

Healthy Teeth and Me

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Introduction of Project and Identified Problems

Dental hygiene is one of the single-most important health promotion factors in preventing dental caries in people of all ages. Establishing proper dental hygiene practices at an early age not only protects young teeth, but also enables the continuation of these healthy practices into adulthood. Accessibility and availability of resources within the community is a significant influence in healthy dental practices. There are several community resources available to the Greenfield Community in Botetourt County. There also are potential barriers and health issues that could impede proper dental hygiene performance.

As part of a national dental hygiene initiative, a lesson was designed for the first grade students at Greenfield Elementary School. “Healthy Teeth and Me,” the developed lesson plan, will be implemented during National Children’s Dental Health Month. The lesson will address the risk of dental caries among first-graders at Greenfield Elementary School related to improper brushing technique, informal educational interventions, economic status of the community, limited availability of fresh foods, and lack of fluoridated water. Dental hygiene is of importance to the community surrounding Greenfield Elementary because of the demographics, current health issues, and community resources available. The implementation of dental hygiene health promotion programs will aide in the prevention of dental caries in first grade students at Greenfield Elementary School.

Community Assessment

Greenfield Elementary School and its respective surroundings are nestled in Botetourt County, Virginia. It is a mostly small suburban town that has evident growth and expansion occurring noted by new residential and commercial construction. There are also small signs that

alert drivers when they have crossed into Daleville. Aside from the seclusion of some subdivisions that are clearly identified with signs introducing the neighborhoods, there are no clear natural or physical boundaries in the community. Minimal evidence exists that suggests boundaries could negatively impact the residents. When approaching Daleville, it can be noted that one side of the street is dominated by upper-scale neighborhoods, while the other side features single-wide trailers and outdated homes. This separation could signify the different socioeconomic classes within the county.

There is an obvious differentiation of property values. Some homes have gated entrances and are large one-story or two-story single-family homes, while others are apartments or small single-story homes that appear weathered, unkempt, and potentially unsafe. The strikingly different homes appear less than five miles apart in the community. As a person drives farther off the main road, Roanoke Road, he or she will note that the suburban scenery turns into more rural land. During this drive, one will note a train track that runs parallel with the road and a nearby cement factory. There is increasing farmland with farmhouses and livestock as one drives away from town.

The farmhouses located on the cattle and hay farms appear very maintained. Nearly all homes are single-family homes with attached or detached garages. The apartments on the outskirts of town appear less maintained than the apartments in Daleville, both of which are located approximately ten minutes from Greenfield Elementary School. The apartments in Daleville have a pool, fitness facility, and individual garages for each apartment. For the residential areas closer to the school, there is an equal mix of older, well-kept homes, which are mostly single-story brick homes and newer homes that are two-story and feature more vinyl siding and stone for construction. Most of the homes present as well-maintained with open green

spaces and decent-sized yards, with the exception of only a few. These open green spaces and predominantly large yards enable the children to have more room to play and remain active, with many of the properties incorporating an enclosed back yard to promote safety. Based on the number of suburban areas and their proximity to the businesses in town, it can be assumed that these homes have city water. Having treated city water enables the children to receive water enriched with fluoride. The American Academy of Pediatric Dentistry (AAPD) reports the most cost-effective and beneficial prevention method for dental caries is optimal fluoride exposure for every child (“Guideline,” 2013). The residential areas lead into the business zones; however, they are not intermixed. The clear separation of the business and residential areas creates a need for residents to travel to handle their shopping needs.

Travel from the residential area to the business zone must occur in private vehicles due to a lack of public transportation as noted by the absence of bus route signs, bus stops, and buses. Aside from private vehicles, there are school buses to transport the children of the community to the public schools. The roadways are maintained, with evidence of roadwork present on some back roads that are being re-paved. Residents in the community can drive on these roadways to easily reach major roads, such as Roanoke Road, which then leads to Highway 81. As the residents travel down Roanoke Road, opposite of Highway 81, they will approach an area with bike trails, walking trails, and sidewalks near the Botetourt Center of Greenfield. Residents will not find sidewalks in other areas surrounding Greenfield Elementary School. The absence of sidewalks creates a safety issue for the residents of the community, because should they choose to exercise by walking or running, they face the problem of roadway traffic. Another safety barrier present is that some of the secondary roads do not have lines on them, which could increase the occurrence of automobile accidents.

If an accident, or some other news-breaking event were to occur in the area or nearby areas, residents would be able to receive the news by way of Internet, cable, and newspaper. The major source of information for this community appears to be television. Two different Internet companies advertise for providing service to the area. There are multiple cable companies, including Dish, DirectTV, and Comcast. The most common publication in the community is the *Roanoke Times*, which nearly every resident has a paper box to receive. The *Roanoke Times* is geared specifically towards the people who live in Roanoke and the neighboring counties. In the event of an emergency alert, or increased need for health information or health education, information should be presented at schools or doctor's offices in the area. The community could also utilize the newspaper. Emergency alerts should come across the bottom of the television screen, be featured as alerts on radio channels, as well as be part of a call chain from the county.

Despite the common belief that Botetourt County is strictly rural, there are many food services and businesses in the area. Some of the food services that are less than fifteen minutes from the Greenfield Elementary school district include: Kroger, Three Little Pigs BBQ, Papa John's Pizza, Subway, Little Caesar's Pizza, Bojangles, Wendy's, Mill Mountain Coffee, and Asian Cuisine. Most of the food sources are centralized in the shopping center area with close proximity to Highway 81, while Subway and Little Caesar's Pizza are found five minutes further down the road. Fast food dominates this area, with Three Little Pigs BBQ being one of very few family-oriented food facilities. The Asian Cuisine buffet is the only available ethnic food service. While fast food is cheaper, it is not the healthiest choice for the residents. Kroger is more expensive, but offers a variety of fresh fruits, vegetables, fish, poultry, and beef that can be utilized to produce healthy meals. Both food options are just as easily accessed, which makes it the choice of the residents, whether a financial choice or personal choice, as to which they

choose to consume. In addition to the food services offered within the community, there are several commercial buildings housing local businesses. These buildings house churches, dentist offices, orthodontics, insurance companies, real estate offices, VDOT services, and post offices. There is also a memory care center, a health and rehab center, and a Velocity Care Center in the heart of Botetourt right off the interstate.

Aside from the previously mentioned Roanoke Cement Company, there is a railroad industry and a construction company that could present possible health threats to the workers. However, these risks should not overshadow the growth and job opportunities that they bring to the community. None of these facilities present problems with air or water pollution. Several new businesses are joining the community. Most of the job opportunities in this area are more than beneficial to the residents because they enable growth and employment opportunities.

With potential injuries from career environments present, it is worth noting that there are several healthcare clinics, public services, and social services available in the community. In addition to the Velocity Care Clinic, the health and rehab center, and the memory care center, there is also a Carilion Children's Clinic in Daleville, a CVS pharmacy, a Lewis Gale facility that offers OBGYN, Pediatric, Cardiology, and family medicine services, and a Carilion family medicine facility that also offers OBGYN services. There are also two mental health offices available in Daleville for psychiatric services. To receive access to these services, residents of the Greenfield school district have less than a twenty-minute drive to most of these facilities. Most residents live less than ten minutes from a healthcare or dental facility. These services are located in areas that are very accessible to residents with adequate parking, signs, and contact information on the doors. For emergency services, there is a fire department and an emergency medical squad that serve the area.

The residents of this community appear to be very physically active with several recreational activities available. Within a ten-mile radius there is a dog park, two golf courses, several gyms, a community park, and two sports complexes. One of the complexes is at the high school, while the other, the Greenfield Sports Complex, is located in Daleville. The Greenfield Sports Complex offers four baseball/softball fields, two soccer fields, one football field, and a park. There was no obvious evidence of acute or chronic diseases noted during the Windshield Survey, as most of the people encountered appeared relatively healthy. There were no apparent risk factors threatening the health and safety of residents other than the roads without lines, some litter in the ditch on the side of the road in town, and the factories and companies previously mentioned.

Botetourt County's community resources all contribute to the overall health and wellbeing of the community being examined. When examining them all from a big-picture approach, it is apparent that health and activity is important to this growing community. There is nothing physically impeding the residents from accessing health care from what was observed during the Windshield Survey. Some possible impediments could include lack of transportation, lack of healthcare coverage, or lack of financial means to assist with transportation and healthcare costs. This community as a whole appears to be healthy with adequate resources and services. It is acknowledged that all communities carry some form of at-risk population and this would become more transparent with further submersion into the culture and lifestyle of the area.

Demographics of Population

According to Suburban Stats, 33,148 people currently inhabit Botetourt County (2016). The 2015 census conferred that 7,666 children over the age of three were enrolled in school in Botetourt County, compared to the state enrollment of 2,161,031 ("Botetourt," 2015)

(“Virginia,” 2015). A census conducted in 2013 deemed 7,100 children under the age of 18 were living in poverty in Botetourt County (“Children,” 2013). 8.6% of children in Botetourt are living in households that receive supplemental security income, cash public assistance income, or food stamp/SNAP benefits (“Children,” 2013). The national level in 2012 was 3.3 million or 2.9% of households receiving public assistance, which increased from 2.7 million in 2000 (“Census,” 2014). Five states, Virginia included, actually had a decline in households receiving public assistance from 2011 to 2012 (“Census,” 2014). It is worth noting, however, that there has been a significant increase in the level of poverty on the local, state, and national level since the 2000 census (“Census,” 2014). Living in poverty presents potential barriers for the children in the community. Some of the potential barriers resulting from poverty include: limited access to healthcare, limited access to dentists, inability to purchase healthy food, limited methods of transportation, and limited funds for hygiene products, medications, and clothing. Of the 33,148 people in Botetourt County, 1,042 are aged five to nine years old (“Population,” 2016). This is a vulnerable population, as many healthcare habits and dental hygiene practices are often formed during these years. The families’ socioeconomic status may also influence their attentiveness at school, as some may be distracted by hunger, tiredness, or worry. Knowing this population and recognizing that an increasing poverty level is trending statewide can help keep teachers and health educators informed so that they are able to overcome the presented barriers.

Health Issue Statistics, Consequences, and Evidence-Based Recommendations

Oral hygiene plays a big part in children’s health and in the prevention of disease. Over the years there have been multiple documentations of inadequate access to oral care in children, especially those belonging to low-income families. Teaching of dental care in this age group is extremely important. Kyle and Carman in *Essentials of Pediatric Nursing*, report school-aged

children need to brush their teeth two to three times a day for two to three minutes with a pea sized amount of fluoridated toothpaste. Toothbrushes must be replaced every three to four months and flossing should be done daily. Having a fresh toothbrush and routine flossing can help minimize the occurrence of plaque or tooth decay. Children can experience pain if they have plaque or tooth decay present. Young children are often unable to communicate that they are experiencing oral pain, so it may be hard for parents or teachers to notice. It is important for parents to monitor the child while they are brushing as well as watch for any abnormal signs the child may display. Children should see the dentist every six months for routine check ups and cleanings to help with the prevention of dental problems (Kyle & Carman, 2017). Encouraging positive dental hygiene practices can help prevent dental caries from forming, while receiving routine dental cleanings can serve to quickly identify any potential or existing dental concerns.

One of the most common chronic conditions in children is dental caries, also known as tooth decay. Tooth decay is damage to a tooth that occurs when bacteria in one's mouth begins to eat away at a tooth ("Health," 2011). Early tooth decay can cause infections and pain. Tooth decay can even lead to further issues such as difficulty speaking, learning, eating, and even lowered self-esteem (Holt & Barzel, 2013). Recent studies have shown that 51% of children between the ages six to eleven have dental caries in primary teeth, 21% percent have dental caries in permanent teeth, and 23% percent of children two to eleven years old have untreated dental caries (Kyle & Carman, 2017, p.168). Out of all children between the ages five to nineteen suffering from untreated tooth decay, the percentage of children is twice as high for those coming from low-income families (Holt & Barzel, 2013). Knowing the population that is most likely to have untreated tooth decay can help steer the community education to target children of lower socio-economic families.

Poor oral health can lead to poor school performance and social relationships, as well as decreased appetite, and increased inattention and distractibility, which may negatively impact schoolwork. On average children and adolescents with oral health problems miss one more day per year than those without (Holt & Barzel, 2013). Elementary and high school students from low income families who cannot access oral care when needed are three times as likely to miss school because of oral health problems (Holt & Barzel, 2013). Recognizing that poor dental health can impact a child's learning experience only further promotes the necessity of dental health education in the school system.

One way to help with these issues is the use of a head start program in schools. Head start helps children from low-income families prepare for school. Head start programs include, health, nutrition, oral health, and social services, as well as education and cognitive developmental services. Something that has been shown to be very beneficial for children at high risk of oral disease is school-based learning programs with oral health professionals, as well as other health professionals in the community. These programs help provide access to needed education, prevention, and treatment opportunities (Holt & Barzel, 2013).

Other ways to help with tooth decay include a fluoride varnish that can be painted on the teeth during visits with the dentist. Fluoride varnish can prevent about one-third of decay in primary teeth. Children living in communities with fluoridated water have fewer incidences with decaying teeth compared to children living in areas with untreated water. Another way to help prevent dental caries is having dental sealants applied to the chewing surfaces of the back teeth. These sealants have been shown to reduce decay in the permanent teeth by 81% and are effective for up to four years after they are applied ("Health," 2011). Researching other community resources available can also further promote healthy dental habits.

Community Resources

In order for the first-grade class of Greenfield Elementary to grasp the concept of proper dental hygiene practices, it is important to evaluate the children's level of understanding and provide age-appropriate education. In first grade, children are beginning their growth and development within the school-age stage. During the school age years, all twenty deciduous teeth are lost and replaced by twenty-eight of thirty-two permanent teeth (Kyle & Carman, 2017). It is essential to have sources in which children and their parents can attain this information early within the developmental process. Several community resources are available to children and their parents about dental hygiene. Families often begin to seek and obtain knowledge about health from their children's school. The school nurse plays a major role in teaching the children about dental hygiene. According to the American Academy Pediatrics, school nurses provide surveillance, chronic disease management, emergency preparedness, behavioral assessment, ongoing health education and extensive case management, and other duties ("Aap," 2016). The services that school nurses provide also serve as a major source of healthcare access for lower income families that cannot afford to go directly to the dentist or primary care physician. The school nurse can address the social determinants of the student, helping them receive the services that they need to prevent absenteeism while keeping the student as healthy as possible ("Aap," 2016).

There are currently four local family dentist practices and one orthodontic office serving Botetourt County. Lack of availability is not a current barrier for the children of the community. Each of these offices provides thorough information on their websites about different aspects of dental hygiene. The websites also provide the ability to schedule appointments or contact the offices for information. Dentist offices can be expensive, which is why many people do not

always seek their services. Therefore, families of lower income may not go to the dentist office as frequently as they should. Dental insurance is accepted at these offices. If insurance does not cover all expenses, patients will have to pay out of pocket for the services provided.

Family healthcare facilities serve as another asset to the community. Physicians are a great source of information. More specifically, they provide information related to proper hygiene and diet during each stage of development. Since children start going to their primary care physicians as newborns, parents can receive proper education on ways to prevent poor oral health at an early age. When children go to the doctor for check-ups or well child visits, the doctor will assess for information pertaining to dental hygiene. Doctors can also be the first to identify an issue related to the child's oral structure or mucosa that could be affecting the child's dental hygiene. These issues can include signs of vitamin deficiencies, congenital conditions, systemic conditions or child abuse ("A health," 2010). The doctors can also refer the child to a specialist if needed. Primary care offices have literature available to the public about dental hygiene along with healthy diets for children. There are four Carilion pediatric practices located within the Greenfield Elementary school district. There is adequate access to primary care physicians in Botetourt County. Recognizing that these resources are not easily accessible to all within the community creates a need for additional services.

Community resources for people of low socioeconomic status include the health department and free clinics. The health department is where the Women, Infant and Children Nutrition Program (WIC) can be accessed. Nutrition education, breastfeeding promotion and support, supplemental nutritious foods, counseling at WIC clinics and screenings and referrals to other health, welfare and social services can be accessed through the WIC program. Medicaid is also available for lower income families and offers many benefits for children needing dental

services. The Early and Periodic Screening, Diagnostic and Treatment benefit within Medicaid is what provides the services for children under twenty-one (“Dental,” 2017). These services include relief of pain and infections, restoration of teeth, and maintenance of dental health (“Dental,” 2017). Although these services are not available to children over the age of five, receiving these services at any early age could provide a foundation for healthy dental practices.

In addition to the health department, free clinics within Botetourt County can also provide a foundation for healthy practices. Free clinics within the area include the Christian’s Free Clinic and Bradley Free Clinic. Through the Christian’s Free Clinic, dental services are offered to Botetourt county residents. The Bradley Free Clinic offers free emergency extractions and restorative care. These are invaluable resources available to eligible patients without health insurance or government provided healthcare.

The abundant community resources available in Botetourt County make receiving dental care accessible to a wide variety of people within the area. Health professionals within these various locations strive to educate the public on preventative oral health habits that can keep children free from oral diseases. It is essential that the public know about these community resources to enable everyone to receive oral health care. The resources allocated to these populations further promote primary, secondary, and tertiary preventive measures.

Greenfield Elementary School Project Goal and Objectives

Goal: To increase the knowledge of dental hygiene among first-grade students at Greenfield Elementary School in Botetourt County.

Objectives:

1. By the end of the lesson, all students will be able to distinguish between four good and bad dental hygiene habits.

2. By the end of the lesson, all students will be able to identify two good and two bad food choices to promote dental health.

Activity Planned For Greenfield Elementary School

A group of eight student nurse representatives from Radford University School of Nursing will be visiting Greenfield Elementary School to provide a presentation on dental hygiene to three first grade classes. According to the American Nurse's Association and the National Association of School Nurses, the school nurse "provides anticipatory guidance to individuals, families, groups, and communities to promote health and prevent or reduce the risk of health problems" ("American," 2011, p. 45). The student nurse representatives will assume this role by participating in a community outreach in collaboration with the school nurse of Greenfield Elementary School. According to an article published by the *Journal of School Nurses*, "collaboration between school districts and universities has potential to increase the level of health services available in schools while providing quality public health clinical nursing placements for universities" (Kreulen, Bednarz, Wehrwein, & Davis, 2008, p. 360).

In an article from the *National Association of School Nursing Journal*, Buerlein 2010, the director of the Children's Dental Health Project, states, "school nurses are on the frontlines of children's health care and have likely seen firsthand many of the consequences of poor oral health" (p. 27). It is important for all healthcare professionals to be aware of the resource that the school provides to the children in the community. Buerlein goes on to caution unless school nurses "provide information on oral health and ways to prevent dental caries and encourage referrals to dental care, many families not prioritizing oral health may remain unaware of its importance and of their role in prevention and disease management at home" (Buerlein, 2010, p. 28). This presentation has been designed to provide developmentally appropriate instruction to

the first grade classes and to provide supplemental information to improve dental hygiene knowledge at home.

The educational points to be presented include the importance of dental hygiene, correct technique for teeth brushing and flossing, and health dietary choices for optimal oral health. The AAPD warns that there is an increased risk of dental caries when the child frequently consumes sugar-containing snacks or drinks between meals (“Guideline,” 2013). The presentation will provide specific education to the children and take-home information for parents regarding decreasing sugar consumption.

According to clinical psychologist Jean Piaget, young children in school develop concrete operational thought. In this way, they absorb material best through manipulation of objects but they lack the ability to think abstractly (Piaget, 1969). The activities of the presentation were developed with this theory in mind. Each activity provides an avenue for learning through either hands-on manipulation or visual observation. These activities are each explained in further detail below. Upon conclusion, the children will be provided with a collection of educational handouts to take home and a letter to parents explaining the purpose of the visit while also reviewing major educational points.

This lesson was designed based on the suggestion made by Marrs, Trumbley, and Malik stating that educational programs are most beneficial after a needs assessment has been performed on the surrounding area (Marrs, Trumbley, & Malik, 2011). The planned presentation will begin with an assessment of the children’s current knowledge base regarding oral care. The group will then read an entertaining and educational short story aloud, followed by small group discussions of the important points presented. A student nurse will then demonstrate proper technique of tooth brushing with a large toothbrush prop on a large poster board tooth, which is

bright, white, and shiny. These props should be large enough to be viewed clearly by all students. This activity should be supplemented by input from the children. For example, the presenting student nurse may ask the children to raise their hands if they remember the best way brush their teeth. They could also have a student come to the front of the class to demonstrate. The student nurses will then present another large poster board tooth that appears yellowed with decay. The student nurse will ask the children to recognize the differences between the two teeth and if the children have any ideas as to why this tooth appears different from the other. In a large group of children, only children that are raising their hands and called upon should answer questions. At this time, the student nurses will present a collection of healthy and unhealthy props, including: apples, soda, brushing after meals, and candy. The children should be asked to raise their hands for a chance to come to the front of the room and attach that food or behavior to the healthy or unhealthy tooth that it matches. The student nurses will be able to evaluate the effectiveness of the teaching by observing the children's responses.

The group of student nurses have chosen the short story, *Have You Ever Seen A Moose Brush His Teeth*, written by Jamie McClaine and illustrated by April Goodman Willy. The story follows a young moose on his mission to attain pearly whites (McClaine, 2003). Through descriptive language of the moose's silly antics, the author describes the basic technique of brushing one's teeth and other important dental hygiene behaviors, such as flossing and rinsing. An article from the *Pediatric Nursing Journal* suggested that the most successful health promotion educational programs focus on stimulating healthy tooth brushing habits (Marrs, Trumbley, & Malik, 2011, p. 13). The authors of this manuscript have selected to make this belief of the primary goals of the education. Visual depictions also help children of that age better understand information being presented to them, as they are concrete learners (Kyle &

Carman, 2017). A member of the presenting team will read the book to the children, with special attention paid to the sections explaining brushing technique and allotted time to allow the children to examine the illustrations.

The recommended grade level for the selected book is for children in preschool and older. The book will be read to the class and then donated to the school library for the students and teachers to access in the future. As one member of the student nurse team reads the book, the other seven members will be seated throughout the group of students. This will allow for a short small group discussion after the book has been read. During this discussion, the student nurses will assess the children's understanding of the book and the dental hygiene practices presented therein before moving on to the whole group activity.

The interactive activity of determining good and bad dental hygiene behaviors should be handled with careful attention to the children's developmental level. At the age of six, the children will be eager to engage in tasks to prove their abilities and gain recognition. It is important for all of those who interact with children of this age to "build on the child's successful experiences to promote mastery, success, and self-esteem" (Kyle & Carman, 2017, p. 155). The authors of the text, *Essentials of Pediatric Nursing*, go on to caution that if expectations are set too high, the child will inevitably fail and the result will be development of feelings such as inferiority and incompetence (Kyle & Carman, 2017). Expectations for this activity will be appropriate for the children's developmental level to build positive self-esteem and negate any potential for feelings of failure. Having realistic expectations that are age appropriate can also facilitate learning for the child because he or she will feel accomplished with praise and encouragement.

Following this model of thought, the authors of this manuscript recommend that the student nurse presenters make it a priority to respond positively and constructively to any incorrect responses by the children. For example, if a student were to place a 'bad behavior', such as drinking soda, on the 'good tooth' then the presenter should respond by saying 'Thank you for answering [student's name], that was a really good try! Actually, that's something that could be bad for teeth so it goes over here instead. So you learned something new and now you are so much smarter!' When the response is positive and encouraging, the child will feel celebrated for their participation rather than focused on what they did wrong.

One possible barrier to achieving the goals set forth would be the short attention span of a six to seven year old child. The student nurses plan to provide incentives for answering questions, such as sugar-free suckers and tooth-shaped erasers. The student nurses plan for the interactive activity to hold the attention of the first-grader students. Additional barriers to the possible success of the program do exist. The school has allotted the student nurses a total of thirty minutes to provide the dental hygiene presentations to a group of sixty-three first graders. This limited time frame poses a concern, as it will diminish the amount of interaction and participation that can occur for each child. Having sixty-three young children in one setting inhibits the extent of individualized learning that can be provided and evaluated. The student nurse team is comprised of eight members. It has been determined that roles will be assigned to these team members to help address these barriers. One member of the team will read the short story out loud, while the other seven members disperse themselves throughout the crowd of students to establish a presence. This presence will allow for more individualized communication during open discussion with the students and provide a more direct means of addressing distraction or side conversations among the children. Additionally, due to the number of children

and the size of the space, the student nurses will communicate with the teachers present to determine if any children have visual or hearing impairments, so that these children might be seated at the front of the room. Per the availability of an adequately sized space, the students will be seated on the floor for the presentation. Therefore, written work will not be provided for the students to complete during the presentation. The student nurses plan to compensate by providing educational, age-appropriate coloring sheets to the teachers for the students to complete at a later date or at home.

Evaluation will take place at intervals throughout the presentation. The large group of young children poses difficulty to assess as a whole, but the student nurses seated throughout the room will each interact with the children in their immediate area. Following the book reading, small group discussions will take place wherein the nursing students evaluate the children's understanding of the content. The last activity, where the children determine which behaviors are healthy tooth habits and which are not, will provide additional information for the amount of information that has been effectively conveyed and retained.

Conclusion

Dental hygiene is a longstanding need in the United States. Several barriers can impede people from receiving proper dental care. Some of these barriers include physical, environmental, and socioeconomic barriers, availability of resources, and education. Though considered by most to be a rural community, Botetourt County has the necessary resources to maximize dental health maintenance in the community. The Radford Nursing group of eight students plans to help meet this school goal by teaching dental hygiene practices to the first graders at Greenfield Elementary School to further aid in the prevention of dental caries. Dental

hygiene may not be as exciting as recess, but with proper implementation and execution, the activity will resonate a message that children of this vulnerable age will benefit from greatly.

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