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Promising Practices to Improve Access to Oral Health Care in Rural Communities

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Oral health is a critical component of general health and well-being.[1] Poor oral health is related to a range of diseases and disorders in adults and children including cavities and periodontal disease.[2] Routine oral health care examinations and services can help to prevent disease and also identify other conditions. Despite the importance of oral health and developments in knowledge and practice in this area, significant oral health disparities exist in rural communities related to access to care, utilization of services, and outcomes. These disparities result from a number of factors including provider shortages in rural areas, a lack of dentists who accept Medicaid or have discounted fee schedules, geographic isolation, a lack of public transportation, cultural norms, and poverty. In some rural communities, the only non-private sources of oral health care are a dental clinic within a federally qualified health center or an extraction clinic—both with long waiting lists. As a result, rural communities across the U.S. are developing oral health programs that build oral health infrastructure and capacity to reduce the prevalence and impact of oral disease, enhance access to care, and eliminate disparities.

The Health Resources and Services Administration (HRSA) Federal Office of Rural Health Policy (ORHP) funded rural communities to develop community-based oral health programs as part of the 330A Outreach Authority program. The 330A Outreach Authority program focuses on reducing health care disparities and expanding health care services in rural areas. One of the lessons learned from the experiences of the 330A Outreach Authority grantees is that there is a need to identify and compile promising practices and resources for rural oral health programs to guide program development, implementation, and sustainability.

Key Findings

- There are barriers to accessing oral health care in rural communities.
- This project identified rural oral health program models in the literature and in practice: workforce, mobile dental services, school-based, dental home, oral health-primary care integration, allied health worker, and community outreach and engagement.
- The 330A Outreach Authority grantees offer promising practices in the areas of program implementation, evaluation, and sustainability.
- Implementation lessons learned focused on the recruitment of dentists, addressing cultural issues of stigma, and achieving buy-in for oral health programs.
- Grantees are conducting process and outcome evaluations to assess their programs.
- Sustainability stratgies range from fee-for-service models and third party payer sources to grants, in-kind contributions from partners, and local fundraising.
- Grantees found that their programs were successful because of strong partnerships that exist in their rural communities.

While many communities have developed innovative approaches to increasing access to oral health care, there is a lack of research on the oral health models that are most effective in rural communities. The 330A Outreach Authority program grantees have successfully implemented a range of different oral health program models and their experiences suggest promising practices that can be adapted and applied in other rural communities. Identifying evidence-based and promising practices for rural oral health programs and sharing this information widely will help to facilitate the replication of programs that are supported by research and experience.

Findings for this issue brief are based on a literature review of rural oral health programs and lessons learned from seven 330A Outreach Authority grantees that implemented rural oral health programs. This project culminated in the development of a toolkit of rural oral health program resources and promising and evidence-based practices. The toolkit is available on the Rural Assistance Center (RAC) website, www.raconline.org.

Purpose of the Project

The purpose of this project was to identify promising practices for rural oral health programs that help rural communities learn from the experiences of their peers and access tried and tested tools and approaches. The study focuses on reviewing the experiences of rural oral health programs in the field to identify "model" programs—those that are frequently implemented in rural communities with positive outcomes—and promising practice resources that may benefit rural communities.

Methodology

The methods for this project included: 1) a review of the literature on rural oral health programs; 2) a review of the applications for fourteen 330A Outreach Authority grantees that were funded in 2010 and twelve grantees that were funded in 2012 to implement an oral health program; 3) semi-structured telephone interviews with seven 330A Outreach Authority grantees that were funded to implement an oral health program in 2010; and 4) the development of a toolkit that contains resources and promising practices that were identified by the grantees and in the literature.

In the first phase of this project, ORHP staff identified fourteen 330A Outreach Authority grantees that were funded in 2010 to implement oral health programs in rural communities. We reviewed the grantee applications, which contained information about grantees' strategies for developing rural oral health programs; conducted a review of the literature on rural oral health programs; and developed a grantee interview protocol. The protocol included a range of topics such as the goal of the program, key activities, promising or evidence-based approaches used, implementation lessons learned, challenges, facilitators, evaluation activities, sustainability plans, and dissemination strategies. Of the fourteen grantees identified, seven grantees participated in an interview. Following the interview, some grantees provided resources for inclusion in the rural oral health toolkit. Interviews were completed between July and August 2012.

In the second stage of the project, we reviewed findings from the interviews and compiled toolkit resources from the literature. The toolkit is organized in eight areas: 1) introduction to rural oral health; 2) oral health program models; 3) implementation of rural oral health programs; 4) sustainability; 5) measuring and evaluating rural oral health programs; 6) disseminating rural oral health resources and promising practices; and 7) rural oral health program clearinghouse. The toolkit provides information about rural oral health programs and resources that may helpful to other communities developing similar programs. The toolkit is available on RAC at www.raconline.org.

This project represents the first effort to develop a toolkit that houses promising practices and resources for rural oral health programs. Findings from a review of literature and discussions with the grantees illustrate that often the approaches used by rural oral health programs are not rigorously evaluated because of a lack of time, funding, and resources. Additionally, there is not an existing body of literature on evidence-based oral health programs in rural communities. Thus, the toolkit is a compilation of promising practices rather than evidence-based practices and provides information and resources for rural communities that are interested in implementing a rural oral health program. Future research is needed to validate rural oral health program approaches. The key themes that emerged from this project are described in this issue brief.

"Access to care has been so difficult for our patients, we have severe needs. Many people need dentures. The severity of the dental disease is so much greater in a rural community than in an urban population where there is better access to care."

–330A Outreach Authority Grantee

Oral Health Program Models in Rural Communities

The literature review and 330A Outreach Authority grantee interviews identified oral health program models that are frequently implemented in rural communities and have contributed to positive outcomes.

Workforce Model. Recruiting and retaining dentists can be challenging in rural areas because of fewer local training programs, lower health insurance reimbursement rates for services, and fewer employment opportunities for the dentist's spouse. Rural communities have implemented workforce programs that involve encouraging students from rural communities to choose dental careers; offering incentive programs to dental professionals who serve rural populations including tuition reimbursement and loan forgiveness programs; introducing students to dentists who practice in rural areas; and creating linkages between dental schools and rural dental clinics to increase the number of dental student graduates completing a portion of their training in a rural community.

Mobile Dental Services Model. Rural programs deliver oral health care to adults and children using the mobile dental services model. In this model, a mobile dental unit is used to conduct dental exams, deliver fluoride treatments and sealants, and take x-rays. Some programs deliver oral health education services. Mobile units may also be used to deliver portable dental equipment to schools, Head Start facilities, health centers, and community organizations where dentists can deliver oral health care services. Mobile dental units may visit the same location several times each year.

School-based Model. In this model, dental professionals deliver services to children in school-based clinics. This program model may involve dentists, dental hygienists, dental students, and community health workers. Programs may offer fluoride varnish, dental sealants, and oral health education to students, and if needed, refer patients to local dentists that have agreed to treat more complex cases. Other programs work with dental hygiene professors and students who travel to schools to deliver oral health services. Community health workers may work alongside dental professionals to assist with screenings. The school-based model helps to reduce missed school time for children and can reach children in families that may not seek dental care due to a lack of resources.

"In a rural community, access to care is more challenging. We serve 17 surrounding counties and some patients have to travel two hours to see us."

–330A Outreach Authority Grantee

Dental Home Model. The dental home model of care is a comprehensive approach to improving oral health access for vulnerable populations by providing a regular source of care. This model emphasizes an ongoing relationship between the dentist and the patient, increased collaboration among providers, and the promotion of oral health education. Rural communities are designing dental homes for adults and children.

Oral Health-Primary Care Integration Model. In this model, rural oral health programs improve communication between dental providers and primary care providers. Approaches include establishing referral partnerships between dental clinics and primary care practitioners and creating interdisciplinary teams where dental hygienists work alongside primary care physicians to provide services.

Allied Health Worker Model. Allied health professionals support rural oral health programs by providing dental care, education, referrals, screening and support services. Allied health professionals include dental hygienists, dental assistants, dental educators, and dental laboratory technicians. Some states have established an allied health professional training program for mid-level dental therapists who have more training than a dental hygienist but less than a dentist in order to increase access to care in rural areas.

Community Outreach and Engagement Model. Rural programs develop strategies to increase knowledge and awareness of the importance of oral health. Examples of activities include conducting targeted outreach in hard-to-reach rural areas, providing oral health education at community events, and working with primary care providers to incorporate oral health into patient visits.

These oral health program models are not mutually exclusive. Many of the models complement one another and can be implemented in the same program. For example, a rural oral health program may combine the oral health-primary care integration model and dental home model given the emphasis on communication and coordination across providers. Similarly, a rural community may implement the mobile dental services and school-based models by delivering care to children using portable dental clinics in school settings.

Staff and Resources Needed to Support Rural Oral Health Programs

The 330A Outreach Authority grantees reported that their programs would not have been successful without a combination of talented staff and expertise and contributions from a range of partner organizations. The grantees collaborated with dental clinics; hospitals; area health education centers; programs such as Head Start and Women, Infants, and Children; schools; health departments; faith-based organizations; tribal organizations; and community and social service organizations. Many programs also worked with volunteers such as retired dentists and students from dental school residency programs to deliver services.

Partner organizations donated funding, staff time, technical assistance, space for program activities, and supplies. For example, one grantee's partner donated space for a dental clinic, while another grantee's partner financed a mobile dental van. Grantees also worked with partners to identify champions in the community to speak to engage providers, educators, and policy makers to participate in or support the program. Grantees commented on the importance of publicly acknowledging the contributions of their partners.

> *"You must acknowledge your partners and identify their contributions, profess how valuable they are, and say thank you. We didn't care who received the credit."*
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> *–330A Outreach Authority Grantee*

Implementation Lessons Learned

The 330A Outreach Authority grantees shared their experiences implementing different rural oral health programs. Grantees that implemented a dental home model reported that recruiting dentists to practice in a rural area was a challenge. One grantee who was implementing a dental clinic for underserved residents said: "We had recruitment issues in the beginning as you might expect in a rural community. We were unable to identify a dentist or even a dental director. Most successful dental access clinics have a dentist at the helm and we weren't able to find that person." Another grantee reported that finding a dentist to staff their mobile unit and clinic was problematic. To address these challenges, grantees recruited retired dentists who volunteered their time as well as dentists who were paid to see patients one day each week in a rural dental clinic. One program established an agreement with a medical center to pay dental students to practice in the program's clinic for one year.

Grantees that implemented the mobile dental services model faced a different set of issues. One grantee, a local health department, collaborates with a school district and local dentists to provide preventive, emergent and restorative dental care to underserved children. This grantee provides oral health care to students in a school clinic and discovered that it was feasible to transport their portable dental equipment to the school using a small trailer rather than a recreational vehicle (RV):

"We knew that we did not want an RV unit…The reason was because of all of the requirements…We did not want that overhead of the unit, having to have a special license to drive it, having to have a place to store a big unit, and having to winterize a unit. That is why we went with a small trailer that we could pull behind our company vehicle."

In this mobile dental program, dentists serve students in the school clinic rather than in a mobile unit. Therefore, the grantee also works with the school to identify a power source for the x-ray equipment and a source for water. In addition to deciding on the appropriate vehicle, grantees implementing the mobile dental services program model also established relationships with local dentists for referrals. Because mobile clinics cannot serve as a dental home to patients, and often are not used for more complex procedures like root canals, grantees established relationships with local dentists to refer patients with more complex needs.

Grantees also tailored their programs to address cultural barriers in their communities, such as stigma associated with receiving "charity" oral health care. Some grantees offered free oral health services, but experienced low demand because individuals were reluctant to seek treatment. One grantee that implemented a school-based oral health program noted:

"We had a lot of folks excited, but we could not get folks to sign up…We opened up the service to all students; it made the stigma go away. The people we needed to serve were the ones signing up, but because [the program] was open to all, there was not that pressure. We had very few people sign up who did not need the service."

This grantee also noted that working with a professional marketing firm helped them to engage their population through radio advertisements. In addition, other grantees leveraged community engagement and outreach activities to raise awareness about their programs, the need for oral health care, and the relationship between oral health and overall health. For example, grantees developed a brand identity for their programs by creating a dental outreach mascot and a colorful mobile unit.

Finally, grantees found that it was important to develop a project advisory committee comprised of local partners, such as the local dental school and hospital as well as members of the dental community. One grantee noted that the advisory committee helped to facilitate relationships with members of the local dental community who viewed the oral health program as competition for their practices:

"We didn't want to take away patients from the private sector. We had to convince [local dentists] that this is not what we are doing. We are basically trying to take care of patients [who] are not getting served. You do have to have the private community at the table as well, so they can understand the project and support the project."

The grantee was successful in achieving buy-in from the local dental community. In fact, some local dentists volunteered their time to help with the project.

Program Evaluation Strategies

Program evaluations can be used to gain buy-in from community stakeholders, educate decision makers, mobilize resources, measure patient satisfaction, demonstrate program outcomes, and share success stories. Evaluation can also help to raise awareness of the needs in the community and elevate oral health as a community priority. One grantee noted that it is critical to have "data documenting the need [for oral health care] in the community…to open the eyes of dentists so they can understand what is going on."

Rural communities are conducting process and outcome evaluations to assess their programs. The 330A Outreach Authority grantees evaluated the extent to which they achieved their program goals and whether outcomes could be attributed to their projects. The grantees collected qualitative data through in-person interviews, surveys, and focus groups—for example, soliciting feedback from their participants about the oral health services delivered to identify strengths and weaknesses of the programs. Many of the programs also collected quantitative data about the participants in their programs and their experiences. Common outcome measures were frequency of tooth brushing, time elapsed since the last visit to the dentist, and oral health outcomes. Process measures included the number of encounters per month, the number of targeted schools recruited to participate in the program, and the number of referrals to providers. While grantees are also measuring the impact of their programs, some noted that the benefits of their programs—reduced caries and teeth extractions, changing attitudes and behaviors, improvements in oral health status—occur over many years, and are more difficult to measure.

The 330A Outreach Authority grantees' experiences suggest several lessons learned for evaluating rural oral health programs. First, design data collection instruments that are sensitive to the literacy level of the population. Second, consider the mobility of the population that is participating in the program evaluation because it will have an impact on the evaluation approach and measures. For example, one grantee noted that their mobile program does not always see the same patients or work with the same dentists. Third, it is helpful to plan for evaluation activities early in the project in order to collect the appropriate data to measure progress over time.

Sustainability Strategies

The 330A Outreach Authority grantees are striving to develop and implement lasting solutions to the oral health care challenges in their communities. Thus, grantees are developing sustainability strategies to continue their work. Sustainability approaches range from fee-for-service models and third-party payer sources to grants, in-kind contributions, and local fundraising. Grantees noted that some programs are more difficult to sustain than others. For example, school-based programs that provide sealants and fluoride varnish applications to students in a school setting can be less costly to sustain than programs that provide more complex dental services. Cost is not the only factor affecting sustainability. Programs must have a flexible and sustainable staffing model given many programs require a team of dentists, dental hygienists and other providers.

Two 330A Outreach Authority grantees offer innovative sustainability approaches. The first program is a collaboration of local dentists who treat Medicaid patients. The program's grant finances a dental cleaning and exam as well as a personalized dental care plan. Other services are offered at a reduced rate and this cost is equally shared by the patient and the program. A second rural oral health program collaborates with a hospital's pediatric dentistry residency project. Two pediatric residents complete rotations each month at a rural dental clinic that serves low-income and uninsured populations. These programs sustain their activities through grants, cost sharing between the patient and program, and donated care from dentists and dental students.

Rural Implications

The 330A Outreach Authority grantees commented that their programs were successful because of the strong partnerships that exist in their rural communities. One grantee noted that there is an implicit expectation in their rural community that providers, local agencies, and other organizations will work together and that "the need to work in a collaborative fashion is absolutely essential." Another grantee noted that "in a rural community, you know the players better" and you are able to "reach out to who seems to be your natural partners." Grantees reported that their programs have been successful because of their rural communities' "cultural propensity towards resourcefulness" and unwavering commitment from their administrators, staff, dentists, dental hygienists, school nurses, and partner organizations.

> *"What we are able to do in a rural area, since we do not have great prosperity...is understand that we must hang together. The need to work in a collaborative fashion is absolutely essential. From that aspect, I think there are some advantages in a rural area."*
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> *–330A Outreach Authority Grantee*

This project and toolkit helps to build knowledge about practices that have increased access to oral health care in rural communities. The 330A Outreach Authority grantees' lessons learned and promising practices have great potential to be replicated in other rural communities across the country.

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