Addressing the Lack of Access to Oral Healthcare in Southwest Virginia for Better Health Outcomes

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Abstract

Southwest Virginia is considered part of Central Appalachia and is an area drastically underserved by both medical and dental care. It is an area encompassed by extreme poverty, rural landscapes, and tough livelihoods. Much of the population is uninsured for either medical or dental coverage. Many of the solutions being offered seem to be reactionary to the problems at hand but are not doing much to help prevent the problems from developing in the first place or providing primary lines of medical and dental healthcare. The programs currently being offered like RAM-Wise are great programs for dealing with the access problem we are facing currently but cannot be seen as long-term solutions to a problem that is only growing as the population ages and insurance coverage becomes harder to obtain.
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The Central Appalachian Population of Southwest Virginia

Appalachia is a large geographical region of the United States (US) that follows the path of the Appalachian Mountain chain from New York to Mississippi covering an area of approximately 205,000 square miles. The diversity within the regions of Appalachia is immense as it is such an extensive land tract. One area of much concern is health disparities, particularly oral health, in the section of Appalachia that is within Southwest Virginia. According to the Center for Oral Health Research in Appalachia at the University of Pittsburg (2011), “Appalachia has the largest burden of oral health problems per capita in the United States, and health disparities in oral health outcomes resulting from differences in socioeconomic status occur.”

As of June 1, 2009 the population for Appalachian Virginia is estimated to be 760,060 residents (Appalachian Regional Commission (ARC), 2011). Much of rural Southwest Virginia lies within the heartland of Central Appalachia, including but not limited to Wise, Dickenson, Lee, Scott, Russell, Buchanan, McDowell, and Washington counties. According to the Appalachian Regional Commission, comparing these counties to national averages using unemployment rates, per capita market income and poverty rates, all of these counties hold an economic status of either distressed or at-risk with the exception of Washington County, which is viewed as being transitional (ARC, 2011). This is on a scale of distressed, at-risk, transitional, competitive or attainment. In all there are 25 counties in Virginia that are included in Central
Appalachia averaging out to roughly 30,400 residents per county. Roughly one-third of Virginia’s land total is home for just over 10.3% of Virginia’s total population. The rough terrain of the Appalachian Mountains led to the creation of the Appalachian Regional Commission, as cited earlier, which was established by an act of Congress as a partnership between federal, local, and state organizations to improve economic and community stability in the region. One of the main focuses this organization has had is building an adequate highway system through the rough mountainous terrain to connect the region with the country surrounding it in hopes of bringing in traffic, tourism, and industry (ARC, 2011).

The socioeconomic status of Central Appalachia is one of great disparity compared to the rest of the United States, and with the rising costs of healthcare, increasing age of the population, and greater numbers of uninsured this will only continue to grow. The main industries of Central Appalachia are mining, farming, and natural resources where more than 59,000 jobs have been lost, roughly 15% of jobs, from 2000-2008 with more loss suspected (ARC, 2011). According to the Economic Overview of Appalachia 2010 produced by the ARC, workers in Central Appalachia’s personal market income was only 51% of the national average, only 25% of adults living in Central Appalachia have attended college compared to 50% of adults in the US, and there are higher rates of heart disease, diabetes, and cancer than compared to the rest of the nation (ARC, 2011). It has been shown that there is a link between oral infections and cardiovascular disease including heart attacks and stroke, and that gum disease has been linked to difficulty maintaining adequate blood glucose levels in diabetics (National Health Policy Forum, 2011). According to the Appalachian Community Fund (2010), “although many are touched by deep poverty and tragedy, Appalachia and its people have a generous spirit, strong determination, and great love for and pride in the unparalleled natural beauty of this region.”
Oral Health Access and Affordability

In 2000 the Surgeon General released a report on oral health called *Oral Health in America* where he addressed the notion that oral health and seeing a dental specialist is more than just having healthy teeth but that a patient’s mouth is “a mirror of health or disease occurring in the rest of the body”. (Institute of Medicine and National Research Council, p. 48).

There are many disparities in oral health and oral healthcare among underserved and vulnerable populations, including but not limited to low-income populations and rural populations like those found in Southwest Virginia (p. 51). “About 47% of adults ages 20 to 64 whose incomes are below the poverty level have untreated dental caries, compared with 19% of adults with incomes above 200% of the federal poverty level (FPL)” (National Health Policy Forum, 2011, p. 2). It is also more common for low-income populations to treat one-time episodes or emergencies over receiving preventative care, have tooth extractions for advanced dental decay, and total tooth loss is more common in patients under the FPL (Institute of Medicine and National Research Council, p. 55-56). Residents of rural areas, like those of Southwest Virginia, also access oral healthcare less frequently, which is possibly due to fewer dentists practicing in rural areas or lack of dental coverage, as over 60% of poor adults and adults living in rural areas tend not to have dental insurance (p. 62). While access and cost are two major factors contributing to inadequate oral health care in Southwest Virginia so are oral health literacy and prevention and maintenance.

The overall oral health literacy of the nation is low in regards to knowing how often to schedule dental appointments and what the benefits and risks of not receiving care can be. For example, nearly 8,000 people die each year from oral cancers that might have been caught and treated earlier had the patients had adequate knowledge regarding symptoms and risk factors
Also as an example, the public tends to think that brushing and flossing are the best ways to prevent cavities when in actuality fluoride and sealants provided by dentists have been proven most effective (p. 63). It is also thought that patients living in rural areas without fluoridated water have higher susceptibility of dental caries (p. 62). Fluoridated water to 79.6% of the population is now a Healthy People 2020 initiative.

Along with oral health literacy comes lifestyle modification and lessons to patients about how their daily habits are affecting their mouths and teeth. Eating high sugar foods and drinking carbonated beverages can be directly linked to causing cavities, and whether its oral healthcare providers or non-oral healthcare providers this information should be taught and explained to patients (p. 64). New mothers should also know that increasing their intake of folic acid will not only help to prevent neural tube defects but can also reduce the risk of cleft lip and cleft palate (p. 64). Tobacco products are recognized as one of the major causes of oral cancers and when combined with drinking alcohol account for 90% of all oral cancers (p. 64). This is not a problem that is going to solved overnight but will require careful planning to assist the vulnerable and underserved populations in obtaining proper oral healthcare through education and access.

Volunteer Based Dental Services: Stopgap or Solution?

No simple solution exists to resolve the overall problem of lack of dental access in an area such as Southwest Virginia, but efforts are being made to combat the issue at both a federal and state level through public and private ventures. At the federal level, government agencies are working on the problem at multiple levels, by working to increase the number of dental professionals, strengthening the dental public health infrastructure, providing direct dental care
to specific vulnerable populations, such as veterans and low-income children and adolescents, and increasing the amount of households that receive fluoride in their water (Institute of Medicine and National Research Council, 2011, p. 1-3). Similar tactics are occurring state by state but the problem of lack of access persists.

Dental professionals themselves have undertaken one solution to the immediate need for care through volunteer organizations that provide free oral care. The Virginia Dental Association Foundation founded one such group, called Missions of Mercy (MOM), in Virginia in 2000 (Virginia Dental Association, 2011). MOM projects are short term, temporary, clinics set up in underserved communities that are staffed by volunteer dental professionals to provide free dental care. Since its founding, MOM organizations have developed in many other states, all modeling themselves after the Virginia example.

The first project that the Virginia MOM took part in was the 2000 Remote Area Medical (RAM) clinic in Wise, Virginia. Each year Virginia MOM puts on numerous events on its own throughout the state but the largest project each year is RAM at Wise. MOM has returned to RAM at Wise every year since 2000. Between 2000 and 2011, 14,979 patients were treated and received an estimated $11 million in free dental services (Virginia Dental Association, 2011). As is the case at all MOM events, at RAM in Wise patients are seen on a first-come, first serve basis. Each patient receives an initial screening during which the dentist determines what procedures will benefit the patient most, as not all problems can be addressed in a short timeframe with such a large volume of patients. The procedures performed include, cleanings, fillings, root canals, extractions and dentures are fitted based on a prearranged appointment. Extractions, often of multiple teeth, are the most common procedure performed at RAM in Wise. Most of these procedures are performed outside in tents but complex extractions are done inside
a truck set up for oral surgery (Virginia Dental Association, 2011). Volunteer dental professionals including oral surgeons, dental hygienists, dental laboratory technicians and other specialists provide all of oral care. Dental students from the Virginia Commonwealth University School of Dentistry also provide assistance and perform procedures under varying levels of supervision. University of Virginia medical volunteers, which include RNs, nursing and medical students, assist by checking vital signs, performing blood glucose level checks, and administering oral medications prior to procedures as well as assisting with any medical emergencies during procedures.

MOM in Virginia is doing remarkable work but some may argue that the temporary nature of this type of care and the fact that it relies completely on volunteers does not lend itself to being a permanent solution to the lack of dental access. The figure for how many patients MOM volunteers have treated considering RAM at Wise is a two and a half day event once a year is commendable. The services provided are necessary and make a big difference for those who are able to come and be seen, but what about the many that are not there but desperately need dental care? As Dr. David Smith, a medical ethicist noted, volunteer efforts by a few dentists are merely a Band-Aid for the bigger problem of access (2006). Smith commends dentists who provide charity work but argues that the profession as a whole needs to embrace a service model that in effect requires dentists to perform a certain amount of free care.

Responding to Smith, dentist Dr. Wendy Mouradian agrees that volunteer efforts are merely “Band-Aid solutions” but does not agree with the idea that more volunteerism, even if forced, is the answer to the access problem (2006). Mouradian argues that increasing volunteer efforts is inadequate to solve the greater dental access problem and actually not morally defensible. Mouradian notes that volunteer efforts are driven mainly by the practitioners’ availability and
location and lacks the continuity of care required to maintain good oral health. She warns against the dangers of relying on a model of volunteerism, as it can make it appear as if the problem is being addressed and gives people a chance to pat themselves on the back for doing the right thing a few days per year (p. 1177). Although Mouradian is critical of any focus on a provider-driven model of access as it deflects from the larger issue of health disparities, she does not posit a better “solution” other than stating that dental professionals need to bring their oral health expertise to a broad interdisciplinary effort to eliminate health disparities. It is hard to imagine that anybody would disagree with that idea but in the meantime people would not be treated without volunteer efforts done by groups such as MOM at RAM in Wise.

Although a “Band-Aid,” groups such as MOM are actually out in the field providing necessary care. As noted above MOM groups have begun in numerous states since its origins in Virginia. In 2008, the America’s Dentists Care Foundations (ADCF) was established to support the growing number of MOM organizations. As described in their 2009 information pamphlet on their website, ADCF recruits and provides logistical support for groups that want to establish new MOM projects and assists them in obtaining the necessary dental equipment. Their long-term objective is to have at least one MOM event for every 2 million people in each state where MOM has a presence. It is true that even with this lofty goal not everyone who needs care will receive it but this is a solution in practice and not just on paper.

What Further Actions Should Be Taken?

In an upcoming 2011 book by the Committee on Oral Health Access to Services of the Institute of Medicine and National Research Council, similar concerns are raised about volunteer efforts. Volunteer efforts “have temporarily mitigated some of the burden related to inadequate access to oral health care, but they have been insufficient in fully addressing existing challenges
and underlying problems” (p. 1-4). This Committee undertook the task to look at the state of dental access and came up with ten recommendations to address the problem. Their first recommendation is that oral health care be integrated into overall healthcare, rather than treating it as a separate realm of care. For populations that rarely visit a dentist, “nondental health care professionals may be in the best position to provide oral health education, screening, and prevention” (p. 6-3). For example, children are seen more often by pediatricians, nurses, nurse practitioners, and school nurses than by dentists; why not train these providers to be the frontline for education, screening and preventative measures, such as fluoride rinses (Institute of Medicine and National Research Council, p. 6-3). In order for this to occur nondental health care professionals will need to receive adequate training. The committee recommends that all health care graduates at a minimum be competent in the following categories: “recognize risk for oral disease through competent oral examinations, provide basic oral health information, integrate oral health information with diet and lifestyle counseling, and make and track referrals to oral health care professionals” and that accrediting bodies for healthcare education programs mandate that these requirements be met by the educational program (p. 6-4). This echoes the call made in the groundbreaking 2000 U.S. Surgeon General report, which exposed the disparities in access to dental care and also proposed solutions, including the need to improve health providers’ education about oral health care. Eleven years have passed since that report was written and little has changed. Now is the time to implement these suggestions and educate all healthcare professionals about oral care.

Nurses are in an ideal position to provide dental health education and screening in all the different settings in which they work but this is not presently occurring. Basic nursing education includes mouth care but as noted by Clemens and Kerr, nurses have not generally placed a high
priority on oral health (2008). This is likely due to the fact that nursing education does not presently provide adequate education about the oral health and hygiene. As noted by Jablonski, et al., oral care is often glossed over as something nice to do for a patient, rather than a necessity (2010). The recommendations made by Committee on Oral Health Access to Services, to include more education about oral care would have a positive impact on how nurses view the importance of good oral health for their patients. This type of education and exposure will help to form coalitions between dental and medical providers in addressing the greater dental access problem. Opportunities, such as the chance to volunteer to work with the MOM project at RAM in Wise, should be taken by nurses and nursing students to expose them to the dire need for preventative care and education. It is unacceptable that the solution is to wait till a person’s teeth are in such bad shape that they need to be pulled and nurses need to take on part of the responsibility to provide preventative education and screening.

Summary

A single, grand solution to the lack of dental access for people who live in Southwest Virginia has not yet been identified. Although perhaps not a feasible, long-term solution, free dental care clinics, such as those put on by MOM at RAM in Wise, are playing a crucial role in providing treatment to those already in need of care. These may be a “Band-Aid” but they are filling a part of the glaring gap in oral health care access. A longer-term solution is to bring in more partners to work with dental professionals to prevent the need for patients to come to a MOM project solely to have teeth extracted. Just as dental professionals are crucial in helping to identify medical illnesses such as hypertension and diabetes, nondental healthcare providers must begin to identify oral health problems and provide much needed education, screening and
preventive care. Working together, as occurs at RAM in Wise, dental and medical providers can fill an even larger part of the gap.
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