Center, School of Rural Public Health, Texas A&M University System Health Science Center, 3000 Briarcrest, Suite 300, Bryan, TX 77802; e-mail gamm@srph.tamu.edu.

that rural settings present unique challenges to attaining nationally identified objectives.

The Rural Healthy People 2010 Project

The Rural Healthy People 2010 project described in this article is intended to maximize the impact of Healthy People 2010 on health conditions in rural America. The Southwest Rural Health Research Center at the Texas A&M University System Health Science Center School of Rural Public Health is conducting this project with grant support from the federal Office of Rural Health Policy (ORHP). The project will produce a companion document to Healthy People 2010 that emphasizes rural health priorities, one of several such documents encouraged by Healthy People 2010. For each priority, a literature review and model(s) for practice will be included in paper and Web-based versions of the rural companion document.

The Need to Address Rural Health Issues

The impetus for this project was the recognition that rural areas frequently pose different and, in some instances, greater challenges than urban areas in addressing a number of Healthy People 2010 objectives. There appear to be rural-urban disparities in health conditions associated with particular preventable or chronic diseases, as well as disparities in infrastructure or professional capacity to address health needs. In addition, particular geographic, demographic, and cultural conditions in rural areas present obstacles both to rural residents seeking services and to providers who would deliver them. Several recent books and reports address a number of these conditions (Eberhardt, Ingram & Makuc et al., 2001; Geyman, Hart, Norris, Coombs, & Lishner, 2000; Loue & Quill, 2001, Ricketts, 1999).

Access to primary care remains a challenge in many rural areas. Rural Americans continue to face a relative undersupply of physicians, not only of subspecialists as one might expect, but also of primary care physicians specializing in internal medicine, obstetrics and gynecology, and pediatrics. Much of the primary care work rests on the shoulders of family practitioners (Rosenblatt & Hart, 1999). In a number of rural areas, these same physicians may be the exclusive providers of medical care at the local hospital and the sole providers of mental health services (Holzer, Goldsmith, & Ciarlo, 1998).

Aging, poverty, lack of employer-subsidized insurance, travel distances, and lack of public transportation in many rural areas may work in various combinations to reduce access to preventive and primary care services that do exist. A possible consequence of these conditions is that relatively more hospitalizations, including more avoidable hospitalizations for ambulatory-care-sensitive conditions, occur in rural areas (Eberhardt et al., 2001).

In addition to problematic access to primary care, there is anecdotal reporting of serious deficiencies in access to emergency medical services (EMS) in rural areas. Lack of direct national data on this point is partially offset by national studies of traffic accident reports. Although rural counties experience half as many traffic accidents as urban counties, the resultant rate of death and serious injury is 2 to 5 times higher (National Transportation Library, 1999). This information is given additional currency by another study that found that, in nonmetropolitan areas, in contrast to metropolitan areas, it takes twice as long for an ambulance to arrive on the scene after an accident, and there are 17 more minutes in the "golden hour" emergency response chain of events from accident occurrence to hospital arrival (U.S. Department of Transportation National Highway Traffic Safety Administration, 1998).

Mental disorders appear to be no more prevalent in rural areas than in urban areas, and according to some studies are less prevalent (Hartley, Bird, & Dempsey, 1999). There is evidence, however, of higher suicide rates—a standard indicator of mental illness—in rural areas, particularly among adult males and children (Eberhardt et al. 2001; Hartley et al., 1999). Major rural disparities appear in the smaller numbers of professional mental health providers serving rural areas, fewer rural hospitals providing inpatient mental health services, and greater distances to more specialized mental health service providers (Goldsmith, Wagenfeld, Manderscheid, & Stiles, 1997; Hartley et al., 1999; Holzer et al., 1998). Added to these conditions are the lack of anonymity in small rural communities and the perceived social stigma associated with mental illness (Calloway, Fried, Johnsen, & Morrissey, 1999).

Type 2 diabetes, arguably the most rapidly growing chronic illness in the United States, is more prevalent in rural than in urban areas. The 1995 prevalence rate was 36.2 cases per 1,000 population in nonmetropolitan areas and 32.4 cases per 1,000 population in metropolitan areas (Benson & Marano, 1998). The vast majority of the increase in diabetes is of the Type 2

variety, with the most dramatic increase occurring among adolescents and children. Two major risk factors for this form of diabetes—obesity and lack of physical activity—are also disproportionately present in rural areas (Eberhardt et al., 2001).

Like mental health, oral health in rural America suffers from disproportionately low numbers of professional providers. Rural populations make fewer dental visits and, in most regions, include higher percentages of elderly with total tooth loss (Eberhardt et al., 2001). Relative lack of community water fluoridation programs and sealant programs in rural areas also contribute to poor oral health (Isman, 2001).

Tobacco use (cigarettes and smokeless tobacco) and substance abuse (in the form of alcohol, methamphetamines, and inhalants) are higher among youths in rural than in urban areas (Cronk & Sarvela, 1997; Substance Abuse and Mental Health Services Administration, 2001). Rates of tobacco use among adults and smokeless tobacco use by youth also are higher among rural than urban populations in most regions of the country, especially in the South (Eberhardt et al., 2001). Tobacco use remains the leading underlying cause of preventable death (Kendell, 2000). Consequences of alcohol use—arrests for driving under the influence—are more prevalent in nonmetroplitan areas ("No Place to Hide," 2000). Rural youth are more likely than urban youth to report using alcohol while driving (National Institute on Drug Abuse, 1997). Rural areas are less likely to have treatment options for substance abusers or resources to support substance abuse prevention and intervention ("No Place to Hide," 2000).

Heart disease and cancer, the number one and number two leading causes of death, generally do not appear disproportionately in rural areas. One exception is the greater presence of heart disease in the southern region of the United States. Severity of conditions associated with cancer, moreover, may reflect disparities in access to rural primary care. That is, the initial diagnosis of cancer among rural residents is likely to occur at more advanced stages of the disease, stages where therapy is less effective and death more proximate (Higginbotham, Moulder, & Currier, 2001).

This sampling of rural health conditions affords evidence of the need to explore such rural challenges and successful models that have been employed to address them. It is not the purpose of the Rural Healthy People 2010 project, however, to attempt to address all the focus areas and objectives examined by so many experts within the Healthy People 2010 process.

Selecting Rural Health Priorities

The first step in the Rural Healthy People 2010 project was to develop a methodology for identifying which of the 28 focus areas and 467 consensus objectives of Healthy People 2010 we would treat in a companion document. The Healthy People 2010 areas and objectives are not prioritized. The Rural Healthy People 2010 project staff worked in close consultation with additional faculty from Texas A&M's School of Rural Public Health and with ORHP staff to identify nine criteria for weighing and selecting rural health priorities. The initial plan was to survey a panel of national and state rural experts both to rate these criteria and to nominate what they considered to be rural health priorities.

An e-mail survey in spring 2001 received responses from 44 of 90 national and state rural health experts contacted. Included in this survey were all the state offices of rural health and selected staff members of the ORHP, the congressional rural caucus, and national rural health research centers. Respondents were referred to the Healthy People 2010 Web site and then were asked to list several rural health needs or issues (or goals or objectives from Healthy People 2010) that came immediately to mind as major rural health priorities. Results of the first survey showed that nearly all the respondents' statements of priorities fit within the existing 28 focus areas established in the Healthy People 2010 document. Of the 14 rural health topics identified by more than 20% of the respondents, 5 topics dealt with aspects of access: access to EMS, health services, health workforce, primary care, and health insurance. The highest percentages of nominations were for mental health and oral health. Educational and community programs, diabetes, injury and violence prevention, nutrition and overweight, public health infrastructure, substance abuse, and tobacco were the remaining 7 areas nominated by more than 20% of the respondents.

Regarding the criteria for selecting priorities, the survey found substantial agreement among the respondents on the importance of all the criteria, with a heavier emphasis on a few of them. Grouped according to three levels of importance, the nine criteria for assessing rural health priorities are presented in Table 1.

The results of the survey were presented in May 2001 at the annual conference of the National Rural Health Association (NRHA) in Dallas (Gamm & Bell, 2001). Responses to the survey and feedback from staff of other rural health research centers, ORHP staff

Table 1. Importance Ratings for Criteria in Selecting Rural Health Priorities[1].

Most Important
- Has been identified by people living in rural areas as a high priority health issue for them

Very Important
- Overall prevalence in rural areas (i.e., how common is the problem or condition)
- Whether there is a disproportionate prevalence in rural areas compared to nonrural areas

Important to Very Important
- Impact of the condition or problem on mortality
- Impact of the condition or problem on morbidity
- Is considered to be a contributor to many other health problems
- Causes of the condition or problem are known so that effective interventions or solutions could be identified
- Solutions or interventions are feasible in rural communities (e.g., not too costly, not too complicated, does not require major system change at state or national level)
- Community interventions or model programs exist and are known to work

1. State and national rural health experts (n = 44) were asked to rate the importance of criteria proposed by the Rural Healthy People 2010 project for selecting rural health priorities.

members, and other attendees at the conference suggested a need for a second, broader survey seeking more input from state and local representatives.

In the second survey, which used standard mail survey methodologies (Dillman, 2000), questionnaires were mailed from July through October 2001 to 975 people representing state and local organizations with a commitment to rural health. The sample included four categories: statewide entities (offices of rural health, state primary care offices, state primary care associations, state rural health associations), local rural public health agencies, rural health clinics and community health centers, and rural hospitals (principally critical access hospitals). For the three categories of local respondents, the project attempted to reach equal numbers of randomly selected organizations from each state. The local respondents were selected from lists of the organizations provided by the relevant national agencies and associations. An additional 24 rural experts, nominated by respondents, were surveyed as well. After a reminder and follow-up mailing, 501 responses were received, a response rate of 51.4%. Rates varied from 50% for rural hospitals to 61% for state agencies and associations.

The respondents, presented with a list of the 28 Healthy People 2010 focus areas, were asked to check the 5 areas that they believed to be top rural health priorities. The 12 focus areas that were selected by at least 20% of respondents were then chosen by project staff as the rural health priorities to be addressed in the Rural Healthy People 2010 companion document (Table 2). The survey results reflected a wide distribution of priority selections, with "access to quality health services" the one nominated most frequently. The priorities nominated in the second survey are quite consistent with the results of the first survey.

In addition to identifying their rural health priorities, the respondents were asked to identify rural models for practice that addressed one or more of their priorities. The respondents nominated more than 250 models for practice, which are being screened and surveyed for more information by project staff. In addition, professional associations, foundations, and federal agencies promoting innovative practices in rural health are being encouraged to nominate models for Rural Healthy People 2010 consideration.

Next Steps

For each of the 12 priorities, the Healthy People 2010 companion document for rural areas will include a literature review describing the nature of rural health challenges in that topic area along with at least four or five models for practice, summarizing how some rural areas are addressing these challenges. The literature reviews will address the nine criteria presented in Table 1.

The companion document also will describe each of the selected models for practice, with information including major steps in the model's development, difficulties encountered and strategies employed, and assessment of progress or outcomes. Materials generated by the project will be accessible at the Southwest Rural Health Research Center's Web site: http://hscconcord.tamu.edu/srph/srhrc/.

Conclusion

The objectives of the Rural Healthy People 2010 project are to improve understanding of selected rural

Table 2. **Healthy People 2010 Priorities Selected by State and Local Rural Health Participants (n = 501).**

Rank[1]	Healthy People 2010 Focus Areas	Percent Nominating[2]
1	Access to quality health services	73
2	Heart disease and stroke	41
3	Diabetes	40
4	Mental health and mental disorders	37
5	Oral health	35
6	Tobacco use	26
7	Substance abuse	25
8	Education and community-based programs	25
9	Maternal, infant, and child health	24
10	Nutrition and overweight	22
11	Cancer	22
12	Public health infrastructure	21
13	Immunization and infectious diseases	17
14	Injury and violence prevention	16
15	Family planning	13
16	Environmental health	13
17	Physical fitness and activity	10
18	Respiratory diseases	9
19	Arthritis, osteoporosis, and chronic back conditions	5
20	Health communication	5
21	Occupational safety and health	5
22	Sexually transmitted diseases	4
23	Chronic kidney disease	2
24	HIV	2
25	Vision and hearing	2
26	Disability and secondary conditions	2
27	Food safety	1
28	Medical product safety	0

1. The first 12 categories will be the focus of the Rural Healthy People 2010 companion document.
2. The average percentages of four groups of respondents (a) state offices (b) rural public health agencies, (c) rural health clinics/community health centers, and (d) rural hospitals—choosing each focus area as a priority.

health priorities, to identify models for practice that effectively address these priorities, and to share this information with a broader audience that includes rural communities, rural policy makers, and others. The Southwest Rural Health Research Center and Rural Healthy People 2010 project staff invite broad participation in this effort and seek to work in partnership with a number of organizations both to identify models and to disseminate useful products to the many rural constituencies. Exploration is underway for means to continue this effort, expand it to other rural health priorities, and continually update the information, including new successful models for practice. Readers are invited to contact the authors or to visit the project Web site for more information.

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