Community Assessment of the City of Canton

Andrew Barker, Neva Brenneman, Carla Duffie, Brigett Gillespie, Meghan Gilroy, Jerod Haddad, Melissa Murphy, Nicole Perretta, Angela Vasco, Chelsea Youngman

Kent State University at Stark

Canton is a medium-sized city with a population of 73,007 located in northeastern Ohio in Stark County. Upon assessment of this community, many strengths and weaknesses were noted. It is the home to the Pro Football Hall of Fame, and the McKinley monument, as well as a notable arts region. Canton boasts "big city living" with a Midwestern suburb feel. It has many parks totaling over 800 acres, and an elaborate plan to bring businesses and jobs into the city to improve the economy. However, the community does have some weaknesses. There are numerous bars which can lead to a high population of intoxicated individuals who tend to make poor decisions. There are also high crime rates, the highest in all of Stark County.

Canton also has a large population of residents living in poverty with poor health practices, poor living conditions and homelessness. Graduation rates are also very low in Canton when compared to county and state levels. After assessing this community, a nursing diagnosis was developed to address one of the major weaknesses in the city of Canton. The diagnosis is knowledge deficit related to the economic status of the city and decreased access to health services as evident by: 25.8% of Canton City residents are living in poverty, 82% of children attending Canton City Schools receive free or reduced lunches, graduation rates are 79.9% for Canton City Schools, unemployment rates of 9.1%, median income of $32,356, top three causes of death are heart disease, cancer and stroke, and there are minimal options for low-income families to obtain health care.

Disparities Within Canton

Canton is the State of Ohio's ninth largest city. Being an urban environment, there are many problems that Canton faces that would not be such a problem in smaller communities. One of the issues that Canton faces is the poverty level. When compared to the county as a whole, and to the state, Canton's poverty rate in 2010 was 25.8%, compared with 14.8% in Stark County as

a whole, and 15.1% for the state of Ohio (US Census, 2010). This relates to a median household income for the city of Canton at $29,522 while Stark County's median income is $44,363. The state median income is $45,467. It is easy to see how much of an income disparity there really is in the city of Canton. This disparity also makes it easier to understand why the residents of Canton face challenges that are not as apparent in some of the suburban areas of Stark County.

Adding to the poverty rate is the high unemployment rate that the residents of Canton are dealing with. Canton's unemployment rate stands at 9.1% which is higher than both Stark County, at 8.2%, and Ohio overall, at 9.0%. Jobs are hard to come by and this makes it more difficult for the residents to get out of a cycle of poverty.

To make matters worse, the income disparity that is present in Canton is coupled with the fact that there are low educational levels in the City of Canton when compared to Stark County and Ohio. Canton has a graduation rate of less than 80% while Stark County's graduation rate is over 87% (US Census, 2010). The state of Ohio graduation rate stands at 86.8%. In 2010 only 12.1% of Canton residents are college graduates. This rate is considerably lower than the 19.6% of Stark County residents that are college graduates and the 23.6% of Ohioans that are college graduates (US Census, 2010).

While Canton has many different schools for children to attend, the children who live in the city limits and who also live in poverty face many challenges. It is reported that 82.2% of the children who attend Canton City Schools are on free or reduced lunch (ccsdistrict.org, 2012). The breakfast and lunch that many of the children receive during the school day, may be the only meals that they eat any given day.

Poverty is a very big issue for the residents of Canton. This makes it harder for the people who live in the city to make decisions for health promotion when they have a hard time even

meeting basic needs of food and shelter. When this is the case, oral health and other activities that improve health can be put on the back burner.

Barriers and Resources Available

The barriers in the community related to healthcare include oral health. According to the Ohio Department of Health (2011) the most common reason children did not get the dental care they needed is because the family could not afford it or they did not have dental insurance. During a personal communication with Lynn Fritz, a dental hygienist for thirty-three years with Dr. Craig Linik DDS, stated that one of the reasons that people do not regularly attend the dentist and do not have very good dental care is the fact that oral care and management are too expensive (personal communication, April 11, 2012). Lack of accessibility to get dental care on a regular basis depends on where they live, the family's income, and whether or not they have dental insurance. Lynn also stated that approximately 35% of the patients seen in her office do not have dental insurance (L. Fritz, personal communication, April 11, 2012). Another barrier, as parents reported to The Ohio Department of Health (2011), is that either the wait for an appointment was too long or the hours were inconvenient limiting opportunity for the child's dentist visit.

There are resources and programs aimed at improving access to dental care for the community. These resources include community water fluoridation and school-based sealant programs. There are five Safety Net Dental clinics in Stark County for people who cannot afford to get dental care in private dental offices. There are two in Canton; The Canton Community Clinic and The Stark County Health Department (2011). They provide dental care for those covered by Medicaid and offer sliding-fee schedules or reduced fees. These clinics are stretched to capacity with waiting lists for appointments that can be weeks long. Lynn states that her

office, like many others, does offer free appointments for those in need, and often times there are charities or churches that will pay for these visits. She added that only 50% of the people show up for these appointments as they have no transportation to get to the office (L. Fritz, personal communication, April 11, 2012).

Accessibility and Utilization of Resources

The Ohio Department of Health (2011) reports that access to dental care was the single most common unmet health care need for children in Ohio, regardless of family income, disclosing that the current systems for getting dental care are inadequate. Many of the community residents may not be aware of the services that are in place and offered to them limiting accessibility. The Stark County Health Department (2011) began facilitating a Community health needs assessment in 2010 where the access to health coverage and care was voted in the top three most important health needs for Stark County. As they continue to keep accessibility a priority their dental clinic is for any person one year and older. The hours are Monday through Friday 8:30AM to 4:30PM with an appointment.

The Canton City Health Department (2011) is helping people receive health services by promoting strategies to improve access to healthcare services. The Health Departments provide up to date information on their websites (cantonhealth.org and starkhealth.org). They also communicate through the local newspaper, radio stations, television, and also provide brochures annually. The Canton Community Clinic (www.cantoncommunityclinic.org) is located in an area of the community that needs services. They are handicap accessible, there is a SARTA bus stop with a shelter, and they provide ample parking. The hours are Monday through Friday and an appointment is needed. For many who work through the week the hours may limit the

accessibility to these clinics. The countless citizens who utilize these services are satisfied and return for follow up appointments.

Review of Literature

Poverty and Health

After completing our community assessment tool, it was noted that the city of Canton has a lot of potential risk factors that can impede health of its population. The greatest risk factor detrimental to the communities overall health is that 25.8% of residents are living in poverty. Poverty plays a huge impact on the health of a community. Arias (2007) reported that people living in poverty face an increased risk of poor health and criminal activity, both of which can lead to joblessness. Her definition of poor health is defined as limited access to care as well as a greater exposure to environmental hazards and engagement in risky behavior (Arias, 2007). Economic research shows that poverty is associated with a number of adverse outcomes for individuals, such as poor health, crime, and reduced labor market participation, and has a negative impact on the economic growth rate (Nilsen, 2007). Canton's poverty rate of 25.8% is way above the average urban area poverty rate of 17% as indicated by the U.S. Government Accountability Office.

Poverty itself can be a cause of poor health or an effect of poor health. Whether it is a cause or an effect, lower-income individuals experience higher rates of chronic illness, disease, disabilities, and also die younger than those who have higher incomes (Nilsen, 2007). Some of these conditions include hypertension, high blood pressure, and elevated serum cholesterol, which can eventually lead to more serious medical complications. Heart disease and stroke are two of the top three causes of death in Canton. Living below the poverty line also makes the individual or family prioritize what they spend their income on. Depending on what they

consider necessities can lead to poorer health outcomes. The uses of alcohol, tobacco, and street drugs; as well as lower consumption of fiber, fresh fruits, and vegetables are some of the behaviors that have been associated with lower socioeconomic status (Nilsen, 2007). Nutrition is one of the cornerstones of preventive and curative medicine while under-nutrition during a child's development can have structural and metabolic effects on a child that can persist throughout life (Ortiz-Andrellucchi, Pena-Quintana, Saavedra-Santana, Albino-Benacar, Monkeberg-Barros, & Serra-Majem, 2009).

The last thing that is a factor for individuals living in poverty involves where they live. Individuals lining in poverty may have more negative health outcomes because they are more likely to live and work in areas that expose them to environmental hazards such as pollution or substandard housing. Some researchers have found that because poorer neighborhoods may be located closer to industrial areas or highways than more affluent neighborhoods, there tend to be higher levels of pollution in lower-income neighborhoods (Nilsen, 2007). Pollution poses many negative health effects on individuals, living in these high risk areas increases an individual's likely hood of developing medical problems related to pollution.

Importance of Oral Health

Oral health has a huge impact on the overall health of an individual, especially of children. Research has shown that even the United States Surgeon General has stated that "oral health is a mirror for general health and that the oral cavity is a portal for infectious organisms" (Jackson, Vann Jr., Kotch, Pahel, & Lee, 2011, p. 1900). The connection between oral health and overall health is simple. Your mouth is full of bacteria, with most of them being harmless. Normally the body's natural defenses and good oral health care, such as daily brushing and

flossing, can keep these bacteria under control. However, harmful bacteria can sometimes grow out of control and cause oral infections, such as tooth decay and gum disease.

Your oral health may affect, be affected by, or contribute to various diseases and conditions including: endocarditis; cardiovascular disease; premature birth and low birth weight; diabetes; HIV/AIDS; osteoporosis; and even possibly Alzheimer's disease (Mayo Clinic, 2012) What's even more startling is that according to national Institutes of Health estimates, 20% to 30% of children and adolescents in the United States have chronic health conditions with dental caries being the most common (Jackson et.al, 2011).

Not only do children and adolescents develop dental caries with poor oral health, dental caries can have a direct impact on how a child performs in school. It was concluded that children with poor oral and general health were 2.3 times more likely to perform poorly in school than those with both good oral and general health (Jackson et.al, 2011). This is why it is important to promote good oral health to children early in school. By becoming more proactive in promoting oral health, particularly in childhood, we can expect benefits across the life course as healthy environments and behaviors early in life decrease the risk of disease in later years (Litchfield, 2011).

Recommendations for Action

Poor oral health is a major concern for children in the United States, with dental caries ranking as the number one chronic childhood disease (Mattheus, 2010). This is a huge problem considering that oral health is directly related to overall health. According to Mattheus, "oral health not only involves the child's teeth, but is also directly associated with systemic health and quality of life (2010, p. 2123)." Additionally, data shows that dental caries in children are actually increasing, especially in children with low socioeconomic status (Mattheus, 2010). The

involvement of the community health nurse, and implementation of nursing interventions, is imperative in order to educate parents and children about the importance of oral health, and ultimately improve the oral health of children.

The first intervention is to set up oral health stations at health fairs. Short teaching sessions and demonstrations would be used to teach children proper brushing techniques. Oral health packets with toothbrushes, toothpaste, dental floss, and educational materials would be distributed to children. Information on accessing oral health services should be distributed to parents, and they should be made aware that there are free and low-cost options available within the community. Helping parents to locate dental services that are available to them within the community is shown to reduce a child's risk for developing dental caries (Webster, Ware, Man Wai, Post & Risko, 2011).

The second intervention is the use of oral health screenings in schools. These screenings would help to identify children who are at risk for poor oral health. Dental screenings conducted at school are ideal, because of the large numbers of at risk children that can be identified (Jackson, Jahnke, Kerber, Nyer, Siemens & Clark, 2007). Children who are determined to be at risk should receive information to take home to their parents. This information should include details about where they can obtain free or low-cost dental services for their children, such as those offered by the Canton Community Health Clinic and the Stark County Health Department.

The third intervention is to create an educational video that would be distributed to schools in order to teach children about oral health. The video would include the basics of oral health, and the importance of nutrition, fluoride, proper brushing, and regular dental checkups. The video should be developmentally appropriate for the children who will be viewing it. The

purpose of the video would be to provide education on oral health to large numbers of children, when it may not be possible to conduct live teaching sessions.

The final intervention involves partnering with pediatric health providers in the community, in order to distribute oral health packets to children who are found to be at risk for poor oral health. According to Kagihara, Niederhauser & Stark, "because infants and children frequently access health care during the first 6 years of life, primary care health providers are uniquely positioned to provide assessment, intervention, education, and referrals (2009, p. 9)." If a child is found to be at risk, they should be supplied with an oral health packet, and educated about low-cost dental services offered by the Canton Community Health Clinic and Stark County Health Department.

Role of the Community Health Nurse

The role of the community health nurse is crucial in each of these interventions. The community health nurse is responsible for implementing each intervention, as well as evaluating its effectiveness. According to Mattheus, "nurses, being a highly respected profession, have the opportunity to increase community awareness of oral health issues and facilitate changes in the community so as to support families and children better (2010, p. 2123)." At health fairs, the community health nurse would be responsible for setting up oral health stations, and conducting teaching sessions and demonstrations. Effective communication would be necessary with schools in order to organize and coordinate oral health screenings. The community health nurse would also be responsible for creating educational materials and activities for use in oral health packets. For each of these interventions, the involvement of nursing students should be considered. Students could assist with the interventions, while satisfying requirements for their nursing courses. The community health nurse plays a vital role in educating children and their parents about the importance of oral health, and thus improving the overall health of children in

the community. Children who have regular dental check-ups have a greater than 50% chance of having fewer cavities throughout the rest of their lives (L. Fritz, personal communication, April 11, 2012).

Public Health Policy

The American Dental Association is America's leading advocate for oral health. On their website, they offer a lot of information how to get access to oral health care and what all is being done now to eliminate barriers to getting oral health care and raising awareness on the importance of oral health care. The ADA has a pdf online on their policies and on page 65-74 it contains policies that are in place for children. The information included in this section are:

- School-Based Oral Health Programs (2010:557)
- Oral Health Assessment for School Children (2005:323)
- Non-Dental Providers Completing Educational Program on Oral Health (2004:301)
- Non-Dental Providers Notification of Preventive Dental Treatment for Infants and Young Children (2004:303) Child Identification Program Partnerships (2003:360)
- Statement on Early Childhood Caries (2000:454)
- Health and Welfare of Children (1989:562)
- National Children's Dental Health Month (1979:625)
- The American Dental Association Dental Health Program for Children (1966:179, 306; 1967:336; 2010:553)
- Dental Care for Children with Crippling Defects (1963:287)

The interventions that we provided but did not implement would not hinder any public health policies that are already in effect. Most policies are directed towards children and health programs that prevent or control dental problems in children, primarily caries or cavities. The

American Dental Association also recommends a national dental health program be instituted due to new potential for adequate funding, "on the basis of its unique competence in the field of dentistry and under its obligation to foster the improvement of personal and national health" (Current policies, 2012). Aultman Hospital has a WOW bus or wellness on wheels that goes to schools, churches, senior centers and offers free noninvasive health screenings. There have also been discussions about dental busses that go to schools and provide dental care to school age children. While there is no evidence that these busses exist in Canton Ohio, this would be an intervention that would strengthen the ADA's position on children's oral health and would not negatively affect current policies put in place. This type of resource would be considered an "exploratory program and would provide the professional, administrative, statistical and other data which are needed to guide the national program in its future development" (Current Policies, 2012).

Implementation of Recommendations

The intervention that was implemented was a teaching session in an inner-city school with a group of third graders, age 8-10 years. The teaching session aimed at involving the students' current classroom set-up, pods, to allow students to participate in cooperative learning. This set-up corresponds with ideas used by Vygotsky in his Sociocultural Theory. This theory suggested that cooperative learning encourages children to assist each other with the idea that "…less competent members of the team are likely to benefit from the instruction they receive from their more skillful peers, who also benefit by playing the role of teacher" (Shaffer & Kip, 2007, p. 282).

The implemented teaching session included a PowerPoint presentation that taught students about the layers of the tooth and showed them how a cavity forms by describing the

stages of decay. The presentation also included a video by Charlie Brown that teaches children how to properly brush and floss their teeth. The class was then broken up into small groups and stations were formed. Each station had a different activity; they were crossword puzzle, good vs. bad foods game/poster, picture coloring, proper brushing technique using a large demo set of teeth and toothbrush, and an oral health game matching key words with questions asked. The students were also given a take-home packet that contained a list of dentists in the area for parents to take their children, a tooth brushing chart with stickers that is used to remind the students to brush twice a day, and more word searches and pictures for the children to color and learn from. A tooth brushing kit was also handed out to the students following our presentation that included a toothbrush, toothpaste, and floss which was donated by a local dentist.

The measurable behavioral outcomes were measured on the student evaluation sheet that we handed out following the teaching session. Questions included the identification of healthy foods for good oral health and identification of four layers of the tooth. Two other behavioral outcomes were measured during the teaching session. The goal was to have at least fifty percent of students participating in the group stations and this outcome was met at 100%. Another goal was for 50% of students to demonstrate proper tooth brushing technique using the large teeth and brush, this goal was met at 100%.

Some non-measureable behavioral outcomes of the teaching session are the child's long-term tooth brushing habits. Another non-measurable outcome would include the parent's involvement related to reinforcing daily tooth brushing and providing a means for the child to be seen by a dentist. People may have a low values for dental care as opposed to other costs in life (L. Fritz, personal communication, April 11, 2012). With that being said, it is not a full-proof intervention, but with all of the information provided the choice is up to the individual.

Children are also at a higher risk for dental carries when their parent(s) have a low educational level and who consume foods or have diets that are high in sugars (Caple & Schub, 2011). Teaching the children about proper brushing techniques and healthy food choices has the potential to change the health of the community. Providing the children with the information to make healthy food choices is a step in changing their health but should also be reinforced by their parent(s). The group has come to the conclusion that this teaching session has the potential to change the health of the community, but in the end it is up to the children and their parent(s) to make the needed changes.

The teaching session did not change public health policy, but did follow recommendations from public health policy. For example, *Healthy People 2020* (2012) states that the objectives for oral health include: "Increase awareness of the importance of oral health to overall health and well-being, increase acceptance and adoption of effective preventive interventions, and reduce disparities in access to effective preventive and dental treatment services" (para. 4). Providing the children with packets to take home delivered information to the parent(s) about dental services within the community but also made an effort at reducing disparities. The teaching session also helped reduced disparities by showing the children proper brushing techniques in the event that they had not been previously shown, or needed reinforcement of these techniques.

Conclusion

This intervention should be continued in Clarendon Elementary School with the cooperation of the teachers and the SCRUBS organization. The oral hygiene presentation had low costs involved. The school has access to copy machines so the reproduction of handouts would be a minimal cost. The matching game, posters, handouts, and power point could be

saved in the storage area of the nursing lab so they could be reused annually. SCRUBS could work with local dentists to get toothbrushes and toothpaste donated for the intervention.

The intervention would be done at Clarendon Elementary school's annual health fair. The principal or teachers could contact SCRUBS through the SCRUBS email ksuscrubs@gmail.com. SCRUBS could then send members of the organization to attend the health fair and reproduce the intervention. The intervention will then be able to be carried out for years to come with little to no cost to implement.

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