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# EDUCATIONAL AND COMMUNITY-BASED PROGRAMS IN RURAL AREAS

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## SCOPE OF PROBLEM

- Educational and community-based programs tied for sixth place with other focus areas as a top rural health priority area.<sup>1</sup>
- School, worksite, health facility, and community-based health promotion, prevention and intervention programs reach large segments of the population; however, these programs may be less prevalent in rural than urban settings.
- According to a 1994 report, only 28 percent of school districts meet the recommended standard of one school nurse per 750 students. School nurses in rural areas are often responsible for schools that are many miles apart.<sup>2</sup>
- Smaller employers—the mainstay of rural economies—are less likely than larger employers to offer health promotion and disease prevention programs.<sup>3-5</sup>
- Rural areas may lack the readiness, resources, and technical expertise necessary to develop successful and sustainable educational and community-based programs.<sup>5-13</sup>

## GOALS AND OBJECTIVES

The Healthy People 2010 (HP2010) goal for the Educational and Community-Based Programs focus area is *to increase the quality, availability, and effectiveness of community and education-based programs designed to prevent disease and improve health and quality of life*.<sup>14</sup> Settings such as the school, worksite, health care facility, and community are an integral part of this goal; each setting provides access to select populations through existing organizational and social structures.<sup>15</sup> Programs combining any or all four settings can have a greater impact than those utilizing one setting alone. This reduces the time and resources necessary for program development and maximizes the impact by reaching large populations repeatedly.<sup>15</sup>

The following Healthy People 2010 objectives are addressed:

### School Setting

- 7.2. School health education
- 7.4. School nurse-to-student ratio

### Worksite Setting

- 7.5. Worksite health promotion programs
- 7.6. Participation in employer-sponsored health promotion activities

### Health Care Setting

- 7.7. Patient and family education
- 7.9. Health care organization sponsorship of community health promotion activities

### Community Setting and Select Populations

- 7.10. Community health promotion programs
- 7.11. Culturally appropriate and linguistically competent health promotion programs
- 7.12. Older adult participation in community health promotion activities

Based on a survey of state and local rural health leaders, the Educational and Community-Based Programs focus area was virtually tied for sixth place with four other areas as a top rural health priority area.<sup>1</sup>

This overview differs from most others in Rural Healthy People 2010 since it does not focus upon specific health conditions or provider groups. Instead, the focus is on the health education and prevention strategies used in different settings and the rural issues—disparities, barriers, and challenges—encountered as well as evaluation, sustainability, and feasible solutions/interventions in rural areas.

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## PREVALENCE

The issues and disparities facing rural America in the delivery of educational and community-based programs are described in this section by setting: school, worksite, health care organization, and community.

### School-based Setting

A rural school is often the most prominent institution and one of the largest local employers in the area. School-based programs can influence students, teachers, and parents.<sup>16, 17</sup> Approximately 20 percent of all students in public elementary and secondary schools in the United States reside in rural areas.<sup>18</sup> Children living in rural areas, especially minority children and adolescents, are less likely to be insured than urban children.<sup>19</sup> For these and other school children, school health education programs, school nurses, and school-based health centers may be vitally important to their health.

Health promotion programs for children are effective and may impact child health beyond childhood. For example, cardiovascular disease risks and eating behaviors established in childhood often carry into adulthood.<sup>20-24</sup> School-based approaches can improve health habits while reducing behavior-related risk factors.<sup>25-27</sup> Additionally, studies of school-based tobacco and substance abuse program interventions have been found to be effective.<sup>26, 28</sup> Such interventions have been found to be nearly equal in effectiveness across rural, suburban, and urban schools.<sup>26</sup>

School-based health centers (SBHCs) may provide comprehensive physical and mental health services to students.<sup>29</sup> Of an estimated 1,400 school-based health centers across the U.S. in 2002, 28 percent are located in rural areas in contrast to 61 percent in urban and 12 percent in suburban areas. A study of West Virginia centers found higher enrollment rates in rural SBHCs than in urban schools—86 percent and 46 percent, respectively.<sup>30</sup>

Rural school nurses play a significant role in the health-related activities of schools.<sup>31</sup> They provide

services such as health education, screenings and assessments, and medications. In addition, more than 90 percent of school nurses monitor students with chronic conditions such as diabetes or asthma.<sup>32</sup> However, a 1994 report found only 28 percent of school districts meet the recommended standard of one school nurse per 750 students. Among schools with an average of 190 students, over 40 percent of schools responding to the survey did not have a school nurse.<sup>7</sup>

A school nurse shortage may reduce both the amount and quality of health promotion and prevention activities. A 2003 Washington state report noted rural school districts have limited or no access to school nurses and psychologists.<sup>33</sup> To make matters worse, school nurses in rural areas are often responsible for schools that are many miles apart.<sup>32</sup> This shortage may force other school staff members, such as secretaries, to assume school nurse functions in some rural schools. A Montana survey of school secretaries found nearly three-quarters of respondents provided care for students' injuries or illnesses on a weekly basis, while 70 percent of respondents passed out prescription medication on a weekly basis.<sup>7</sup>

### Worksite Settings

Worksite health programs vary from health education, services and benefits, and counseling programs to policies that promote safe working conditions.<sup>34, 35</sup> These programs have been found to reduce medical care costs and absenteeism.<sup>36, 37</sup> Most worksite studies of health promotion activities, however, focus on large businesses,<sup>5, 36</sup> while rural economies are relatively more reliant on small businesses.<sup>5</sup>

According to 2002 survey of Georgia employers, smaller employers are less likely than larger employers to offer at least one health promotion and disease prevention program—68 percent versus approximately 90 percent, respectively. Although nearly as likely as large employers to have smoking restrictions, small employers are less likely to have programs for physical activity, nutrition and weight management, or disease management.<sup>3, 4</sup>

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Several reasons are frequently cited for the few health promotion programs in small businesses. These include: (1) lack of a knowledgeable staff member able to design and organize a health program; (2) financial inability to offer health insurance and promotion and preventive programs; and, (3) burden of health and safety regulations that may limit resources for those programs not required by law.<sup>5</sup>

### **Health Care Facility Settings**

Health care facilities are frequent settings for health promotion, prevention, and treatment programs. Health providers are often trusted and respected, and patients are usually receptive to health information they provide.<sup>15</sup> In physician offices, prevention education for patients is viewed as part of the physician's role, and evaluations of the effectiveness of these efforts are published.<sup>38</sup>

Several rural community health centers have participated in the U.S. Bureau of Primary Health Care-sponsored collaboratives that have focused on secondary and tertiary prevention of chronic illnesses since 1998. Although patients relying on such centers are more likely to be poor and uninsured or on Medicaid, there is evidence rural health center patients are significantly more likely than people in the general rural population to receive preventive services and experience decreased rates of low birth weight, especially among African Americans.<sup>39, 40</sup>

Hospitals have a history of health promotion and disease prevention activities in the community. A survey of Iowa hospitals found over 98 percent of rural hospitals offered health promotion services such as cancer screenings, safety and protection programs, nutrition programs, and prenatal/maternal health services.<sup>41</sup> Rural hospitals frequently collaborate with providers and community organizations such as churches, civic clubs, and employers to pool resources to fund and staff programs and services for larger populations. In general, hospital collaboration with community organizations can be associated with desires to

improve the community health and/or any of several threats—external regulation, loss of tax exempt status for nonprofit hospitals, or increased market competition.<sup>8, 42</sup>

### **Community Settings**

Community-based programs seek to improve a community's health through comprehensive approaches combining education, prevention, screening, and treatment.<sup>43</sup> Such approaches can effectively reach special populations who are otherwise difficult to reach—rural, undereducated, economically disadvantaged, or minority groups.<sup>26</sup>

A community health governance model developed by a workgroup of nine partnerships in *Turning Point*, a foundation-funded initiative, emphasizes the importance of collaborations to empower individuals within communities, to bridge social ties in the community, and to create and leverage synergy.<sup>12</sup> Community-based programs require a diverse group of members representing a cross-section of social and economic sectors of the community. Community involvement is necessary at all stages—assessing needs, identifying resources, and implementing and governing the program. This ensures that the multiple factors affecting the health of a population are considered and incorporated into interventions.<sup>44-47</sup>

## **BARRIERS**

### **Effective Mobilization**

It is frequently a challenge to mobilize schools, worksites, health facilities, and communities in rural areas. Under-funded schools may be unable to support a school nurse, much less underwrite a school health center. Rural hospitals may not be encouraged by staff or board members to engage in health promotion or disease prevention strategies.<sup>8</sup> Even where interest is present, such health care facilities often face time or financial constraints.<sup>8, 15</sup> Rural businesses may require tangible and quantifiable evidence of the benefits in health promotion efforts.<sup>11</sup> Furthermore, many rural communities—especially minority communities—

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may be at a low stage of readiness to address health issues such as substance abuse or related problems.<sup>26</sup> Other challenges include difficulty in retaining and recruiting participants and a low level of community involvement in addressing problems within the community.<sup>12</sup>

## **Sustainability**

Across multiple settings considered in this overview, several elements have been identified as critical to the sustainability of partnering and innovative program interventions—personnel and expertise, leadership, funding, and evaluation.<sup>13, 48</sup> Rural hospitals and schools often have shortages of health professionals.<sup>8-10</sup> Likewise, rural employers may lack the expertise to offer health programs.<sup>5</sup> Rural communities may face a shortage of leaders, and several prevention efforts in rural communities may rely upon the same small group of leaders.<sup>11</sup> Grants—a significant means of funding for community-based programs—are not long-term funding sources. Program evaluation throughout various program stages, including development, can keep sustainability on course.<sup>49</sup>

## **PROPOSED SOLUTIONS**

### **Rural School Settings**

Determining the level of need is critical for an effective school-based program. The Centers for Disease Control (CDC) provides several resources schools can use in needs assessment and program implementation.<sup>26, 50-52</sup>

In 2001, The Department of Education designated seven drug prevention programs as exemplary; five of these programs are school-based. Also, both the Substance Abuse and Mental Health Services Administration (SAMHSA) and the Center for Substance Abuse Prevention (CSAP) have developed a national registry of science-based prevention programs in schools.<sup>26</sup> There is evidence that substance abuse prevention efforts targeting multiple facets of risk and protection offer the best prospect of preventing adolescent substance abuse.<sup>26</sup>

Evidence-based prevention programs, especially those based on social cognitive behavioral theory, have attained some success in tobacco cessation among youth.<sup>53, 54</sup> Several studies show school-based programs are effective in rural and urban areas. In West Virginia and North Carolina, implementation of the American Lung Association's *Not On Tobacco* program among high school smokers resulted in high cessation rates.<sup>55</sup> Another program relying on trained high school students to teach lower grade students health and life skills for behavioral change in tobacco use and fat and fiber intake was associated with changes in attitudes concerning diet, smoking, and self-efficacy, along with an increase in knowledge of dietary fat and fiber.<sup>56</sup> Programs that include student peer involvement may increase student buy-in.<sup>57, 58</sup> Finally, telehealth promotion and disease prevention programs in schools report medium to high satisfaction among students.<sup>59</sup>

### **Rural Worksite Settings**

Worksite prevention and health promotion programs can reduce illnesses and injuries that otherwise may decrease productivity, increase absenteeism, and increase costs of disability and health insurance.<sup>37</sup> Worksite interventions ranging from single-site programs to community-wide efforts are effective in rural areas. For example, multiple positive results have been found in a low-cost program of smoking cessation and nutrition education at one manufacturing site<sup>60</sup> and in a nutrition and physical activity intervention among rural female blue-collar employees combining an educational campaign and the “natural (lay) helper” model of health promotion.<sup>61</sup>

A number of other such prevention programs may be especially appropriate to addressing health access challenges in rural areas. In Ashville, North Carolina, the municipal government paid pharmacists \$40 per patient per month for counseling on diet and exercise, stress reduction, and medications to city employees with asthma, hypertension, or high cholesterol. Health care spending for these employees declined, as did negative clinical findings and worker absenteeism.<sup>62, 63</sup> Another

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program—recognizing the reluctance of some farmers to seek traditional care—relies upon veterinarians, who are frequent and trusted visitors to farms, to deliver health promotion information to adult farmers. Participants found it an acceptable way to receive health education.<sup>64</sup> Finally, small and dispersed worksites in rural areas have benefited from collective action across communities. The National Rural Electric Cooperative Association of 1,000 cooperatives in 47 states offers programs to help employees choose quality health care.<sup>65</sup>

### **Rural Health Care Facility Settings**

Several rural community health centers participate in disease management collaboratives promoted by The Bureau of Primary Health Care. Some centers work not only with center clients but also with clients of other physicians in the community.<sup>66</sup> For example, several centers work with rural hospitals and organizations to help manage diabetes and hypertension among African-American adults.<sup>67</sup>

A report of rural hospitals and community health center collaborations in five communities showed linkages with mental health, substance abuse, oral health, home health, elderly care services, transportation, and family planning. These linkages provide a continuum of care in areas with high proportions of elderly persons and high rates of poverty and uninsurance. Factors important to such collaborations included a shared vision of serving the community and a common mission of increasing access to care and meeting the populations' health care needs regardless of the ability to pay.<sup>68</sup>

### **Community Settings**

Community-based programs are often supported by key community institutions, and several efforts by schools, employers, hospitals and health centers are noted within this section. Smoking cessation programs relying on rural African-American churches in Virginia counties have been successfully implemented.<sup>69</sup> Another program in rural counties that relied on worksites and community educational presentations and screenings at health fairs was

associated with an increase in physical activity, smoking cessation attempts, lower fat intake, a decrease in average serum cholesterol levels, and a 20 percent decrease in health insurance claims by employees.<sup>26</sup>

Community collaborations that draw simultaneously on the efforts of schools, worksites, health care facilities, and other community organizations to provide comprehensive programs and services are becoming increasingly important in the protection of the public's health. Such collaborations may help rural communities to address increases in health care costs and limited resources.

### **SUMMARY AND CONCLUSIONS**

As health care costs, chronic disease, and life expectancy increase, communities are challenged to effectively manage costs and services for ensuring the public's health. This is particularly a challenge for rural areas because many cost-saving measures rely upon volume and risk sharing. Since the majority of illnesses are preventable, health promotion and prevention programs are especially important to rural communities.

Improvement of a community's health relies upon the development and sustainability of educational and community-based interventions. It calls for efforts by schools, health care organizations, employers, and community-wide partnerships. Such programs can coordinate limited resources and employ a combination of settings reaching multiple populations to improve outcomes and strengthen community capacity for future collaborations.

### **MODELS FOR PRACTICE**

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

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