PROVIDING ORAL HEALTH EDUCATION TO UNDERSERVED POPULATIONS IN COMMUNITY CENTERS

by

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ABSTRACT

Almost more than a decade ago, the Surgeon General of the United States released a report on oral health disparities existing in the United States' underserved populations. Low-income populations face high rates of untreated dental diseases due to low access to dental treatment. The barriers underserved communities experience are poor distribution of dentists, lack of participating dentists in government insurance, and transportation problems. Different age groups deal with dental diseases that progress over time leading to poor oral health and quality of life. The most common oral diseases that manifest in underserved populations are dental caries and periodontal diseases. Untreated oral diseases are often seen in low-income communities and are preventable through public health prevention programs and dental safety nets.

The literature review examines the barriers to accessing oral health care in the United States and preventive community oral health based services, such as dental treatment and education distributed in underserved communities. Along with the literature review, a project of an oral health needs assessment was done for three community centers around the Pittsburgh, PA area. The needs assessment was administered to find what community center managers need for their clients in regard to oral health. The interviews provided information about what the staff were delivering to their clients in regards to educational material. After analyzing the interviews,

all three educational curriculums were in dire need of an update, both in the content and the format. The materials will allow their personnel to effectively promote prevention of oral health diseases amongst the underserved communities.

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PREFACE

This paper comes out of work I did with Bridging The Gaps Pittsburgh, PA. Bridging the Gaps Pittsburgh is a summer internship where students from different graduate and professional schools come together and make a difference in their communities. The program involved community agencies in the Greater Pittsburgh area, and mentors guide the interns from different agencies, who are given work during the summer program. Along with the tasks, each intern team develops a program to help contribute to the community they are working with in the agency. I was lucky enough to be a part of the organization through my advisor, with the permission of the director of Bridging The Gaps Pittsburgh.

In my first didactic and reflection meeting I made it clear that I am always going to use my problems as a catalyst to keep fighting for my community, and to think about where I want to be in life in order to help others in need. My main goal is to keep the Pittsburgh community up to par with its dental hygiene and oral health education, because it is vital for every individual to take care of their teeth, and have a better outlook on their overall health. Also, I want to make difference in how oral health education and information are disseminated and utilized by social service agencies for the underserved communities.

Each Wednesday, the group of interns and I had reflective sessions, in which we shared something about our community agency, and we had lessons on concepts of community health and inequalities in underserved communities. Each lesson helped me understand what was happening to the underserved communities in Pittsburgh, which made me want to create something that will help people to be serious about their dental care at home and prevent dental diseases.

For me, the greatest parts about the Bridging the Gaps meetings were the presenters; they inspired me to think of new ways to communicate and educate the staff and eventually the clients for each of the community agencies I would work with in the summer. Two lessons that helped lead my way through my interviews and the development of my product for each site came from a dentist at UPMC Children's Hospital and a film artist from the city of Pittsburgh, Pennsylvania. The dentist, Dr. Brian Martin DMD, delivered a memorable presentation. Dr. Martin helped me to understand the dental care issues that families in underserved areas go through on a daily basis and how their lack of oral hygiene knowledge is harmful to their own health. An alarming example from the presentation was about a mother who put a Red Bull energy drink into her toddler's bottle and did not know the negative side effects it would have on the child's teeth or overall health. Such stories served as precautionary for me to make sure I asked the right questions at the agencies.

Chris Ivey's video presentation was also extremely helpful because it shed some light on the local East Liberty community and how the underserved populace there was dealing with changes in the region due to the influx of new businesses in the area. The video taught me that communities do tend to stick together and help each other through rough times after dramatic changes, which is a refreshing thought. Furthermore, the video was inspiring, because it showed

how much a single person is able to do for people who have a very little voice in their own community. After his presentation, I wanted to make sure that the product for my study and the agencies was something powerful for staff to share with their clients. Both presentations also showed me that sometimes people just need the proper guidance to get their lives back on track, regardless of their age and their problem.

1.0 INTRODUCTION

Almost more than a decade ago, the Surgeon General publicized a report on oral health. The report discussed the disparities of oral health and limited access to dental care services for underserved populations (*Oral Health in America: A Report of the Surgeon General- Executive Summary*, 2000). A limited and uneven access to oral health care contributes to both poor oral health and disparities in oral health for underserved individuals (Institute of Medicine, 2011).

The literature review in chapter two focuses on the social determinants of access to dental. The barrier to accessing dental care treatment is an indicator of poor oral health status. A substantial portion of the US population self identifies a need for dental treatment, but does not seek care because of the high cost. Also, those who are disadvantaged by income, include those whose age, health, behavioral, social, or geographical conditions makes them vulnerable and limit their access to, or acceptance by 92% of all US dentists who are in private practice (Edelstein, 2010). Another barrier is misdistribution of dentists who are practicing in areas that are economically disadvantaged. However, even in areas with robust economy, the participation of dentists in medical assistance programs, such as Medicaid, is typically low. The dental insurance system fails to provide preventive and primary oral health care services for nearly one-third of Americans (Garcia, Inge, Niessen, & DePaola, 2010).

The most common of oral diseases in low-income communities are dental caries, and periodontal diseases. In the literature review, dental caries is seen as one of the most prevalent

oral diseases in poor children. On the other hand, periodontal diseases such as gingivitis and periodontitis are seen in adults and elderly adults. Both oral diseases can be easily preventable through oral hygiene regimens. Untreated oral diseases eventually lead to tooth loss, which is an indication of poor oral health, and quality of life changes from adjusting nutrition, speaking, and social being. Also, poor oral health effects general health causing chronic diseases to worsen over time (*Oral Health in America: A Report of the Surgeon General- Executive Summary*, 2000).

There is a need for underserved communities to get treatment for and education about their dental health. For low-income individuals, community based oral health programs help to structure families and children to attain dental treatment through different dental safety nets. Many underserved communities provide programs and services for dental treatment through social programs (Edelstein, 2010). Prevention and intervention programs are helpful for low-income communities to gain dental treatment and preventive oral health education. Programs with education and treatment often decrease the prevalence of oral disease over time, due to a change in behavior. However, for individuals in low-income communities to fully understand the importance of oral health during a course of preventive services, dental treatment and education have to be available at the same time (Watt, 2005). Communities may have resources to link underserved populations with dental treatment and oral hygiene information to help reduce and prevent oral diseases.

Chapter Three, called the "The Project," introduces the development of an oral health needs assessment of three community centers in the Pittsburgh, PA area. The community centers that were included are McKeesport YMCA, Early Head Start Council of Three Rivers American Indian Center, and Community Human Services. In the project, three managers were interviewed

about what was needed for their community center staff and clients in regards of oral health education. After reviewing the interview responses, the underlying problem for all three community centers was a need for updating oral health information for both staff members and their clients. The evidence from the interviews helped to developed three oral health booklets for different age groups to help update education material for the community centers' staff members to distribute and promote oral health information to their clients.

2.0 BACKGROUND

The social determinants of health are complex, integrated, and overlapping social structures and economic systems including social environment, physical environment, health services, and structural and societal factors. Social determinants of health are shaped by the distribution of money, power, and resources throughout local communities, nations, and the world (CSDH, 2008). Watt (2005) stresses the importance of focusing on the social determinants of disease, injury, and disability, and of adopting a complementary range of different interventions to promote effective oral health. Although overall improvements in oral health have occurred in many developed countries over the last 30 years, oral health disparities continue to emerge as major public health challenges arise due to lower income and socially disadvantaged groups experiencing disproportionately high levels of oral disease (Watt, 2005).

Poor oral health literacy of individuals contributes to poor access to oral health care because the population may not understand the importance of oral health care or their options for accessing such care (Institute of Medicine, 2011). Once individuals acquire the relevant knowledge and skills, they may then alter their behavior to maintain good oral health. People tend to behave in association with the social, economic and environmental conditions in which they are living. Although behaviors and lifestyles undoubtedly have some influence on health, it is essential to understand the broader context that determines patterns of behavior. Effective

public health approaches, those from various perspectives, are therefore required to prevent oral diseases and promote oral health across the population (Watt, 2005).

Individual behaviors such as oral hygiene practices, dietary patterns, and preventative dental care are largely influenced by family, social, and community factors, as well as political and economic ones (Watt, 2005). Social and environmental factors do in fact play a large role in influencing health behaviors and exposure to modifiable risk factors (Woolf, Dekker, Byrne, & Miller, 2011). The larger socioeconomic model of health influence and theories of behavioral changes acknowledge that personal choices are constrained in multiple ways by contextual cues, opportunities, and limitations, which are imposed at a higher level by the environment in which people live, work, study, and play (Woolf et al., 2011). These conditions are in turn the result of broader social values and public policies. Social and material environments can place major impediments in the path of people attempting to lead healthier lives (Woolf et al., 2011).

Safety nets for low-income communities exist, including community health centers with dental care capacity, hospitals with dental clinics, and dental hygiene school clinics, but those safety nets reach fewer than eight million of the 82 million Americans who are currently underserved in oral health (Gehshan, 2008).

Due to the many issues that currently exist in the American healthcare system, access to proper dental care is often overlooked. Obtaining appropriate dental care itself hits several road-blocks, chief amongst which is the low ratio of dentists distributed in the US in relation to the general population (Mertz & O'Neil, 2002). The dentist workforce is smaller than the physician workforce and is growing more slowly than the underserved population. Moreover, policymakers are just beginning to pay attention to the fact that in 2014, the number of retiring dentists will exceed the number of dental students graduating and entering practice (Gehshan, 2008). Even

now, all states face shortages in dental specialties and have too few professionals practicing in rural areas. The Bureau of Health Professions says that 6,701 to 9,138 dental providers are needed to serve 3,724 designated shortage areas in which more than 30 million underserved people live (Gehshan, 2008).

Another access problem is rooted in economics; dental care continues to be expensive, which affects underserved populations even more than others. A combination of reasons suggests that societies with prevalent inequality have worse health simply because they contain more people living in poverty; therefore, the effect of income disparity on health is not due to health inequality itself, but is a result of how individual incomes affect the household's ability to utilize healthcare facilities (Bernabe & Marcenes, 2011). Almost one in three health center patients reported that they were unable to get needed dental care in the past year, primarily because of the affordability and lack of insurance coverage (Marsh, 2003). The growing need for dental care will fall under the traditional system of private practice, fee-for-service dentistry (Marsh, 2003).

Socioeconomic status tends to be the most important indicator for use of services and health outcomes, regardless of race and gender. The likelihood of visiting a dentist decreases with decreasing income, and people who live below the federal poverty level are less than half as likely to have visited a dentist in the past year as those who make over 400% of the federal poverty level (Institute of Medicine, 2011). People with dental insurance have a higher likelihood of visiting dentists for preventative treatments than those without coverage (Manski & Magder, 1998). The two most common kinds of health coverage for low-income populations are Medicaid and Medicare insurance. Most dentists do not accept Medicaid insurance, and Medicare insurance does not provide dental coverage, which is not helpful for people who cannot afford preventative dental procedures (Mofidi, Rozier, & King, 2002). Many of the

underserved, particularly children, are insured by Medicaid and the Child Health Insurance Program, but are unable to obtain care primarily because of the lack of private dentists who participate in these programs (Edelstein, 2010). Although roughly 10% of children lack health insurance, 23% lack dental insurance. However, in 2004 only about 20% of children ages zero to five and 30% of all children who were enrolled in Medicaid received dental services (Gehshan, 2008). Dental care is out of reach for many adults as well; since the mid-1980s dental insurance for adults has been dropping, and fewer than half of private-sector workers are now offered dental insurance (Gehshan, 2008).

The lack of dentists participating in Medicaid is due to three major factors: low reimbursement rates, missed appointments, and burdensome paperwork associated with Medicaid regulations (Mofidi et al., 2002). While some dentists volunteer their time to help the underserved, the lack of dentists participating in Medicaid continues to be major access barrier for many low-income populations (Mertz & O'Neil, 2002). A study by Mofidi et al. (2002) found a limited number of dentists accepted Medicaid insurance in North Carolina. A mother in the study's focus group commented on her experience with her dentist saying, "A problem that I experienced was that I could not get a dentist to take Medicaid. And you know that's a problem. I just gave up!" (Mofidi et al., 2002, p. 54). Once an individual with Medicaid finds a dentist who accepts her insurance, the patient has difficulty scheduling an appointment because some dentists accept only a certain number of people from each family or from the overall Medicaid pool in their private practice.

Additionally, there is a large racial/ethnic disparity in oral health among adults in the United States. A study by Schrimshaw, Siegel, Wolfson, Mitchell, and Kunzel (2011) surveyed 118 uninsured and insured African Americans in Central Harlem to obtain knowledge about their

dental insurance and if they had seen their dentist recently. They found that 75% of adults had some type of coverage for dental care, but 50% had limited access due to the fact that their coverage was through Medicaid (Schrimshaw et al., 2011). The remaining 25% of the African American population that was surveyed had not seen a dentist for routine care, and they described themselves as seeking dental care when they could, based on the severity of their pain symptoms. The individuals in the study who had insurance coverage still had to pay extra out-of-pocket to account for the amount not covered by their insurance (Schrimshaw et al., 2011). For those who did not have coverage, most patients were turned away, or they opted for the extraction of a tooth that was causing them pain, since that was a less expensive procedure (Schrimshaw et al., 2011).

The location of the dentist office and transportation to and from the site is another challenge for people in underserved areas. The inaccessibility of dental care in rural and metropolitan area leads to greater instances of oral ailments amongst the populace. Public transportation from such regions can be scarce or expensive, which hinders people from getting regular check-ups every six months, or getting treated for a current oral disease that is causing pain. People who cannot travel to a dental treatment facility because they are homebound or are residents of nursing homes or other assisted-living setting must have dental personnel provide care to them where they reside. However, there is a variety of barriers to access for people who do not have transportation, including lack of facilities, insufficient reimbursement, complicated administration, poor daily support from caregivers and lack of experience among dental personnel (Guay, 2004). The least expensive way for people to get to their appointments is free transportation by a city bus system, or being part of a social service group, where they provide a way to make it to an appointment. However, the reliance on other means for transportation, such

as a bus often puts another burden on Medicaid members because if they are late to their appointment they are given unpredictable wait times at the dentist's office due to their insurance status.

The poor distribution of dentists and the lack of universal coverage for delivery, financing of care, and transportation mean that much of the population with the greatest need will continue to be underserved by the traditional system of private practice, fee-for-service dentistry (Mertz & O'Neil, 2002).

2.1 DISEASE PREVALENCE AND NEGATIVE OUTCOMES

Oral diseases are among the most prevalent diseases affecting industrialized societies, and yet are highly preventable (Eke et al., 2013). Additionally, oral infectious diseases, as well as acute, chronic, and terminal systemic diseases with oral manifestation impact functional ability to eat as well as diet and nutritional status (Touger-Decker & Mobley, 2013). Oral health encompasses all the immunologic, sensory, neuromuscular, and structural functions of the mouth and craniofacial complex. It influences and is related to nutrition and growth, pulmonary health, speech production, communication, self-image, and social functioning (Mouradian, 2001). Major oral cavity diseases like dental caries and periodontal disease occur in young children, adults, and seniors (Griffin, Jones, Brunson, Griffin, & Bailey, 2012).

2.1.1 CHILDREN

Children face dental ailments when growing up (Mouradian, 2001). As a group children are more likely to be disadvantaged by poverty or minority status than are adults and at risk for poor oral health (Seale, McWhorter, & Mouradian, 2009). One child out of every six children in America who are in poverty suffers more dental caries than his affluent peers, and his disease is more likely to be untreated (Seale et al., 2009). In the US alone, 30% of all children's health expenditures are devoted to dental care.

Untreated dental caries can profoundly impact the quality of life. Pain, discomfort, sleepless nights, malnutrition, and time off school or work are common effects of severe caries (Watt, 2005). Also, pain from untreated caries can restrict normal daily activities (Griffin et al., 2012). The soreness interferes with a child's ability to concentrate, reducing the value of time spent in school. The pain from untreated dental caries hinders the development of a child's intellectual capacity that takes place apart from schooling (Fox, 2011). It becomes exhausting and diminishes a child's energy for the difficult tasks of a full day of school. Another daily life activity that is decreased is the ability to eat due to the discomfort from the pain. Poor food intake exacerbates the effects of pain on concentration and energy and leads to malnutrition.

Developmental factors interact with most aspects of children's oral health. Developmental psychiatry has long recognized the importance of play and other childhood activities for the development of intelligence and other social skills. Children involved in activities at school develop social skills, and pain from toothache can weaken the ability of children to develop these skills. Also, social development becomes a problem when cavities and decay result in disfigurement, ranging from misshapen smiles to foul odors (Fox, 2011). Timely treatment is necessary to avoid further impact on the child's development.

Children's dependency and vulnerability also create an obligation of health systems to ensure that children have access to needed care, regardless of their parents' social and economic difficulties (Mouradian, 2001). This leads to need for "wrap-around" services, such as provision of transportation, case management, and other outreach services, which are explicit in the Medicaid benefit. Parents and older children also need specific health education and counseling (Mouradian, 2001).

2.1.2 ELDERLY ADULTS AND YOUNG ADULTS

Poor oral health and dental disease often continue from childhood into adulthood because tooth decay and periodontal disease are progressive. Low-income adults have more untreated caries and suffer from greater tooth loss because of decay or gum disease. Among adults aged 19 to 64 who had family incomes of less than $10,000, nearly one in two had at least one decayed tooth that had not been treated (Gao, Deng, & Geng, 2000). The CDC reported that toothaches are the most common pain of the mouth or face reported by adults. Almost one of every four adults reported some form of facial pain the past six months. Women report certain painful mouth and facial conditions like temporomandibular muscle disorder, migraine headaches, and burning mouth syndrome more often than men. Also, over 40% of poor adults 20 years and older have at least one untreated decayed tooth compared to 16% of non-poor adults (CDC, 2013b).

Adults aged 65 and older represent the largest single group in the United States that has limited general literacy and health literacy skills. Bennett, Chen, Soroui, and White (2009) reported that among older adults in the United States, 29% have fair or poor health status, and 27% to 39% have not utilized recommended preventive health care service, like dental care and influenza vaccination. The NHANES data from years 2005-2008 show a strong association

between poor general health and poor oral health. Edentulism was about 10% points higher among persons reporting poor general health compared with those reporting good or better general health (Griffin et al., 2012). Rates of complete and partial tooth loss were higher among older persons with arthritis, cardiovascular disease, chronic obstructive pulmonary disease, and low vision/blindness compared with persons without these conditions (Griffin et al., 2012). Among adults with similar clinical dental health status, older adults report less perceived need for dental care than do younger adults. As adults age, oral health may be problematic, and it is important to have all natural teeth for quality of life (Griffin et al., 2012).

Research by Singh and Brennan (2012) found an association between remaining natural teeth and chewing ability in older adults and concluded that the presence of 20 or more natural teeth does not contribute to a chewing disability. Chewing difficulty is caused by loose teeth, broken or chipped teeth, pain in the mouth, tooth sensitivity, sore gums, and pain in the face, jaw, temple, or front of the ear or earache (Singh & Brennan, 2012). The use of dentures has also shown reduced chewing ability due to substantially lower bite force. Singh and Brennan surveyed 444 elderly aged participants of the ages 60-71 years and found that 10.3% older adults have chewing-deficiency, 26.4% with fewer than 21 teeth have chewing disability, and 25.4% have painful aching pain in their mouth. Also with untreated dental ailments extensive or complete tooth loss may restrict social contact and inhibit intimacy (Griffin et al., 2012).

The Surgeon General's report described the mouth as a mirror of health or disease occurring in the rest of the body in part because a thorough oral examination can detect signs of numerous general health problems (*Oral Health in America: A Report of the Surgeon General-Executive Summary*, 2000). Oral diseases can have an impact on many aspects of general health and health conditions that can turn in have an impact on oral health. The risk of chronic

conditions increases with age, so it is important to examine the interaction of these diseases with oral disease, and their combined impact on overall health among older adults (Griffin et al., 2012). Periodontal disease among older adults profoundly diminishes quality of life and has an adverse impact on general health (Griffin et al., 2012). A recent Cochrane systematic review found evidence that the treatment of periodontal disease improved metabolic control among persons with type 2 diabetes. Minassian, D'Aiuto, Hingorani, and Smeeth (2010) found that invasive dental procedures are likely avoidable with early treatment and prevention. Also, if early treatment and prevention are not available it places adults at higher risk of ischemic stroke and myocardial infarction. Moreover, studies have demonstrated an association of good oral hygiene with positive health outcomes; a systematic review found that enhanced oral hygiene care could prevent respiratory infections and death from pneumonia in elderly people in hospitals and nursing homes (Griffin et al., 2012).

In 2008, Griffin et al. (2012) found that almost half of older community-dwelling dentate adults reported no dental visit in the past year. Among adults who have some of their natural teeth aged 65 years and older, racial ethnic minorities were about half as likely to report a past-year dental visit and about twice as likely to have at least one tooth with a cavity in need of restoration (Griffin et al., 2012). As older adults age they may experience difficulties brushing their teeth, effective in preventing oral disease, and in seeking effective clinical care. Low utilization of dental care may also be attributable to lack of perceived need (Griffin et al., 2012).

2.1.3 DENTAL CARIES

Dental caries is a prevalent chronic, common, and transmissible infectious oral condition in humans (Touger-Decker & Mobley, 2013). This infectious oral disease results from interaction

of specific bacterial and salivary constituents with dietary fermentable carbohydrates in biofilm adherent on the tooth surface, which causes demineralization of the tooth enamel and enzymes that attack the protein component of the tooth, which leads to decay. (Touger-Decker & Mobley, 2013). Untreated caries can interfere with tooth growth, and provides a reservoir of infection for systemic spread (Mouradian, 2001). As the consumption of sugars has risen, levels of dental caries have increased. This is a particular problem in the primary dentition in which most caries remain untreated (Watt, 2005).

In the United States, Dye, Li, and Thorton-Evans (2012) found that dental caries is present in children who are living in poverty from ages three to five years old with the prevalence of 14.4%, 17% in six to nine year olds, and 11.4% prevalence of dental caries in ages 13 to 15 years old. The US Surgeon General reports: "Dental caries is the single most common chronic disease of childhood occurring five to eight times as frequently as asthma, the second most common chronic disease in children" (Moon, Farmer, Tilford, & Kelleher, 2003 p. 242).

This particular oral cavity disease is easily preventable, and if not, can lead to problems of decayed and painful teeth. Non-normal oral tissues can constrain chewing food, and can lead to tooth loss and dietary changes (Touger-Decker & Mobley, 2013).

2.1.4 PERIODONTAL DISEASE

The next most common infectious oral condition in humans is periodontal disease. At least 8.5% of adults from the ages of 20 to 64 years old and 17.2% of older adults ages 65 and older in the United States have periodontal disease (Institute of Medicine, 2011). Periodontal disease is generally broken into two categories: gingivitis and periodontitis. Gingivitis is an inflammation of the tissue surrounding the teeth that results from a buildup of dental plaque between the tissue

and the teeth. Untreated gingivitis can turn into a severe ailment called periodontitis that can cause tooth loss, gum bleeding and recession, formation of deep pockets between the gums and tooth, and loss of periodontal ligaments and bone structure that support teeth. Research done by Eke et al. (2012) used data from NHANES 2009-2010 of periodontitis disease study and found that adults 30 to 34 years old have the prevalence of 24.4% and 70.1% in adults ages 65 years and older. Also, the prevalence of periodontitis in adults living below the federal poverty level is 65.4%, and those with less than high school education 66.9%.

Gingivitis is most common in adults and can be prevented by basic oral hygiene rituals of tooth brushing and flossing daily (Shalala, 2000). Sheiham and Watt (2002) found evidence linking stress to periodontal disease and temporomandibular joint dysfunction, which causes jaw pain, ear pain, and headaches. Along with periodontal diseases, chronic diseases may flare up, such as, types 1 and 2 diabetes mellitus, stress, cardiovascular disease, and osteoporosis associated with periodontal disease in the sub-gingival flora (Eke et al., 2013). Life events are associated with periodontal disease by affecting physiological process and risk behaviors such as smoking and oral hygiene, which increase susceptibility to periodontal diseases. Not only do some systemic diseases affect periodontal disease (Sheiham & Watt, 2000).

2.2 COMMUNITY-BASED PREVENTION

A community-based approach to health education and disease prevention can have profound implications for the practice of public health, as practitioners move away from focusing solely on individual health behaviors and emphasize the role that social structure and the environment play in determining health status (Yoo et al., 2004). The universality of a social gradient in health and

health behavior suggests that health related behaviors are not a simple matter of free choice but are significantly determined by the social environment in which people live and work (Sheiham & Watt, 2000).

In 2006, the American Dental Association (ADA) launched a pilot project to produce community health workers whose training focuses on oral health, also known as Community Dental Health Coordinators (ADA, 2012). The ADA believes that education and prevention are the ultimate keys to extending good oral health to those who cannot afford it or do not have dental treatment available in their communities. The Community Dental Health Coordinators work in underserved rural, urban, and Native American communities. As of Fall 2013 the CDHC had graduated 34 students who are serving 26 communities in seven states. The goal of a CDHC is to increase awareness of the importance of oral health and how to become and stay healthy, through community outreach, bringing at-risk patients with diabetes and elderly to their clinics, providing treatments like cleanings, fluoride treatments and sealants, and improving access to care by establishing dental homes for people in the community. In the evaluation of this pilot community study, the ADA is now further working to engage leaders in education and public health, as well as bringing CDHCs to dentally underserved communities nationwide (ADA, 2012).

Kranz and Rozier (2011) conducted a review of literature of different early education and childcare programs that include oral health education in classrooms and in-home care for families in underserved communities. Kranz and Rozier found that many professionals and governmental organizations consider early education and child care as possible settings to promote oral health in young children. This finding is based on national surveys revealing an increase in dental caries among preschool-aged children. Dentistry has come to emphasize early

childhood as an important time to introduce proper oral health practices to address this growing problem.

Kranz and Rozier (2011) found that Massachusetts implemented early education and child care programs, with the help of the Department of Early Education and Care and the Department of Public Health, which made additional materials available online. The materials included a guide to implement a brushing program in early education and childcare classrooms. Also, the departments contracted with a private organization to provide optional training for their staff to further oral health knowledge in the community and within the classrooms (Kranz & Rozier, 2011). They concluded that adding more oral health content and early education childhood care programs for both children and families in low-income communities will improve child oral health and reduce oral health disparities by introducing appropriate oral health practices at a young age (Kranz & Rozier, 2011).

Many communities have historically underused dental services. To increase participation in oral health care, focused population-targeted programs can be done by increasing education and awareness about services within specific populations groups (Mertz & O'Neil, 2002). Kay and Locker (1998) did a systematic review of the effectiveness of health promotion aimed at improving oral health. They found that complex and technical educative methods added little benefit, but simple provision of information was enough to increase knowledge levels. However, Kay and Locker found that alterations of knowledge, attitudes, and beliefs were not related to changes in behavior or health (Kay & Locker, 1998). For many years, a health education model has been the dominant approach in prevention. This approach placed the emphasis on lifestyle and behavioral change through education and awareness raising programs (Watt, 2002).

Educating individuals in a community based center can help underserved population access oral health information to help prevent future oral diseases.

The Institute of Medicine recommended a campaign to enhance awareness and knowledge about the causes and implications of oral disease and the importance of preventive oral health services (Jones et al., 2013). It is now widely recognized that clinical preventive and educational approaches alone can achieve only limited short-term effects, and may indeed widen health inequalities. Rather than relying solely on preventive and health education programs that are targeted at high-risk individuals public health initiatives are required for assisting individuals and communities to avoid disease and create supportive environments encouraging to sustain good health (Watt, 2005). Improving communication and coordination between dentists and primary care providers will help expand the numbers of providers that promote oral health, reinforce prevention messages, and ensure high-risk children are referred for early dental care. The recent American Academy of Pediatrics National Oral Health Summit signals child health professionals' interest in improving children's oral health; additional collaborative efforts are needed at local, state, and national levels, including the development of best practices for dentist physician collaboration and communication (Seale et al., 2009).

Policymakers should be informed at the local, state, and federal levels because establishing policies is critical in ensuring inclusion of oral health services in health promotion and disease prevention programs, care delivery systems, and reimbursement schedules. Keeping legislators and public officials at all levels of government aware of oral health ailments could help lead to development of effective public policy to improve America's oral health (*Oral Health in America: A Report of the Surgeon General- Executive Summary,* 2000).

Mertz and O'Neil (2002) find that better preventive care and patient habits have helped improve oral health for many parts of the population. Communities are filled with resources where public health agencies may have funding, expertise, staff, facilities, support, equipment, and linkages with other organizations that can be useful. Intervention and prevention services are located around communities in schools, dental schools, associated or primary care programs, community action agencies, childcare and education programs (Allukian, 2006).

Community health centers are sites for underserved populations to seek prevention for oral diseases. In 2010, community health centers provided comprehensive primary care to 19.5 million patients, while serving as affordable and suitable locations for oral health services. In the same year, 9.2 million patients received dental services at health centers (Jones et al., 2013). If health centers do not employ dentists, patients are referred to dentists who accept Medicare or Medicaid insurance. However, one in seven health center patients reported not having accessed oral health care in more than five years.

A range of population and individual-level strategies that help to prevent dental caries includes oral health education, community water fluoridation, and topical fluorides such as fluoride varnish, dental sealants, antibacterial rinses, and dietary interventions (Tomar & Reeves, 2009). Another effective preventative method for dental caries is dental sealants, coatings that are bonded to the chewing surfaces of permanent molars, where it is the most susceptible to dental caries (Tomar & Reeves, 2009). A policy that is encouraged for every state to use by the Pew and the American Academy of Pediatrics is a cost effective solution to improve access for young children, where medical care providers are allowed to apply fluoride varnish to teeth of children in low-income families. This policy improves children's access to oral health care service by compensating physicians through Medicaid for providing valuable dental care

intervention. Therefore, states can reduce the tremendous access barriers for low-income children, and nine states carry this policy for low-income families ("Reimbursing Phsicians for Flouride Varnish," 2011).

Another program that helps prevent oral diseases are school-based dental clinics that help to provide basic health care services, including dental care located in elementary and secondary schools (Institute of Medicine, 2011). The location of the dental clinics is convenient for the children to receive care and it eliminates the need for transportation, parent time off from work, and absence from school. A study conducted by Davies and Bridgman (2011) found that there were more dental caries in children five years of age than children who were in their teens. They created a program for dental professionals to come into schools and educate children about oral health. Parents were present for these programs because children tend not to report to their parents of what they learn in school. Along with the program, public health officials had other ways to prevent dental caries, like changing diets in schools and providing children with toothpaste and toothbrushes to use. The programs were delivered in primary schools and nursery schools, where the children were supervised and educated by dental officials like nurses, and hygienists (Davies & Bridgman, 2011).

Volunteer efforts by organizations are another way to deliver oral health care. Volunteer programs for oral health care provide temporary relief for one day, and do not provide care on a regular basis. Projects are organized by state dental societies or private foundations, and are staffed by volunteer dental professionals to provide care on a first-come, first-served basis (Institute of Medicine, 2011). For example the ADA holds an event called “Give Kids A Smile Day,” which provides care for low-income communities annually, and it is a local and national event (Institute of Medicine, 2011). The ADA started this program in 2003 as a way for dentists

to volunteer their time and join others in their community to provide education, screening, preventive, and clinical services to underserved children (ADA, 2014). Each year, approximately 450,000 children benefit from more than 1,500 events, all because of the efforts of 40,000 or more annual dentist volunteers. As of March 13, 2014, there had been 1,548 events, 346,857 children served by the program, 9,108 volunteering dentists, and 28,362 other volunteers (ADA, 2014).

The ongoing crisis in accessing oral health care in America has combined with the need for greater diversity among dental students. The need for diverse dental students has led to a renewed examination of how dental education prepares students to work with diverse patient populations. Dental graduates also need the attitudes that support the inclusion of underserved children in their practices.

Strauss, Stein, Edwards, and Nies (2010) reported dental student experiences from the University of North Carolina Hill School of Dentistry program to demonstrate the educational components of community based dental education. This is now a Commission in Dental Accreditation requirement for standard dental educational programs. Dental schools must provide opportunities for students to engage in service learning experiences and/or community-based learning experiences. Service learning experiences and/or community-based learning experiences are essential to the development of a culturally competent oral health care workforce. The interaction and treatment of diverse populations in a community-based clinical environment adds a special dimension to clinical learning experience and engenders a life-long appreciation for the face value of community service ("Accreditation Standards For Dental Education Programs," 2010).

Sites in diverse underserved communities provide a venue for clinical dental experiences in settings where students can observe and learn about different patient groups and varied practice patterns. Placement in publicly owned facilities ensures that dental students are experiencing delivery systems that will not use their labor for personal profit and allows students to address oral health in an underserved setting (Strauss, Stein, Edwards, & Nies, 2010). Recent studies of the broader impact of community-based dental education for dental students suggest a promising and complex picture in terms of students' attitudes and plans for caring for the underserved. The students' perceptions and their preparation for extramural rotations were positively associated with their plans to provide at least 25% of their care to underserved patients (Strauss et al., 2010). The authors concluded that community-based dental education as a preventative measure has substantial potential for affecting the values and behaviors for dental students. Also, including dental students in communities is relative to health care access for underserved populations and for attracting a more diverse array of students to dental education.

2.2.1 INTERVENTIONS FOR ORAL DISEASES

Hull et al. (2014) did a study on an intervention called "The Healthy Families Study," also known as "Familias Saludables" created by two partners, Nashville Latino Health Coalition and Progreso Community Center. The study registered 272 Hispanic families with children from five to seven years old. Also the study involved questionnaires for a follow-up assessment of the children's oral health self-care behaviors, including the frequency of brushing in the past seven days, if the child brushes in the morning and before bed, use fluoride toothpaste, and the age of current toothbrush (Hull et al., 2014).

The intervention included four group sessions once a month with parents and children, where both were educated about oral health and its importance in their daily lives. The educational sessions included the importance of keeping teeth and gums clean, correct techniques of brushing teeth, the importance of fluoride and flossing, and the importance of going to the dentist (Hull et al., 2014). Next, the study involved an optional free dental hygiene exam and cleaning at a local university-based dental hygiene clinic, and four phone contacts and mailed newsletters during eight months to reinforce the oral health facts and tips for oral hygiene care. The intervention found that 69.6% of children brushed at least twice daily, 40.6% brushed before bed daily, and one third of parents did not know if their children's toothpaste contained fluoride. This study demonstrates the need for community-based interventions for self care practices (Hull et al., 2014).

Another intervention program conducted by Rozier et al. (2003) called 'In to the Mouth of Babes,' and 'Smart Smiles,' took place in five regions of North Carolina and involved about 1,500 medical providers (Rozier et al., 2003). The programs partnered local physicians with oral health educators to help physicians detect dental caries and apply fluoride varnish to their young patients' teeth. The programs had about 3,000 visits alone in the first year just for dental preventative care, and in the second year this grew to 40,000 visits (Rozier et al., 2003).

For low-income communities to benefit from dental care, an intervention of mobile dental clinics has been used to bring underserved communities oral health services (Institute of Medicine, 2011). A mobile dental clinic can be set up in a retrofitted recreational vehicle or a bus using portable dental equipment. Services provided by mobile dental clinics can range from preventive care including oral exams, radiographs, and sealant placement, to restorative and specialty care. Often Federally Qualified Health Centers, state and local health departments, and

dental schools use mobile dental clinics to provide oral health care for communities (Institute of Medicine, 2011).

Another intervention program, based in a nursing home in Glasgow, Scotland, enhanced its community health center by training staff to educate clients who were 35 to 99 years old (Nicol, Petrina Sweeney, McHugh, & Bagg, 2005). The nursing home had regular screening for patients who had mouth pain or denture problems. The dentist found that the residents had many oral health problems like erythema, mucosal plaques, denture stomatitis, gingivitis, denture induced hyperplasia and denture-induced ulceration (Nicol et al., 2005). At baseline, the patients had mostly dry mouth, and mucosal disease. Nicol et al. (2005) created a control intervention study where 78 of the residents in three nursing homes were divided into two groups, and all staff participated. The staff members were given oral health educational sessions through an intervention based compact disc pack called 'Making Sense of the Mouth,' with videos and audio taped lectures for an hour and a half during work hours. The first group of staff got oral health education before they educated the patients, but the second group was given the full time of 90 minutes of lecture (Nicol et al., 2005). Eventually the second group would get the same educational materials as the first group.

After 18 months of educational sessions for the resident patients, the study found that the patients had fewer problems compared to the first month when education sessions started. Overall oral health education helped to improve denture hygiene, reduced residents wearing dentures overnight, oral mucosal disease, and denture stomatitis dropped a significant amount (Nicol et al., 2005).

3.0 THE PROJECT

This chapter presents the project involving the development of educational material for oral health. These educational materials were distributed to three community service agencies in the Pittsburgh area: Early Head Start Council of Three Rivers American Indian Center, Community Human Services, and YMCA McKeesport. Each one of these organizations provides services to the surrounding communities, mostly in low-income areas.

The educational materials were composed after centers' needs were determined. The data were collected via interviews with the management personnel at the community centers, with the questions being derived from the Behavioral Risk Factor Surveillance System, a compilation of surveys and questionnaires that collect behavioral health risk data as a tool for targeting and building health promotion activities (CDC, 2013a). See Appendix A for the actual questions used in this study.

To obtain permission to set up the interviews with the managers at each one of the three community centers, the director of the Bridging the Gaps program sent out initial emails with introductions. The aim was to sit down, converse with each community center manager, and understand the needs of the clients from the perspective of oral health. Once the personnel responded to the emails and proposed time-slots for the half-hour interviews, the next step was to go ahead and schedule the appointments and prepare all the necessary material for the session itself. Since the interviews were going to be short, it was pivotal to collect concise and accurate

data. To that end, the set of questions that was asked at each site was similar in order to attempted to collect comparable information across the board.

Information for the actual educational material, developed out of the interview findings in the form of booklets, came from different dental organizations. The booklets include educational facts and guidelines on oral hygiene and oral health for age groups of 0 to five years, 17- 60 years, and 60 years and over. The booklets have a user guide that is aimed at the organization's staff members to show them how to utilize the material for their clients and patients. Following the oral health information for the staff members and clients is a section that contains information for each site that can assist families in finding a suitable dentist who accepts medical assistance insurance or offers reduced cost procedures for people from low-income households. Beyond this, each page is filled with facts for staff members to educate themselves and then educate their patients or clients. Pages are labeled "Reference" or "Handout." Reference pages are for the staff members to go over with their clients and to help them understand the information on that specific page. The "Handout" pages are for the staff member to print out for the client themselves to keep and be able to refer to on their own.

An organization that was used as a model for the development of the booklet framework was "Mouth Healthy," a part of the ADA. This organization has a website where individuals can look up facts about oral hygiene and dental health in order to keep themselves up to par with their oral health ("Mouth Healthy," 2013). The website presents information for different age groups to make it easier to understand and navigate. This also further demonstrates that there is a different approach to oral health for each age group, from infants, to teens, adults and the elderly. Each section contains facts on the daily care of the mouth and teeth. This covers topics such as how to brush teeth, floss, and nutritional facts about what to eat in order to maintain good oral

health. The only common fact for most of the age groups is about brushing and flossing teeth, which applies to each level except for infants.

Another agency that was a source of information, which helped in developing the oral health booklets, is the Rhode Island Department of Human Services, which oversees an initiative called “RIte Smiles.” RIte Smiles has been credited with improving access to dental care for young children who are on medical assistance ("Rhode Island Department of Human Services," n.d.). The organization provides facts and education about oral health to children and their parents within the scope of their studies. The educational facts from RIte Smiles helped to structure information used in the booklet for children ages 0 to five years and their parents.

Both sources, “RIte Smiles” and “Mouth Healthy,” provided examples that helped determine the eventual structure of the booklets for this project; the main idea was to create items for every staff member to read and understand and to make it presentable in a form that is easy to teach their clients.

Additional information in the booklets came from CDC, specifically in regards to the steps to take in a dental emergency or maintaining good oral health for adults and children. This information is seeded throughout the booklets, which should make it easier for the staff to remind the clients at proper intervals.

4.0 RESULTS

Three community centers around the Pittsburgh area were chosen for the study. Their respective managers were contacted to set up interviews and to gather data for a needs assessment. The centers chosen were McKeesport YMCA, Services Early Head Start Council of Three Rivers American Indian Center, and Community Human Services.

4.1 MCKEESPORT YMCA

The first interview was with the manager from McKeesport YMCA. The McKeesport YMCA Community Center is in the center of the town of McKeesport, Pennsylvania. As of 2013, the total population of McKeesport was 19,731 from approximately 4,517 family households located in the community (U.S. Census Bureau, 2010). This was a huge departure from its early beginnings; McKeesport was a booming town around the year 1872, when the first large steel mill was up and running and men were bringing their families by railroads, steamboats, and wagons with the promise of a steady job and a better life. According to the US Census Bureau (2010), at the time McKeesport was the fastest growing municipality in the nation due to the steel business. While the population took an earlier hit in 1940 due to the Second World War, that was nothing compared to today's numbers; even after the WWII decrease, the population had been at 55,000. ("McKeesport City History," 2012).

McKeesport's population demographics consist of 66% Caucasians, 28% African Americans, and 3.4% of mixed races (US Census Bureau, 2010). The employment rate of the population continues to be relatively low at is 45.7% (US Census Bureau, 2010). About 18% of the households in McKeesport make less than $10,000, while those that make $15,000-$24,000 account for about 11.1% of the population (US Census Bureau, 2010). One of the biggest organizations and employers in the town happens to be the UMPC McKeesport Hospital, which was originally established in the community in 1894, and then became a part of UPMC in April 1998 ("Our History at UPMC McKeesport," 2014).

The organization of McKeesport YMCA is based in three individual facilities, the main community center and two summer camps that are two miles apart from each other. The manager of McKeesport YMCA stated that their primary group members are children ages five to 13 years and are a part of the summer day camps. She also added that the community center is open free-of-charge to those who live in the area, while being accessible to those from the McKeesport region for $10 a day as well.

The community center provides scholarships through a program called Building Bridges, which is aimed at families that qualify for financial assistance to participate in various YMCA programs, regardless of the area they live in. This assistance allows for free-of-charge membership to the facilities, including but not limited to "Silver Sneakers" and Breast Cancer Awareness workshops held in conjunction with their outreach center.

One of the major ongoing initiatives at YMCA is called "Ways to Work," formed with the sole aim of alleviating transportation problems in the community. Due to cutbacks in the public transportation infrastructure, the local residents had been struggling to find basic transportation and this program provides assistance to them in acquiring vehicles for families.

The manager also stated that the YMCA had recently been approved for a research provisional grant that will allow them to start some new programs this year, especially a few aimed at strengthening families.

The community center also offers educational programs for the children in the summer camps. The summer camp counselors enjoy the opportunity of creating a dynamic curriculum, since the programs are not structured or taught in the actual school, which allows them the freedom to introduce new initiatives to the children. The curriculum includes such programs as "Summer Learning Loss," where the staff gets the students to continue learning and reading through the summer break. Another part of the curriculum, she explained, was weekly lessons on diverse topics, such as nutrition and diet.

Although the YMCA McKeesport camp curriculum did not include an oral hygiene component, the manager was willing to add it to her weekly lessons, due to the freedom allowed by the program structure. The manager actually stated that oral hygiene education would be something new in their community center and it would be helpful information for both the children and their families.

When asked about the status of oral hygiene in the community, as observed by the center employees, the manager told a story of one of their younger members who had to take a half day to get cavities in her molars filled with Amalgam filler. Upon her return to the center, the child showed off the "new silver in her teeth" as something to be envied. The unfortunate lesson behind the account was clear; even though the child had gotten a major dental treatment at such a young age, neither she nor her family really had practical knowledge of oral health, which would allow them to circumvent a recurrence of the ailment in the future.

Another point the manager expressed was that the children did not have adequate supply

of nutritious food, which is also an important factor that affects oral health negatively. To emphasize her point, she mentioned that the town of McKeesport itself is often called a food desert. There is, however, a light at the end of the tunnel; there are talks of a food pantry opening in the community soon, which will allow better access to nutritious meals for the local families. This in turn will have a positive effect on their oral health.

The best approach to oral hygiene education for the community, as verbalized by the manager, would be to add focused dental health education to the program curriculum. It would, however, also be necessary to find a means of reaching the children's parents as well, so preventative measures for dental ailments can be instituted by the informed families in their homes.

4.2 EARLY HEAD START COUNCIL OF THREE RIVERS AMERICAN INDIAN CENTER

An interview was also conducted with the manager at the Early Head Start Council of Three Rivers American Indian Center. It is an organization created by the US Congress, under the re-approval of the Head Start Act in 1994 ("Council of Three Rivers American Indian Center," 2012). This program is also aimed primarily at children and their families who are from the underserved communities in Pittsburgh. The community center itself is located in the borough of Mt. Oliver, a neighborhood in Pittsburgh that was founded in 1892 ("Mount Oliver History," 2011; "Mount Oliver, Pennsylvania,"). As of 2012, the population had dropped to 3,394, and the demographics of the population consisted of 58.6% Caucasian, 31.5% African Americans, 0.2% Hispanics and 0.9% two or more races ("Mount Oliver, Pennsylvania," 2003). Participants in

Early Head Start usually have to be financially eligible for some of the programs, with an income of less than $15,000.

The organization provides services like child development, general health, mental health, and nutrition services. It also extends to services that cover areas such as family support, disabilities, community partnerships, and pregnant women services ("Council of Three Rivers American Indian Center," 2012). Home visitors or a childcare option is provided for most of the services listed above. The home visits consist of approximately 1.5 hours of developmental activities and are performed by trained personnel. These visits can cover activities such as teaching health and nutrition, and discussions about the family's strengths and concerns ("Council of Three Rivers American Indian Center," 2012). The childcare option relies upon the families to send their children to a childcare center, where staff from Early Head Start are able to work with them on their development skills ("Council of Three Rivers American Indian Center," 2012).

As of 2013 the agency was serving 70 children, from ages 0 to three years old, and has expanded its services to pregnant women as well. The current volume of 70 children includes 48 clients being enrolled in the in-home visit option. Also, 92% of the families in the community are at or below the national poverty level and qualify for medical assistance. The manager went on to talk about the patients who have coverage through medical assistance and the primary issue attached to that population: the high volume of no-shows for appointments. The patients on medical assistance do not utilize the services as they should, which makes most dentists wary about accepting the medical assistance coverage in their offices. Early Head Start steps in to ensure that its participants create medical and dental homes through the evaluation of the children's health at their two year old general check-up with their physician. The manager also

explained that most dentists do not see children under the age of three years because it is harder to garner cooperation from the child at that age.

The manager also touched upon the services the children and their families obtain during the in-home visits, which usually last an hour and a half. Some of the more popular services utilized during such in-home visits include general social services, health nutrition lessons, parent and child education, and oral health education. For the oral health lessons, the families receive toothbrushes, both toddler and adult sized and a thimble, which is a tender toothbrush for an infant who is bottle-feeding. These items are all currently purchased by Early Head Start for each family. Along with the toothbrushes, the staff, which is trained by an Oral Health Task Force, educates the children and their families on how to detect oral health problems at onset and how to prevent any further oral diseases. They also assist the families in finding local dentists who accept Medicare. The staff attempts to utilize science experiments and nutritional information in order to demonstrate to both children and parents how sugar from carbonated drinks and other sweet treats in general affect their teeth.

For the children who visit the community center for playgroups, the center counselors ensure that they brush their teeth after snack time. The manager pointed out that in-home visitors also make sure that the children understand how going to the dentist is important for them and their family. By telling the children if their parents go to the dentist, then they should as well, the information is able to penetrate every generation of the household. This further increases the chances of not just the initial dental check-up, but also follow-up visits.

Currently the staff at Early Head Start gets oral health education from a few different organizations. One of the organizations is the University of Pittsburgh School of Dental Medicine, through the assistance of a dentist who contributed an online tutorial for different

stages of cavities. The content of the tutorial focuses on detecting cavities and referring the client to a dentist appropriately. The in-home visitor can refer the family to a dentist if the child has a cavity and educate them on how to prevent a cavity from happening the next time.

Initially some of the screening services were provided by dental students. This, however, did not work out in the long run due to complications with insurance. While ideal for both the students and the patients, it ended up being somewhat unfair because follow-up care could not be provided due to policies from within the insurance coverage.

Another organization in Pennsylvania called the Head Start Oral Task Force, which has grants from an organization called DentaQuest, connects with community center managers to help give infants obtain the procedures they need for prevention of early childhood caries. Patients' fear of more pain causes them to reject their dentist appointment, even if medical assistance is accepted. The Head Start Oral Task Force, therefore, wants to educate families thoroughly on the topic of good oral health care, with the goal of alleviating the possibility of their rejecting help from the dentist due to fears of more pain after the procedure.

After talking about the education of the staff, the manager brought up the oral health status of the clients that the organization works with on a daily basis. She expressed how parents are not "big" on oral health and do not emphasize a dental home as a requirement for themselves and their children. She also constantly hears complaints about insurance problems because most dentists do not accept medical assistance. As an example, she told a story about a mother who had a dentist appointment, which she was going to get to by utilizing a bus that was scheduled to pick her up. However, the transportation service would allow only the mother to utilize the bus, not her children. Hence, the patient did not end up boarding and missed her appointment. This of course had an adverse effect on the staff at the dentist office because they ended up losing that

time slot, hence income, to someone who ended up being a no-show. This is a downward spiral that adds to why dentists prefer not to accept medical assistance coverage. It is also an example of how our infrastructure can sometimes be ineffective in providing easy access to proper care for the underserved.

Throughout the interview, the manager mentioned that she wanted her clients to have access to an effective medical transportation system or service, but for the time being it might be just as prudent to get dentists to make home visits as well. Currently this is not an option, as Early Head Start continues to rely on each parent taking her children to their appointments.

The organization is also in need of supplies of items such as regular toothbrushes, tender toothbrushes for infants, and teeth models for demonstrations for infants' parents to learn how to clean their baby's teeth effectively. The manager went on to say that the most immediate need, in terms of oral hygiene education, was new and updated information to keep up with dental regulations. This new information would then help develop better ways of creating a dental home for families and their children.

4.3 COMMUNITY HUMAN SERVICES

The last community center interview for the purposes of this study was conducted with the manager of Community Human Services. This community center is a part of South Oakland, with a population of 3,335 ("South Oakland Neighborhood in Pittsburgh, Pennsylvania," 2011). The demographics of this region are: 92% Caucasians and 7% African Americans ("Oakland, Pa Profile," 2014). South Oakland's community faces poverty levels of 58.1%, and the median

household income of the neighborhood is as low as $26,579 ("South Oakland Neighborhood in Pittsburgh, Pennsylvania," 2011).

The manager first explained what Community Human Services is all about as an organization by sharing its mission statement:

> CHS seeks to enhance people's lives and strengthen communities by providing opportunities to develop individual potential and by delivering comprehensive services that maximize the health and wellbeing of those it serves in South Oakland and the greater Pittsburgh area.

The founders of Community Human Services wanted to allow South Oakland to thrive by asking the residents themselves what they needed to bring the community together. The input from the community members allowed them to build up confidence in the area to come together and organize events at a centralized location. The events were as simple as games of Bingo, knitting, card games, along with the sharing of diverse ethnic foods. This helped people to get to know each other and begin friendships within their community, which in turn builds a sense of responsibility.

The manager went on to talk about her position as the lead for Community Human Services, where she focuses on the home services programs. The participants in these programs are adults with disabilities who live on their own and just require regular check-ins to ensure their safety and health, as opposed to having to be at a high-level care facility such as a nursing home. The only criterion for the program is that the participants have to be at or below the federal poverty line. The manager explained that in addition to the main building on Lawn Street, there are sister locations located on Atwood Street, the Hill District, and on the North Side, which all provide an array of services that help people at risk. The services include assistance for the homeless, mental health residences, health programs, and the Family Foundation Early Head

Start program. Next door to the Lawn Street location is a Domiciliary Care home, where women with chronic and persistent mental illnesses get supportive auxiliary care services. Also, further down the block is a more independent living location for individuals who may have the same ailments but do not require the same level of supportive care as the Domiciliary Care patients.

The Atwood Street location has residential facilities, which are staffed around the clock for the patients. The manager talked about a third location, which is new to CHS, in downtown Pittsburgh. It is a 200-bed facility for low-income individuals and acts as the central office for the staff members who provide supportive services that the other locations receive on a daily basis. The location also serves as the office for the Homeless Assistance program, which attempts to manage and help the homeless population in South Oakland.

Oral health education at Community Human Services, however, does not fall under a formal program for the members. Usually the extent of oral health education consists of a case manager or nurse reminding the patients to make an appointment with the dentist at their consultations. The manager did however mention an organization by the name of Family Foundations, which is associated with Early Head Start, and which works with children from the ages of 0 to three years, to make sure they have a dental home. Moreover, Family Foundations does have a mobile dentist who makes home visits. The organization also used to have a medical transportation system for dental appointments but it was discontinued due to low utilization at the time.

Additionally, Family Foundations has a partnership with the dental department of UPMC Children's Hospital; however the issue of no-shows continues to be an issue for the appointments. The manager had previously emailed the directors associated with Community Human Services to query them on the no-shows and all of them appeared to have the recurring

theme of patients and families not taking the time to make it to their appointments and not making oral health their priority. In most cases, the patients do not make oral health care a priority due to their low-income background; due to their lack of knowledge in the area and no previous preventative dental visits, they appear not to worry about their dental hygiene as much as other chronic diseases. Other than these programs, the case managers also try to make sure that they encourage folks to follow up with their dentists, but there is no formal oral health or hygiene education beyond that. However, CHS does have general health education on Wednesdays, where anyone can attend and listen to guest speakers who talk about a health problem.

The manager also talked about the dental health status of the patients visiting the various locations of Community Human Services. The first concern appeared to be a fear of the dentist in most people's minds and this inadvertently leads to the case managers having to follow up consistently with the members for their appointments. The lack of dental coverage, especially for the people who are on medical assistance, was an issue here as well. This of course makes it even more important for the community center to be efficient about providing effective oral health education, where patients are taught how to properly take care of their teeth so the need for extensive dental procedures does not arise.

To that end, the manager stated that her goal is to make sure the case managers or staff are talking to the patients about oral health and their dental hygiene and that she would like to know how to go about talking to the members and providing them with the appropriate educational material. She also wanted to garner assistance in creating an oral hygiene reference sheet for the staff members to learn how to get their clients to brush their teeth properly. Lastly, the manager wanted to find a way for the patients to obtain dental work from a dentist who offers

reduced prices for low-income clients and then find a way to offer transportation services to their clinic from each of the Community Human Services locations.

The information from all the managers, followed by the interviews, contributed heavily to the development of the three educational booklets. As stated earlier, the booklets were created with three age ranges as their focal points; children, teens to adults, and the elderly. Each booklet includes topics that the managers at all the organization had wanted for their individual locations or programs for both the members and the staff. See appendix B, C, and D for the final versions of the educational material.

5.0 DISCUSSION

Underserved communities often have poor oral health due to the lack of opportunities for preventative healthcare and education. Oral health education in community centers can help underserved clients prevent oral diseases through basic preventative activities over time. The interviews with the agencies highlight similar issues of lack of dental care access amongst low-income clients, who are on medical assistance for the most part, and their educational needs. The agencies should have the capability to offer oral hygiene information to their clients by using the oral health booklets.

All interviews in this study had the common goal of collecting information about what these agencies needed to better education their clients. Early Head Start needed an update on oral health information, and the major concern was sending an infant to see the dentist at age one, which is appropriate since the child is teething. The organization has a strong foundation of oral health screening and in-home education for oral hygiene. One source of education for staff members is an oral health task force called Cavity Free Kids, who train the staff members on how to detect problems in children's teeth. The staff members of Early Head Start consist of in-home aides who teach young mothers and their children how to take care of their teeth. Also, the staff can teach parents how to properly brush their infants' gums and how to properly floss their teeth. Reading the how-to guides in the booklets that were provided to Early Head Start can help parents, who need guidance to teach their children about oral hygiene. Additionally, the staff

members are able to refer the family to a dentist and if the family cannot afford it or has problems attending an appointment, the family would still be able to refer to the booklets on how to prevent their child from getting a cavity. Having a strong background in oral health education and hygiene will take a family a long way with the help of social agencies in the community.

Community Human Services needed an oral health educational component at all its locations in order to help clients prevent oral diseases. The case managers give reminders to their clients about making appointments, but do not talk about the importance of oral health. This agency could add in some facts in regards to oral health to further increase a family's knowledge. For example, when they tell their clients to brush their teeth, the case manager could add a basic method of self-inspection of areas of the mouth for preventative measures and make it clear that oral health is vital. Community Human Services does, however, offer health education sessions on Wednesdays for its clients to attend, but they would benefit from incorporating some facts about oral health or even demonstrations of how to brush and floss teeth properly in them.

McKeesport YMCA has more flexibility in its weekly education sessions to incorporate oral health education into the curriculum within both the summer camps for the children and their families. While the children get some education and have themed curriculums about the weather and nutrition count as an oral health component, strengthening the curriculum around how to take care of teeth' would be more beneficial for their campers. Furthermore, the example was given of a girl with the amalgam filling, clearly demonstrated the need for oral health education to change the current mindset. The McKeesport YMCA manager also spoke of a potential food pantry for the community. A pantry will help the families obtain foods of better nutritional value and good for their health in general.

The managers talked about transportation problems that their clients and patients have when they need to go to an appointment. At Early Head Start Council of Three Rivers American Indian Center, the manager talked about a woman who had an appointment with the dentist, but the hospital transportation services would take only her and not her children. The woman, therefore, ended up not going to her appointment. The staff at the office tries to make sure the clients make it to their appointments, but when the disconnect occurs in an area such as basic transportation, there is little they can do. Community Human Services provides transportation to its clients, but some are not able to use the services due to family problems and others do not show up at all. Community Human Services could take the initiative to teach its clients how much they will benefit from a dental screening by availing themselves of their services. This would help the clients understand how oral health and free screenings from the dentist play an important role in their long-term health. This could also strengthen the relationship of CHS and its contracted dentists who are providing the services to their clients.

A very small number of dentists accept Medicare and Medicaid insurance in Pittsburgh, according to the managers' explanations about their clients' struggles with coverage. The manager at Early Head Start Community of Three Rivers American Indian Center stated, "Not all dentists take medical assistance patients because the patient ends up cancelling their appointment or they do not show up. They need a way for people to make sure they show up for their appointment." However, the manager of Early Head Start questions this perception about the availability of dentists who accept young children on Medicaid, saying that there must be a breakdown in communication somewhere because there are at least ten dentists practicing closest to poorer neighborhoods in Pittsburgh who accept young children on Medicaid (Dumas & Polk). Also, as for the children on medical assistance the manager said, "Pediatricians end up seeing a

child for their dental examinations because most dentists do not want to see children of the ages of three years or under."

Physicians seeing children for dental examinations is convenient for families who take their children for a basic checkup, especially if Medicare and Medicaid cover the cost of the services. Early Head Start Community of Three Rivers American Indian Center offered free screening services by dental students for a short period of time, but it did not last long because of insurance and policy issues. Also, there was no way to provide follow-up care after the screening, which undermined its effectiveness. The manager from Community Human Services made a statement about insurance saying, "An issue with some of these insurance plans is that they do not cover a whole lot of cleaning, extractions, or root canals." This statement clearly shows the struggle to keep oral health in their clients' lives because most clients do not bother with what they do not get with their current insurance.

Lastly, it was apparent that all three agencies needed an oral health curriculum for their staff in order to educate their clients on the topic. A strong oral health education curriculum for community agencies and their staff would go a long way in lowering the prevalence of easily preventable oral diseases in the community.

6.0 CONCLUSION

A literature review shows that low-income populations in the US are at higher risk of dental disease, due to difficulties in accessing dental treatment. Accessing dental care involves insurance, finding a local dentist, affordability of care, transportation, and knowledge of dental disease symptoms. Easier access to dental care is even more important for low-income families and children because prolonging treatment affects an individual's overall health. Children, adults, and elderly individuals all have a wide array of dental ailments, which can easily be prevented or treated. The common dental diseases amongst the young and elder populations are periodontal diseases such as, gingivitis, periodontitis, and caries. These diseases are preventable with education on topics such as hygiene regiments and can therefore be addressed by community intervention and prevention programs. Therefore with the help from safety nets like community health centers, hospitals, dental school clinics, and dentists who accept government insurance, more options for dental care may become available for at-risk communities.

Low-income populations tend to have government insurance coverage, like Medicaid or Medicare, and most dentists do not accept either of these. However, with the help of community interventions or prevention programs, vulnerable populations would have access to dental treatment and oral health information through other means.

This project addressed an issue that came to light after reviewing information garnered from interviews with three Pittsburgh community center managers; there is a need for concise

oral health educational materials that can be easily disseminated in low-income communities of the area. An oral health component in each community center's training for its staff members would also help to further ensure that basic information in regards to oral hygiene is distributed. The hope would be that the rates of the easily preventable dental disease would go down over time with the help of education and reminders facilitated by the staff members.

Although these three community centers serve different age groups, oral health education is needed to help assist their patients in formulating a healthier outlook on their lives. The findings in this project showed that nearly all community health centers had problems with engaging their members when it came to oral health services aimed at the lower-income populations. The services even included transportation, dental treatment, and referrals. Two community centers, Early Head Start COTRAIC, and Community Human Services have a program where they refer members to dentists and provide reminders to make an appointment for a dental checkup at regular intervals, but the clients appear to not fully take advantage of these offerings.

To address the basic educational need uncovered by the interviews at the community centers, three oral health booklets, aimed at three distinct age ranges, were developed. The information contained within the booklets is specifically for the staff to go over with clients and ensure they understand how important oral health is for their overall well being. Also, it would encourage the patients to take advantage of the oral health services the community centers provide. Information in the booklets came from organizations such as "Mouth Healthy," "RIte Smiles," and CDC guidelines. The booklets also provide information about dentist offices that accept medical assistance and those who have reduced prices for underserved individuals. Overall, this material should have a positive effect on the clients, while allowing them to be

active in the realm of their oral health by taking full advantage of the services the community centers provide to them on a day-to-day basis.

This project has limitations. The interviewing technique could have been improved by adding details about other components of oral health like nutrition, to further understand the organization's disparities in the area, for example, questions like "To what extent does your organization take into account clients' diet and nutritional knowledge of relation to their oral health?" Another limitation of this study is the sample size of three community centers, which could have been expanded to other larger organizations to make more accurate assumptions about oral health disparities in other low-income communities in the Pittsburgh area. Furthermore, the feedback from the organizations themselves is another limitation. After the booklets were distributed to each community center the only location to give feedback was Early Head Start, where the manager expressed her gratitude and immediately began using the booklets in her staff meetings to incorporate more oral health education in their in-home visits.

There are many solutions to one problem, but not every solution is a perfect one. Educational materials for three community centers in the Pittsburgh area is just one more component in the mix of intervention and preventative programs that are aimed at disseminating information about the community's health and well-being. Staff members in community health centers need to keep reminding their clients about oral hygiene and the different methods of care available to them within their limited resources.

Improving oral health can help address health disparities. Oral health promotion and policies in low-income communities will be beneficiary to families to be aware of the ailments of bad oral hygiene. Increasing outreach to communities and advancing the access to oral health

knowledge and care will help to decreases health disparities. Therefore, the dental safety nets should become more prominent in low-income communities to further address health disparities in the United States.

APPENDIX A

INTERVIEW QUESTIONS

1. Who does your agency/organization serve?

   PROBES: age, gender, race/ethnicity, insurance coverage

2. Does your facility currently provide any kind of oral health education?

   If yes, tell me about what you do.

   PROBES: provide basic utensils, education sessions, access to dentist or hygienist, is anyone on staff particularly interested in oral health?

3. From your observations, what do you know about the dental health of the people who come here?

   PROBES: Do you think people have adequate dental supplies? Or dental care? Have you heard complaints about getting dental care or dental work in the past year? Where do people go for dental care?

4. From your point of view, what do your current clients need that is related to their dental health?

5. **(Optional)** What would you need here to make dental health education a part of what you do?

APPENDIX B

Children's Oral Health

Ages: 0 – 5

Users Guide

Each oral health informational book I constructed is for a different population, which includes:

- Children's Oral Health Booklet from the ages of 0 to 5 years old
- Adult Oral Health Booklet from the ages of 17 to 60 years old
- Senior Oral Health Booklet from the ages of 60 and over.

All three of the booklets serve one purpose and it is for the staff to help educate clients about oral health and hygiene. Since there are three populations, it is best for the staff to choose a booklet, which is appropriate for the age group of the clients during home visits or curriculum time in their program. The information for all booklets range from tips for up keeping of oral health hygiene, education about tooth development, how to brush and floss teeth, nutritional guidelines, information for pregnant women and oral health issues. Also, the booklets reading levels range from fourth grade to seventh grade, which will make it easier for the clients to understand.

The pages are set up for staff members to read through easily, and to teach the information to their clients. Each page has an indication whether to share a copy of the page with the client, or use it as a reference. If the page is marked "For Handout", it is for the client to use as reference at home. If it is marked "For Reference", the page is for the use of staff and for staff to share with client during the time of home visit or with in a curriculum they have for the day. Also, there are pages that are marked "For Reference/Handout", which means to share a copy with the client during the visit or during curriculum time.

For example, in the Elderly Booklet, there is a section called "Concerning Problems," which is for staff to see what different oral diseases look like and it is marked " For Reference". This page is solely for the staff to share with the clients for information regarding the identification of various oral diseases. This can be utilized as an early warning analysis to allow the client time to seek preventative measures from their dentist.

While this guide covers a wide array of oral health topics, the best means of information is always your dentist or dental professional. The goal of this guide has been to provide supplementary education to the reader in regards to basic preventative measures for dental ailments.

*** * * ***

[For Reference]

Children 0-5 years Old:

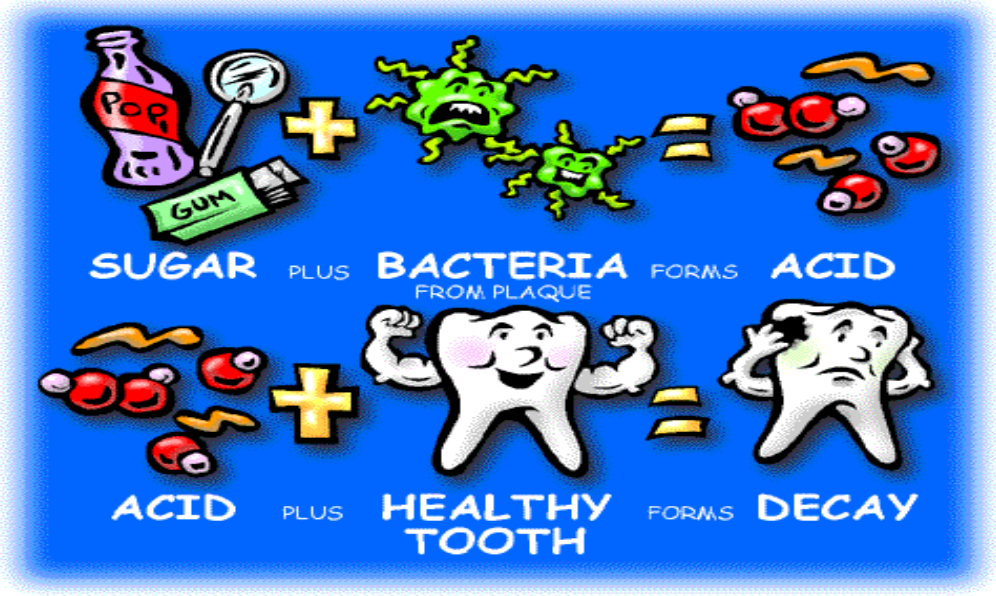
1. **Baby Teeth Are Important**

    a. Baby teeth help your child to:

        i. Chew Food
        ii. Talk Clearly
        iii. Save Space for Permanent Teeth
        iv. Look Good

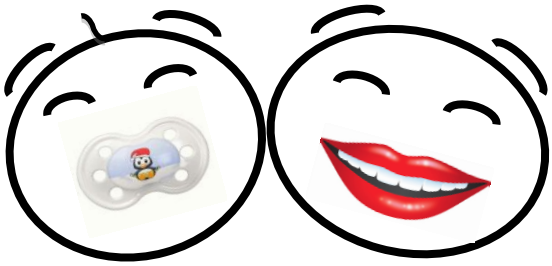
2. **Early Childhood Caries**

    a. Early Childhood Caries is an infectious disease, and it is very contagious.
    b. It can be spread to your baby by just a kiss, and a simple action can be responsible for tooth decay!
    c. If it is not treated, the decayed teeth can lead to abscess, and the infection can spread in the mouth causing life-threatening problems!
    d. ECC is **<u>PREVENTABLE</u>**!!



[For Handout]

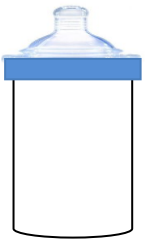
Early Childhood Caries Prevention Steps (Mother and Child)



Vitamin Rich Diet:

Mother: Eat healthy diet, rich in vitamin D and Calcium.
Child: If breast feeding, give baby vitamin D supplements. (Only if doctor suggests it)

Bottle and Sippy Cup:



Mother:

- Only Breast Milk, Formula, or Water in Bottle
- No Bottle or Breast When Sleeping
- Trade bottle for sippy cup by 6 months
- Wean baby off of bottle and sippy cup to a regular cup by 14 months
- Serve unsweetened or sweetened juice in a cup only, starting at one year of age.

Mouth and Tooth Care:

Mother:

- See dentist for regular care, and start early in pregnancy
- Brush and floss teeth twice a day. This reduces the spread of tooth decay to the baby or child.

Child:

- Brush twice a day (especially before bed) using a tiny amount of fluoride toothpaste.
- If your baby has no teeth, use a clean warm cloth to gently wipe the inside of baby's mouth. This should be done after feedings and before bedtime.
- Clean teeth and gums every day
- If you see white spots on the teeth, see the dentist!!
- See dentist by 1st birthday!

[For Reference]

Discomfort During Tooth Development (Eruption)- 6 to 8 Months

Parents have a difficult time when their babies are going through tooth development. Babies undergo pain, irritation, and bad appetite, which worry the parents.

Here are some suggestions for parents to help relieve their child from discomfort:

Cranky Baby

- Parents should spend more time with their baby. Play games with them to keep their mind off of their irritation, that the tooth development is causing.

Drooling

- Wipe your child's mouth and change their bibs often to keep the child clean.

Gum Irritation

- Gum irritation is frequent during tooth development. To help relieve the child's gum irritation, let the child bite on a plastic liquid filled teething ring, which should be cleaned and chilled, to reduce the irritation.

Swollen Gums

- Swollen gums are normal in the process of tooth development. The gums tend to turn red or blue, and that is not normal. In this case, the parent should take the child to the dentist.

[For Handout]

Tips For Happy Smiles

<u>Smile Check For Parents:</u> 6-18 months

- Wash your hands.
- Lift your child's upper lip and look at their gums and teeth.
- Try to examine the inside and outside of the tooth surface.
- As the baby gets older check the back teeth.
- Early decay may appear if white or brown spots are visible on teeth.
- Contact your dentist if you notice any problems.

<u>Brushing Your Infant's Teeth:</u> 6-18 months

- Choose a time after feeding when your infant is not fussy or tired.
- Place your infant on a changing table, bed, floor, or lap.
- Cradle your infant's head with one arm and wipe or brush with the opposite hand.
- Sing, talk, and smile with your infant while cleaning their teeth.
- Clean their teeth twice a day.
- Allow your infant to watch you brush your teeth, which helps teach the importance of good oral hygiene.
-

<u>Caring for Your Toddler's Teeth</u>: 18-36 months

- Look at your child's teeth and gums at least once a month, so you can see if there any differences or problems in time.
- When your child is two, you can use a small amount (pea size) of fluoride toothpaste.
- Use a soft bristle toothbrush, and lift your child's lip to brush along the gum lines and behind the teeth.
- When you brush your child's teeth at night, do not give your child anything to eat, but you can give them water. This will prevent from any cavities forming.
- If you have trouble brushing your child's teeth:
    - Have them stand in front of the mirror with their back to you, so they can see you brush their teeth.
    - Have your child lay on the floor
    - Have your child rest their head in your lap
- Be an example, let your infant watch you brush your teeth. This helps teach the importance of good oral hygiene.

[For Handout]

How to Respond to a Dental Emergency for your child:

***Keep in First Aid Kit**

Emergency	What To Do?
Toothaches	• Child needs to see a dentist ASAP. • Do not use heat or place aspirin on tooth or gums.
Chipped or Broken Teeth	• Save any pieces. Rinse the mouth using warm water; rinse any broken pieces. • If there's bleeding, apply a piece of gauze to the area for about 10 minutes or until the bleeding stops. • Apply a cold compress to the outside of the mouth, cheek, or lip near the broken/chipped tooth to keep any swelling down and relieve pain. • See your dentist as soon as possible.
Knocked-out tooth	• Do not try to put a baby tooth back in the socket. • Place in cool milk. • Take the child and the tooth immediately to the dentist.
Bitten Lip or Tongue	• Apply direct pressure to the bleeding area with a clean cloth. • If swelling is present, apply cold compresses. • If bleeding continues, go to the hospital emergency room.

For further information:
http://www.webmd.com/oral-health/guide/handling-dental-emergencies

[For Reference/Handout]

Facts About Children's Teeth

Infant Teeth

- Talk to your baby's doctor about breastfeeding.
- Breastfeeding is best for your baby.

*If you cannot breastfeed your baby, follow these tips about bottle-feeding:

- Only use breast milk or formula in your baby's bottle.
- Don't put juice your baby's bottle.
- Don't put your baby to bed with a bottle
- Hold your baby when bottle-feeding.

Be Alert Of Baby's Oral Hygiene

- Talk to your baby's dentist about making sure your child gets enough fluoride each day.
- Bacteria that cause cavities can be passed from you to your baby:
    - Do not share utensils, taste foods, or clean your baby's pacifiers in your mouth.
- Wipe your baby's gums with a clean lukewarm washcloth after feedings.
-

Infant's First Tooth

- A baby's first tooth develops around 6 months.
- Use a soft bristle toothbrush, for the baby's first tooth, and warm water. Do not use toothpaste.
- If your baby is feeling pain, make sure to use a wet washcloth or a cold teething ring.

Nutrition for A Healthy Infant/Toddler Smile

- Keep the doctor's advice in mind for your child's healthy smile. For example, baby cereal, baby fruits, and vegetables.
- Give your child to a half of cup of 100% fruit juice, once a day. No sugar added.
- Help your child use a sippy cup or a cup, when he or she is around 6 months.

Nutrition For Child (Continued)

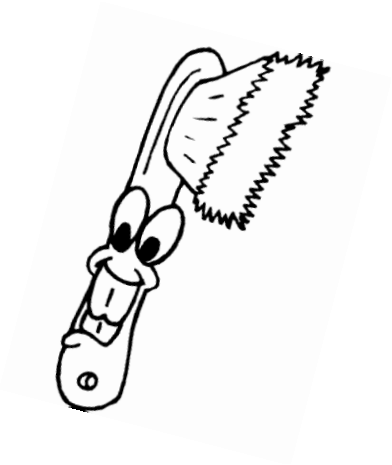
- Following the first year, they start eating solid foods.
- Introduce your child to healthy snacks, like:
    - Cheese
    - Yogurt
    - Vegetables
    - Fruit
- Healthy drinks, your child will benefit from:
    - Milk
    - Water
    - 100% fruit juice
- Limit your child from sugary foods and drinks.

Proper Care For Child's Teeth

- When your child turns 3 years old, your child should have all 20 teeth.
- When brushing child's teeth make sure to use a small amount of fluoride toothpaste, with a child size toothbrush.
- Be alert when brushing the child's teeth, make sure he or she does not swallow the toothpaste.
- Schedule your toothbrush times, and make it a routine for everyday!
    - Help brush their teeth 2 times a day.
- Do not share toothbrushes.

[For Reference]

Activities for the Children



- **Coloring Pages:**
  http://www.coloring.ws/dental.htm
  Tooth Fairy Certificate:
  http://www.dltk-teach.com/t.asp?b=m&t=http://www.dltk-teach.com/books/images/btoothcertificate.gif
- **Tooth Brushing Chart:**
  http://www.colgate.com/app/Kids-World/US/Games-And-Activities.cvsp?Game=Brushchart
-
- **Experimental Activity:**
-
  - **In class or home demonstration:**
    1. Get three white-shelled hard-boiled eggs.
    2. Coat one egg's shell with fluoride toothpaste.
    3. Put one egg in a cup of water (control- explain need for control group), one in Coke, and the one with toothpaste coating in another cup of Coke.
    4. Leave for a day or two. The Coke egg will turn brown, but the toothpaste coated one will be protected.

[For Reference/Handout]

Free/Affordable Dental Care

University Of Pittsburgh School of Dental Medicine Student Clinic

3501 Terrace St, Salk Hall
Pittsburgh, PA 15261
(412) 648-8616

Hours: Monday through Friday, 8 a.m. – 4:30 p.m., by appointment only.

Services: All, including a walk-in emergency clinic

Patient Eligibility: No Criteria

Fees:
-Fee-for-service; some procedures require a down payment.
-Medical Assistance and other insurances are accepted.
-Reduced fees are available for low-income patients.

Area Served: Anyone in need

Contact: Patient Representative: (412) 648-8616

Website: http://www.dental.pitt.edu/patients/

Primary Care Health Services, Inc. –Rankin Family Health Center

300 Rankin Blvd
Rankin, PA 15104
(412) 351-4555

Hours: Monday, 11 a.m. – 7:30 p.m. and Tuesday through Friday, 9 a.m. – 5:30 p.m.

Services: General dentistry, oral surgery, orthodontics, endodontics, periodontics and prosthodontics.

Patient Eligibility: Care will be provided to anyone in need.
Fees: Contact the center for information on accepted insurance plans or other payment methods.

Area Served: Allegheny County
Contact: Wilford A. Payne, Executive Director, (412) 244-4700
Website: www.pchspitt.org

Primary Care Health Services, Inc. – Manchester West End Family Dental Center

441 South Main St
Pittsburgh, PA 15220
(412) 922-5636

Hours: Monday, 10:30 a.m. – 7 p.m. and Tuesday, 8:30 a.m. – 5 p.m.

Services: General dentistry and limited oral surgery.

Patient Eligibility: Provides care to anyone in need.

Fees: Contact the center for information on accepted insurance plans and other payment options.

Contact: Wilford A. Payne, Executive Director, (412) 922-5636

Website: www.pchspitt.org

Primary Care Health Services, Inc. – Hill House Health Center

1835 Center Ave
Pittsburgh, PA 15219
(412) 261-0937

Hours: Monday, 11 a.m. – 7:30 p.m. and Tuesday through Friday, 9 a.m. – 5:30 p.m.

Services: General dentistry, oral surgery, orthodontics, endodontics, periodontics and prosthodontics.

Patient Eligibility: Care will be provided anyone in need.

Fees: Contact the center for information on accepted insurance plans and other payment options.

Area Served: Allegheny County

Contact: Wilford A. Payne, Executive Director, (412) 244-4700

Website: www.pchspitt.org

[For Reference/Handout]

Primary Care Health Services, Inc. – Alma Illery Medical Center

7227 Hamilton Avenue
Pittsburgh, PA 15208
(412) 244-4700

Hours:
Monday, Wednesday, Thursday and Friday, 8:30 a.m – 5 p.m., Tuesday, 10:30 a.m. – 8 p.m. and every other Sunday, 9 a.m. – 1 p.m.

Services: General Dentistry

Patient Eligibility: Care will be provided to anyone in need.

Fees: Contact the center for information on accepted insurance plans and other payment options; sliding fee scale available for low-income patients.

Area Served: Allegheny County

Contact: Wilford A. Payne, Executive Director, (412) 244-4700

Website: www.pchspitt.org

Primary Care Health Services, Inc. – West End Health Center

415 Neptune St
Pittsburgh, PA 15220
(412) 921-7200

Hours: Monday, 11 a.m. – 7:30 p.m. and Tuesday through Friday, 9 a.m. – 5:30 p.m.

Services: General dentistry, oral surgery, orthodontics, endodontics, periodontics and prosthodontics.

Patient Eligibility: Care will be provided anyone in need.

Fees: Contact the center for information on accepted insurance plans and other payment options.

Area Served: Allegheny County

Contact: Wilford A. Payne, Executive Director, (412) 244-4700

Website: www.pchspitt.org

[For Reference/Handout]

East Liberty Family Health Services

7171 Churchland Street
Pittsburgh, PA 15206
(412) 345-0400

Hours: Monday, Tuesday, Thursday and Friday, 8 a.m. – 4 p.m. and Wednesday, 8 a.m. – 1:30 p.m.

Services: General Dentistry

Patient Eligibility: Care will be provided to anyone in need.

Fees: Contact the center for information on accepted insurance plans or other payments options.

Area Served: Pittsburgh and the surrounding area. Please note the bus tickets are furnished upon request.

Contact: Lynne Medley- Long, Executive Director, (412) 361-8284

Website: www.elfhcc.com

Donated Dental Services – Pennsylvania Donated Dental

907 West Street, 2nd Floor
Pittsburgh, PA 15221
(412) 243-4866
(412) 247-7815 -Fax
(888) 683-9158

Hours: By appointment only
Services: Major dental treatment, including oral surgery, periodontics, orthodontics, endodontics, and prosthodontics. (Dentists provide treatment in their own offices)

Patient Eligibility: Applicants must disabled or elderly (receiving SSI, SSDI, or SSA). In addition, applicants need to meet financial guidelines, have no dental insurance and have major dental need. Children with chronic illnesses, emotional issues, developmental delays, or learning issues also may be eligible for the program.

Fees: Free

Area Served: Allegheny County, Armstrong, Beaver, Bedford, Blair, Bradford, Butler, Cambria, Cameron, Centre, Clarion, Clearfield, Clinton, Columbia, Crawford Elk, Erie, Fayette, Forest,

Greene Huntingdon, Indiana, Jefferson, Juniata, Lawrence, Luzerne, Lycoming, McKean, Mercer, Mifflin, Montour, Northumberland, Pike, Potter, Snyder, Somerset, Sullivan, Susquehanna, Tioga, Union, Venango, Warren, Washington, Wayne, Westmoreland and Wyoming counties.

Catholic Charities Free Health Care Center

Suite 301
212 Ninth Street (Corner of 9th & Liberty)
Pittsburgh, PA 15222
(412) 456-6911

Hours: Monday through Friday, 9:00 a.m. – 4:00 p.m., by appointment only.

Services: Cleanings, dentures (partial & full), exams, X-rays, extractions, fillings, root canals and single crowns

Patient Eligibility: Working individuals, ages 18-64, with no insurance

Fees: Free

Area Served: Pittsburgh area

Contact: (412) 456-6911

Allegheny County Health Department Dental Program

The program has 4 locations to better serve Allegheny County residents.

Hill District Clinic
1835 Center Avenue
Pittsburgh, PA 15219
(412) 392-4441

Lawrenceville Clinic
3936 Butler Street
Pittsburgh, PA 15201
(412) 578-8169

McKeesport Clinic
Wander Building
339 Fifth Avenue
McKeesport, PA 15132
(412) 664-8858

[For Reference/Handout]

Southside Clinic
Mt. Oliver Family Health Center
1630 Arlington Avenue
Pittsburgh, PA 15210
(412) 432-1620

***The clinic details described below are the same for each location.**

Hours: By appointment only.

Services: Cleanings, fluoride treatments, dental health education, exams, fillings, sealants, extractions, and space maintainers.

Patient Eligibility: Allegheny County children, ages 1-20, who meet financial guidelines, Accepts Medical Assistance. Contact the center for more information.

Fees: Free

Contact: Dr. Larry Kanterman, Dental Administrator, (412) 578-8378

Website: www.achd.net

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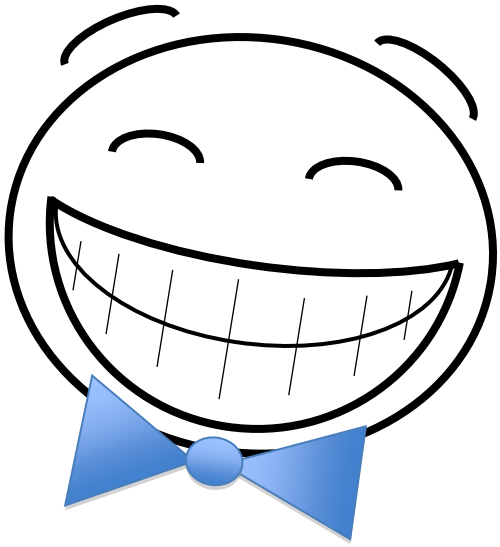
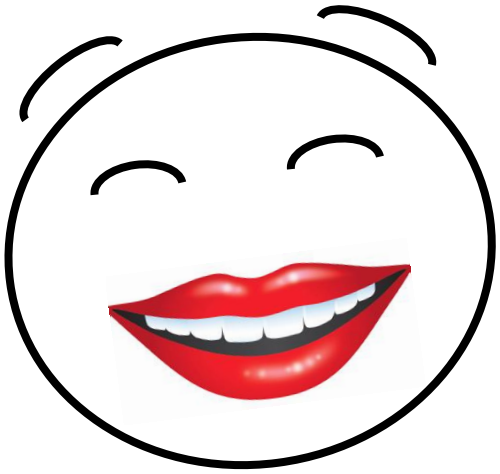
APPENDIX C

Adult Oral Health





Ages: 17 to 60

Users Guide

Each oral health informational book I constructed is for a different population, which includes:

- Children's Oral Health Booklet from the ages of 0 to 5 years old
- Adult Oral Health Booklet from the ages of 17 to 60 years old
- Senior Oral Health Booklet from the ages of 60 and over.

All three of the booklets serve one purpose and it is for the staff to help educate clients about oral health and hygiene. Since there are three populations, it is best for the staff to choose a booklet, which is appropriate for the age group of the clients during home visits or curriculum time in their program. The information for all booklets range from tips for up keeping of oral health hygiene, education about tooth development, how to brush and floss teeth, nutritional guidelines, information for pregnant women and oral health issues. Also, the booklets reading levels range from fourth grade to seventh grade, which will make it easier for the clients to understand.

The pages are set up for staff members to read through easily, and to teach the information to their clients. Each page has an indication whether to share a copy of the page with the client, or use it as a reference. If the page is marked "For Handout", it is for the client to use as reference at home. If it is marked "For Reference", the page is for the use of staff and for staff to share with client during the time of home visit or with in a curriculum they have for the day. Also, there are pages that are marked "For Reference/Handout", which means to share a copy with the client during the visit or during curriculum time.

For example, in the Elderly Booklet, there is a section called "Concerning Problems," which is for staff to see what different oral diseases look like and it is marked " For Reference". This page is solely for the staff to share with the clients for information regarding the identification of various oral diseases. This can be utilized as an early warning analysis to allow the client time to seek preventative measures from their dentist.

While this guide covers a wide array of oral health topics, the best means of information is always your dentist or dental professional. The goal of this guide has been to provide supplementary education to the reader in regards to basic preventative measures for dental ailments.

*** * * ***

[For Reference/Handout]

How to Sustain Excellent Oral Health

CDC Fact Sheet:

1. Drink fluoridated water and use fluoride toothpaste. Fluoride's protection against tooth decay works at all ages.
2. Take care of your teeth and gums. Thorough tooth brushing and flossing to reduce dental plaque can prevent gingivitis—the mildest form of gum disease.
3. Avoid tobacco. In addition to the general health risks posed by tobacco, smokers have 4 times the risk of developing gum disease compared to non-smokers.
    a. Tobacco use in any form—cigarette, pipes, and smokeless (spit) tobacco—increases the risk for gum disease, oral and throat cancers, and oral fungal infection (candidiasis).
    b. Spit tobacco containing sugar increases the risk of tooth decay. Additional information is available at http://www.cdc.gov/nccdphp/publications/CDNR/.
4. Limit alcohol. Heavy use of alcohol is also a risk factor for oral and throat cancers. When used alone, alcohol and tobacco are risk factors for oral cancers, but when used in combination the effects of alcohol and tobacco are even greater.
5. Eat wisely. Adults should avoid snacks full of sugars and starches. Limit the number of snacks eaten throughout the day. The recommended five-a-day helping of fiber-rich fruits and vegetables stimulates salivary flow to aid re-mineralization of tooth surfaces with early stages of tooth decay.
6. Visit the dentist regularly. Check-ups can detect early signs of oral health problems and can lead to treatments that will prevent further damage, and in some cases, reverse the problem. Professional tooth cleaning also is important for preventing oral problems, especially when self-care is difficult.
7. Diabetic patients should work to maintain control of their disease. This will help prevent the complications of diabetes, including an increased risk of gum disease.
8. If medications produce dry mouth, ask your doctor if there are other drugs that you can use. If dry mouth cannot be avoided, drink plenty of water, chew sugarless gum, and avoid tobacco and alcohol.
9. Have an oral health check-up before beginning cancer treatment. Radiation to the head or neck and/or chemotherapy may cause problems for your teeth and gums. Treating existing oral health problems before cancer therapy may help prevent or limit oral complications or tissue damage. http://www.cdc.gov/OralHealth/publications/factsheets/adult_oral_health/adults.htm

Concerning Problems for Adults: [For Reference/Handout]

Plaque and tartar lead to a number of problems:

Disease	Description
Gum Disease	Gum disease is an inflammation of the tissues that hold your teeth in place. If it is severe, it can destroy the tissue and bone, leading to tooth loss. Gum disease is caused by plaque, a sticky film of bacteria that constantly forms on the teeth.
Gingivitis	The first stage of gum disease, which is the only stage that is reversible. Swollen, inflamed, bleeding gums
Periodontitis	Periodontitis a serious gum infection that destroys the soft tissue and bone that support your teeth. Periodontitis can cause tooth loss or worse, an increased risk of heart attack or stroke and other serious health problems.
Halitosis	Bad Breath
Abscesses	Untreated Cavity Infection of Tooth and Gum
Sensitivity	If hot or cold foods make you flinch. Sensitivity in your teeth can happen for several reasons, including: • Tooth decay (cavities) • Fractured teeth • Worn fillings • Gum disease • Worn tooth enamel • Exposed tooth root

Treatments for all oral health diseases listed are preventable and treatable by doing the following:

- Brush twice a day
- Floss
- Avoid Sugary Foods
- Schedule regular dental visits

ADA: American Dental Association: http://www.mouthhealthy.org/en/adults-under-40/

[For Reference]

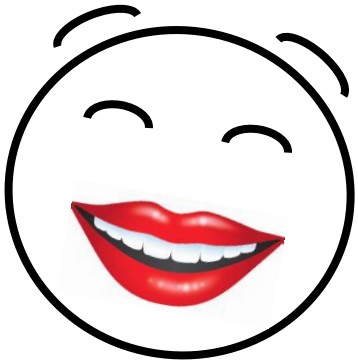
Major Risk Factors	Potential Outcomes
Diet high in sugar	Tooth Decay
Smoking	Gum disease, oral cancer, delayed wound healing
Heavy Alcohol Use	Oral Cancer
Poor Oral Hygiene	Gum Disease, Tooth Decay
Diabetes	Gum Disease
Pregnancy	Gum Disease (gingivitis)

The Website Below Will Help Further Your Knowledge About the Major Risk Factors:

http://wellnessproposals.com/wellness-library/dental/presentations-dental-health-oral-health/

[For Reference]

Risks During Pregnancy



"Pregnancy Gingivitis":

- Can cause red, swollen, tender gums.
- It affects most pregnant women in the early second month of pregnancy.
- It can cause bacteria to enter bloodstream through gums, which will travel to the uterus and induce premature labor.

Pregnancy Tumors:

- May appear due to swollen gums.
- The tumors can be left alone unless it is uncomfortable or causes problems with:
    - Chewing
    - Brushing
    - Flossing
- The dentist may decide to remove it.

Prevention:

- To prevent gingivitis
    - Visit dentist regularly.
    - Keep teeth clean, especially by the gum-line.
    - Brush teeth twice a day with a fluoride toothpaste.
        - If toothpaste causes morning sickness, rinse your mouth with:
            - Water
            - Antiplaque and Fluoride mouthwashes
    - Floss twice a day.

http://www.mouthhealthy.org/en/pregnancy/concerns/

Nutrition During Pregnancy: [For Reference/ Handout]

To assist you in making healthy eating choices, the National Maternal and Child Oral Health Policy Center has compiled this list of tips to follow during pregnancy:

- Eat healthy foods, such as:
  - Fruits; vegetables; whole-grain products such as cereals, breads, or crackers; and dairy products like milk, cheese, cottage cheese, or unsweetened yogurt.
- Eat fewer foods high in sugar including:
  - Candy, cookies, cake, and dried fruit; Drink fewer beverages high in sugar, including juice, fruit-flavored drinks, or soft drinks.
- Snacks:
  - Foods low in sugar
    - Fruits, vegetables, cheese, and unsweetened yogurt.
  - Read food labels so you can choose foods lower in sugar.
- If you have trouble with nausea:
  - Try eating small amounts of healthy foods throughout the day.
- Drink water or milk instead of juice, fruit-flavored drinks, or soft drinks.
- Drink water throughout the day, especially between meals and snacks.
- To reduce the risk of birth defects, get 600 micrograms of folic acid each day throughout your pregnancy.
- Eat foods high in folate and foods with folic acids, including:
  - Asparagus, broccoli and leafy green vegetables such as lettuce and spinach
  - Legumes (beans, peas, lentils)
  - Papaya, tomato juice, oranges or orange juice, strawberries, cantaloupe and bananas
  - Grain products fortified with folic acid (breads, cereals, cornmeal, flour, pasta, white rice.)

http://www.mouthhealthy.org/en/nutrition/Nutrition-Tips-for-Pregnancy.aspx

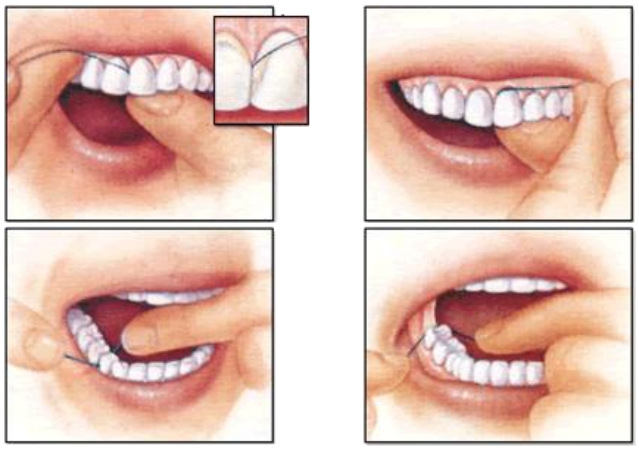
[For Reference/Handout]

How To Brush Teeth Correctly:

- Buy a soft bristle toothbrush.
- Tilt toothbrush to a 45-degree angle against the gum line and gently brush in circular motion.
- Inner tooth surface continue to brush at 45 degrees back and forth in circular motion.
- Brush the front teeth vertically in a soft circular motion to remove any pellicle (protein produced by saliva which house cariogenic bacteria- like streptococci which is more commonly known as **plaque**).
- Also brush biting surfaces.
- DO NOT FORGET THE TONGUE! The tongue can house over 300 million plaque producing bacteria only after a couple of hours after brushing.

http://wellnessproposals.com/wellness-library/dental/presentations-dental-health-oral-health/

How To Floss Teeth Properly:



To receive maximum benefits from flossing, use the following proper technique:

- Starting with about 18 inches of floss, wind most of the floss around each middle finger, leaving an inch or two of floss to work with.
- Holding the floss tightly between your thumbs and index fingers, slide it gently up-and-down between your teeth.
- Gently curve the floss around the base of each tooth making sure you go beneath the gum line. Never snap or force the floss, as this may cut or bruise delicate gum tissue.
- Use clean sections of floss as you move from tooth to tooth.
- To remove the floss, use the same back-and-forth motion to bring the floss up and away from the teeth.

[For Reference/Handout]

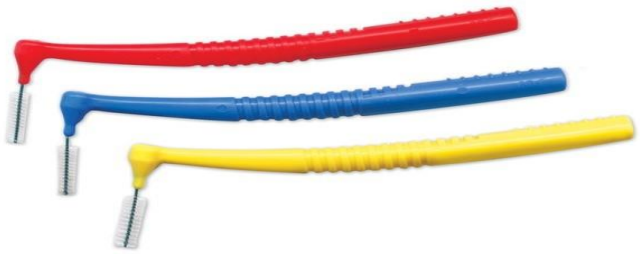
Assisting others to Brush and Floss their Teeth:

Brushing Teeth:

- Support the individual's head, either on your lap or have them lay on the floor.
    - If on the floor, have the person sit away from you. Then you sit behind them on a chair, where they rest their heads against your knees.
    - If on your lap, have a pillow for them to rest their head.
- Take care that the person does not choke or gag while their head is tilted, so it is easy to toothbrush freely.
- Turn the head slightly to one side, to easily see inside the mouth.
- Use small amount of toothpaste.

Flossing Teeth:

- Flossing someone else's teeth is the same way to brush their teeth.
- There are different kinds of flossing utensils that can be used.
    - Interdental or interproximal brushes – These brushes will floss the teeth and will be helpful for the person who is assisting to floss.



http://www.colgate.com/app/CP/US/EN/OC/Information/Articles/Oral-and-Dental-Health-Basics/Oral-Hygiene/Brushing-and-Flossing/article/How-to-Floss.cvsp

[Handout]

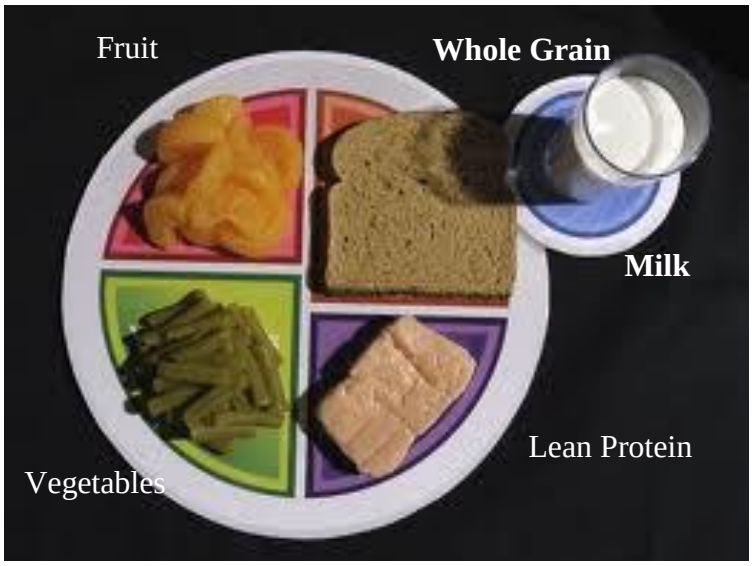
Nutrition For Healthy Teeth
Making Good Choices

When choosing your meals and snacks, think about these tips for y teeth and overall health:

- Drink plenty of water.
- Eat and maintain 5 major food groups, containing
  - Whole grains
  - Milk and other dairy products
  - Fruits
  - Vegetables
  - Lean protein:
    - Beef
    - Skinless Poultry and Fish
    - Dry beans
    - Peas
    - Legumes

-Try to limit the number of snacks you eat.
-If you do snack, choose something that is healthy like fruit or vegetables or a piece of cheese.

- Foods that are eaten as part of a meal cause less harm to teeth than eating lots of snacks throughout the day, because more saliva is released during a meal.
- Saliva helps wash foods from the mouth and lessens the effects of acids, which can harm teeth and cause cavities.



ADA: American Dental Association
Video: Diet And Dental Health
http://www.mouthhealthy.org/en/az-topics/d/diet-and-dental-health.aspx

[For Reference/Handout]

Free/Affordable Dental Care

University Of Pittsburgh School of Dental Medicine Student Clinic

3501 Terrace St, Salk Hall
Pittsburgh, PA 15261
(412) 648-8616

Hours: Monday through Friday, 8 a.m. – 4:30 p.m., by appointment only.

Services: All, including a walk-in emergency clinic

Patient Eligibility: No Criteria

Fees:
-Fee-for-service; some procedures require a down payment.
-Medical Assistance and other insurances are accepted.
-Reduced fees are available for low-income patients.

Area Served: Anyone in need

Contact: Patient Representative: (412) 648-8616

Website: http://www.dental.pitt.edu/patients/

Primary Care Health Services, Inc. –Rankin Family Health Center

300 Rankin Blvd
Rankin, PA 15104
(412) 351-4555

Hours: Monday, 11 a.m. – 7:30 p.m. and Tuesday through Friday, 9 a.m. – 5:30 p.m.

Services: General dentistry, oral surgery, orthodontics, endodontics, periodontics and prosthodontics.

Patient Eligibility: Care will be provided to anyone in need.
Fees: Contact the center for information on accepted insurance plans or other payment methods.

Area Served: Allegheny County
Contact: Wilford A. Payne, Executive Director, (412) 244-4700

Website: www.pchspitt.org

Primary Care Health Services, Inc. – Manchester West End Family Dental Center

441 South Main St
Pittsburgh, PA 15220
(412) 922-5636

Hours: Monday, 10:30 a.m. – 7 p.m. and Tuesday, 8:30 a.m. – 5 p.m.

Services: General dentistry and limited oral surgery.

Patient Eligibility: Provides care to anyone in need.

Fees: Contact the center for information on accepted insurance plans and other payment options.

Contact: Wilford A. Payne, Executive Director, (412) 922-5636

Website: www.pchspitt.org

Primary Care Health Services, Inc. – Hill House Health Center

1835 Center Ave
Pittsburgh, PA 15219
(412) 261-0937

Hours: Monday, 11 a.m. – 7:30 p.m. and Tuesday through Friday, 9 a.m. – 5:30 p.m.

Services: General dentistry, oral surgery, orthodontics, endodontics, periodontics and prosthodontics.

Patient Eligibility: Care will be provided anyone in need.

Fees: Contact the center for information on accepted insurance plans and other payment options.

Area Served: Allegheny County

Contact: Wilford A. Payne, Executive Director, (412) 244-4700

Website: www.pchspitt.org

Primary Care Health Services, Inc. – Alma Illery Medical Center

7227 Hamilton Avenue
Pittsburgh, PA 15208
(412) 244-4700

Hours:
Monday, Wednesday, Thursday and Friday, 8:30 a.m – 5 p.m., Tuesday, 10:30 a.m. – 8 p.m. and every other Sunday, 9 a.m. – 1 p.m.

Services: General Dentistry

Patient Eligibility: Care will be provided to anyone in need.

Fees: Contact the center for information on accepted insurance plans and other payment options; sliding fee scale available for low-income patients.

Area Served: Allegheny County

Contact: Wilford A. Payne, Executive Director, (412) 244-4700

Website: www.pchspitt.org

Primary Care Health Services, Inc. – West End Health Center

415 Neptune St
Pittsburgh, PA 15220
(412) 921-7200

Hours: Monday, 11 a.m. – 7:30 p.m. and Tuesday through Friday, 9 a.m. – 5:30 p.m.

Services: General dentistry, oral surgery, orthodontics, endodontics, periodontics and prosthodontics.

Patient Eligibility: Care will be provided anyone in need.

Fees: Contact the center for information on accepted insurance plans and other payment options.

Area Served: Allegheny County

Contact: Wilford A. Payne, Executive Director, (412) 244-4700

Website: www.pchspitt.org

East Liberty Family Health Services

7171 Churchland Street
Pittsburgh, PA 15206
(412) 345-0400

Hours: Monday, Tuesday, Thursday and Friday, 8 a.m. – 4 p.m. and Wednesday, 8 a.m. – 1:30 p.m.

Services: General Dentistry

Patient Eligibility: Care will be provided to anyone in need.

Fees: Contact the center for information on accepted insurance plans or other payments options.

Area Served: Pittsburgh and the surrounding area. Please note the bus tickets are furnished upon request.

Contact: Lynne Medley- Long, Executive Director, (412) 361-8284

Website: www.elfhcc.com

Donated Dental Services – Pennsylvania Donated Dental

907 West Street, 2nd Floor
Pittsburgh, PA 15221
(412) 243-4866
(412) 247-7815 -Fax
(888) 683-9158

Hours: By appointment only
Services: Major dental treatment, including oral surgery, periodontics, orthodontics, endodontics, and prosthodontics. (Dentists provide treatment in their own offices)

Patient Eligibility: Applicants must disabled or elderly (receiving SSI, SSDI, or SSA). In addition, applicants need to meet financial guidelines, have no dental insurance and have major dental need. Children with chronic illnesses, emotional issues, developmental delays, or learning issues also may be eligible for the program.

Fees: Free

Area Served: Allegheny County, Armstrong, Beaver, Bedford, Blair, Bradford, Butler, Cambria, Cameron, Centre, Clarion, Clearfield, Clinton, Columbia, Crawford Elk, Erie, Fayette, Forest, Greene Huntingdon, Indiana, Jefferson, Juniata, Lawrence, Luzerne, Lycoming, McKean,

Mercer, Mifflin, Montour, Northumberland, Pike, Potter, Snyder, Somerset, Sullivan, Susquehanna, Tioga, Union, Venango, Warren, Washington, Wayne, Westmoreland and Wyoming counties.

Catholic Charities Free Health Care Center

Suite 301
212 Ninth Street (Corner of 9th & Liberty)
Pittsburgh, PA 15222
(412) 456-6911

Hours: Monday through Friday, 9:00 a.m. – 4:00 p.m., by appointment only.

Services: Cleanings, dentures (partial & full), exams, X-rays, extractions, fillings, root canals and single crowns

Patient Eligibility: Working individuals, ages 18-64, with no insurance

Fees: Free

Area Served: Pittsburgh area

Contact: (412) 456-6911

Allegheny County Health Department Dental Program

The program has 4 locations to better serve Allegheny County residents.

Hill District Clinic
1835 Center Avenue
Pittsburgh, PA 15219
(412) 392-4441

Lawrenceville Clinic
3936 Butler Street
Pittsburgh, PA 15201
(412) 578-8169

McKeesport Clinic
Wander Building
339 Fifth Avenue
McKeesport, PA 15132
(412) 664-8858

[For Reference/Handout]

Southside Clinic
Mt. Oliver Family Health Center
1630 Arlington Avenue
Pittsburgh, PA 15210
(412) 432-1620

***The clinic details described below are the same for each location.**

Hours: By appointment only.

Services: Cleanings, fluoride treatments, dental health education, exams, fillings, sealants, extractions, and space maintainers.

Patient Eligibility: Allegheny County children, ages 1-20, who meet financial guidelines, Accepts Medical Assistance. Contact the center for more information.

Fees: Free

Contact: Dr. Larry Kanterman, Dental Administrator, (412) 578-8378

Website: www.achd.net

Work Cited

"Be Mouth Healthy for Life!" *American Dental Association*. N.p., n.d. Web. 16 June 2013.

Centers for Disease Control and Prevention. Centers for Disease Control and Prevention, 10 July 2013. Web. 18 July 2013.

"Dental Health Presentations." *Corporate Wellness Programs Employee Wellness Programs RSS2*. N.p., n.d. Web. 16 June 2013.

"How to Floss." *Flossing Techniques*. N.p., n.d. Web. 18 June 2013.

APPENDIX D

Senior
Oral Health

Ages: 60 &Over

Users Guide

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- Senior Oral Health Booklet from the ages of 60 and over.

All three of the booklets serve one purpose and it is for the staff to help educate clients about oral health and hygiene. Since there are three populations, it is best for the staff to choose a booklet, which is appropriate for the age group of the clients during home visits or curriculum time in their program. The information for all booklets range from tips for up keeping of oral health hygiene, education about tooth development, how to brush and floss teeth, nutritional guidelines, information for pregnant women and oral health issues. Also, the booklets reading levels range from fourth grade to seventh grade, which will make it easier for the clients to understand.

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While this guide covers a wide array of oral health topics, the best means of information is always your dentist or dental professional. The goal of this guide has been to provide supplementary education to the reader in regards to basic preventative measures for dental ailments.

*** * * ***

[For Reference/Handout]

Keeping Up With Daily Dental Hygiene

BRUSH and FLOSS Teeth!

- Brush with fluoride toothpaste, twice a day.
- Brush with a soft bristle toothbrush, with a small head to get the hard to reach areas.
- Get a new toothbrush every 3 to 4 months.
- Floss twice or after every meal a day.

Clean Dentures

- Use denture cleaners, to get rid of the bacteria that stick to the dentures. (Full or Partial)
- DO NOT use toothpaste or household cleaner, which will ruin the dentures.
- Take dentures out of mouth for at least 4 hours for every 24 hours, to keep the lining of the mouth healthy and clean.
- Remove (partial or full) dentures at night.

Visiting The Dentist

- Make sure to have a checkup at least once a year. Do Not wait until you have pain.
    - Pain means the following:
        - Cavity
        - Oral Cancer
        - Gum Disease
- **When visiting the dentist bring the following for the check-up:**
    - List of medications/vitamins/over-the-counter medications/ herbal remedies
    - List of medical conditions and allergies
    - Information and number of health care providers, doctors and previous dentist
    - Emergency Contacts, and Someone who can help make decisions
    - Dental insurance or Medicaid cards
    - Dentures and Partials (even if you do not wear them)

http://www.mouthhealthy.org/en/adults-over-60/healthy-habits.aspx

[For Reference]

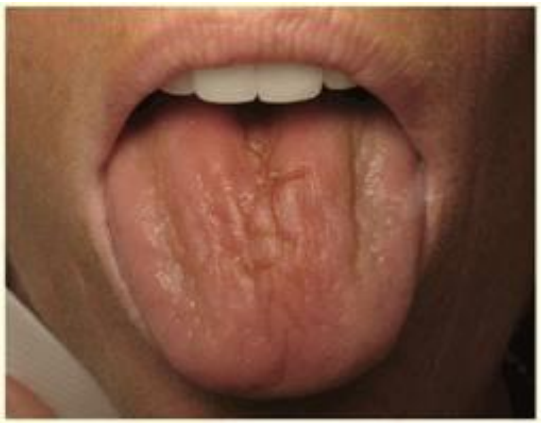
Concerning Problems

Dry Mouth:

- Dry mouth is a side effect many elderly people will go through, due to aging and many medications they use in one day.
- Can cause difficulties in chewing, tasting, swallowing, and speaking.
- It is often the common cause of **cavities** and other infections in the mouth.

Here is a way to prevent dry mouth, from the American Dental Association:

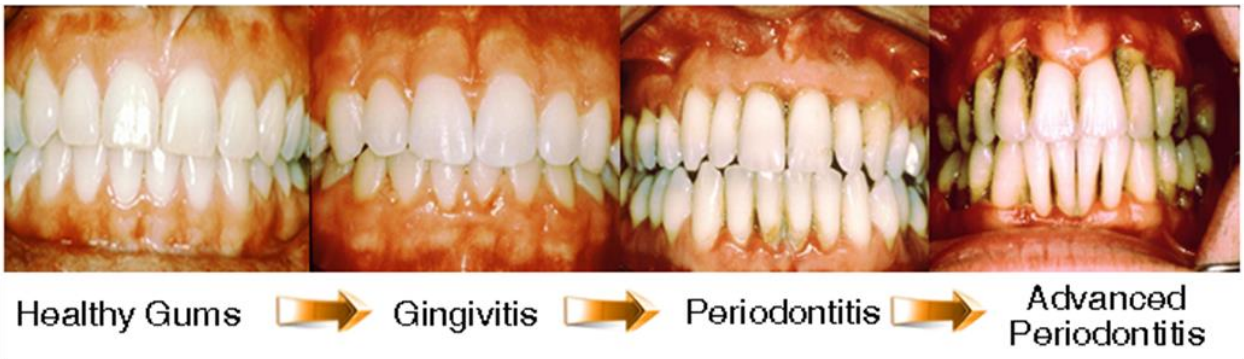
- Use over-the-counter oral moisturizers, such as a spray or mouthwash.
- Consult with a physician on whether to change the medication or dosage.
- Drink more water. Carry a water bottle, and do not wait until thirsty to drink. The mouth needs constant lubrication.
- Use sugar-free gum or lozenges to quicken saliva production.
- Use a humidifier to help keep moisture in the air.
- Avoid foods and drinks that irritate dry mouths, like coffee, alcohol, carbonated soft drinks, and acidic fruit juices.
- A dentist might apply a fluoride gel or varnish, to protect the teeth from cavities.



Gum Disease:

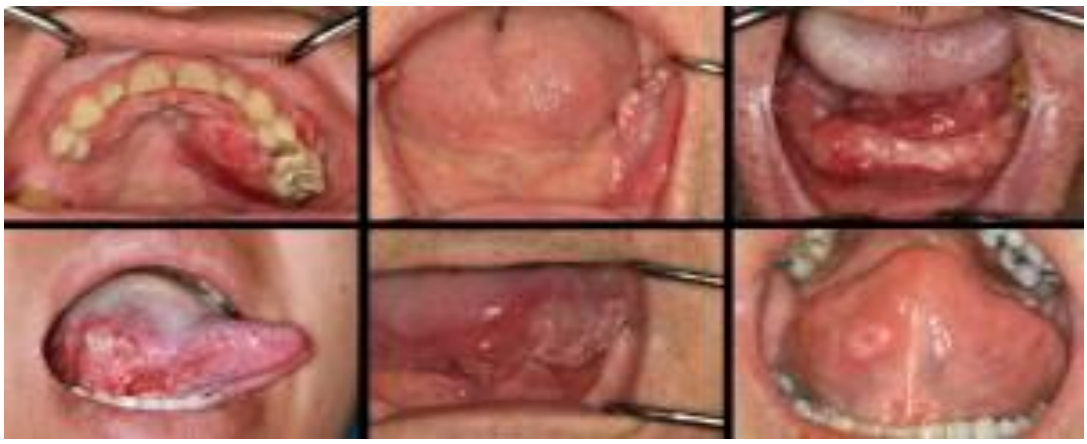
- Elder adults tend to have gum, or periodontal disease mainly caused by bacteria in plaque.
- It irritates the gum, which makes them swell, red, and more likely to bleed.
- If not treated, gums begin to move pull away from the teeth, and create deep spaces called pockets. The pockets can easily trap food particles, which begin the process of plaque building and then cavities.
- The worse part of having gum disease, is that it can lead to damaging the gums and tooth loss:
    - **Gingivitis:**
      It is a type of gum disease that causes red and bleeding gums. It is preventable, by keeping up with daily oral hygiene care, like brushing and flossing teeth.
    - **Periodontitis:**
      An infection causes the jawbone to break down around the teeth.

http://www.oramd.com/gingivitis-its-causes-and-treatment/



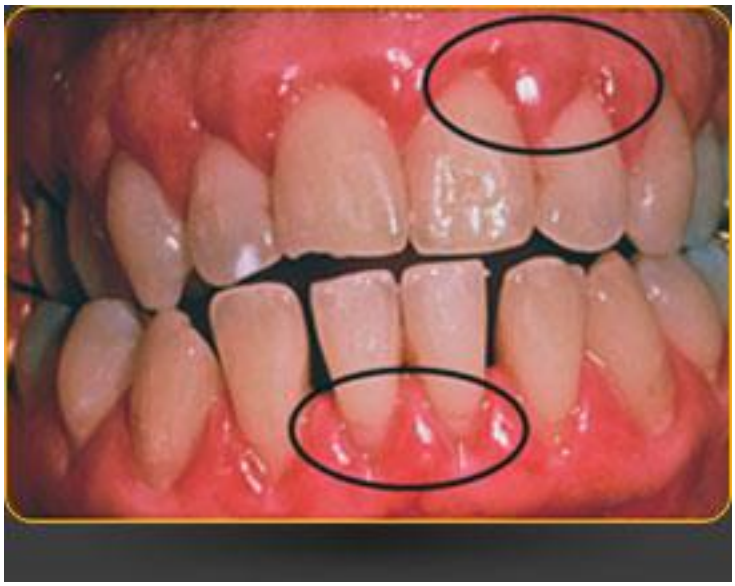
Mouth Cancer:

- It is mostly found under the tongue and sometimes includes the jawbones and glands of the head and neck.
- **Prevention and early detection is very important!** A yearly mouth exam by a physician or dental professional check up is recommended.
- **AVOID TOBACCO AND ALCOHOL**
  www.Checkdent.com



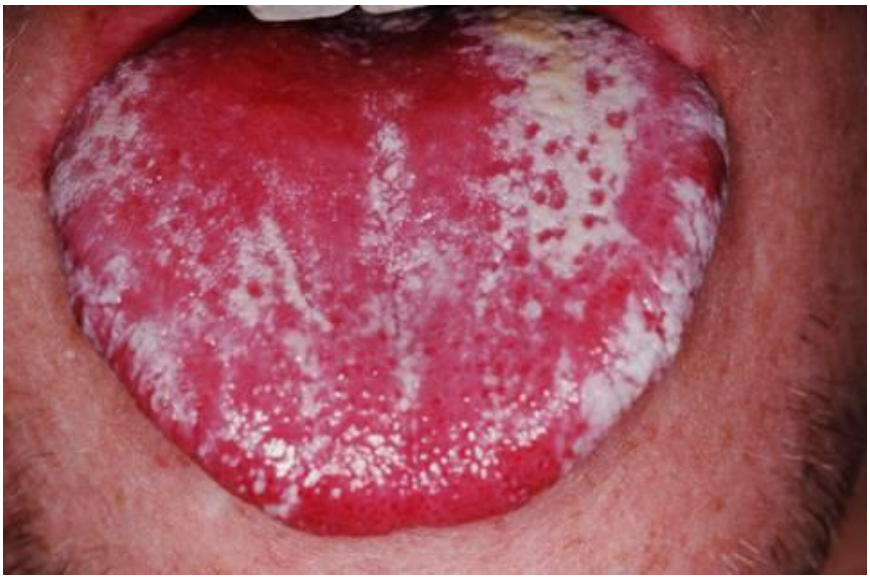
Diabetes:

- **Periodontal disease**, the disease of the gum and surrounding bones, is one of the side affect of diabetes.
  www.implantperio.com



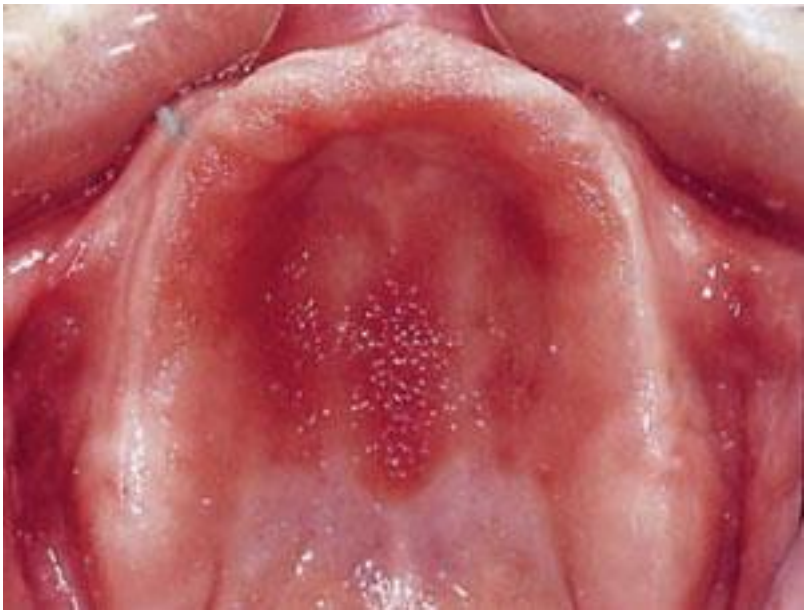
Thrush:

- Thrush is a growth of fungus in the mouth. A white area appears in the mouth and often causes sores in the corner of the mouth.
- Diseases or medications that affect the immune system can trigger the over growth of fungus.
- A mouth exam and treatment is a must to control the fungus growth.



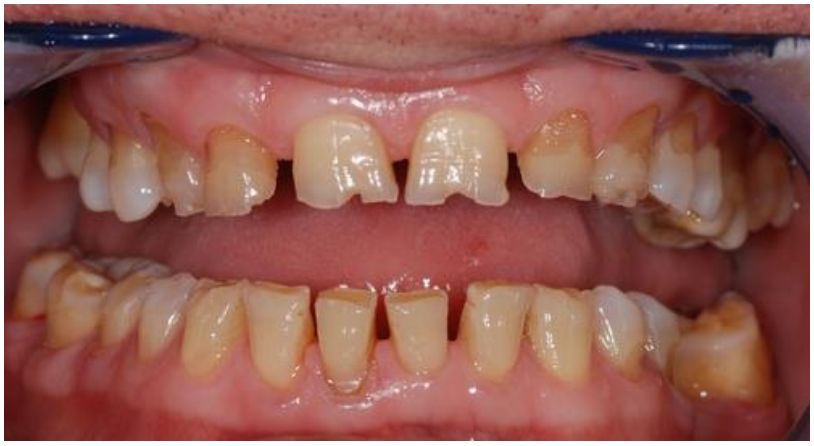
Denture Induced Stomatitis:

- It is the inflammation of the gums and the roof of the mouth under a denture, where the tissue looks very red.
- Poor fitting dentures, poor dental hygiene, a buildup of bacteria or an oral fungus can cause the condition.
- A mouth exam and treatment may correct the problem.



Acid reflux:

- It is the production of excessive stomach acid that flows up into the Esophagus and can come up into the mouth, which eats away at the teeth and irritate the gums, throat, and mouth.
- Rinsing the mouth after acid reflux is one way to help lessen the damage of the acid on the teeth and the rest of the mouth.



Heartburn Relief:

Food Facts:

Though heartburn triggers can vary from person to person, certain food and drinks are more prone to allowing stomach acid to come up into your esophagus, including:

- **Meats.** Ground beef, marbled sirloin, chicken nugget-style, and chicken/buffalo wings.
- **Fats, Oils & Sweets.** Chocolate, regular corn and potato chips, high fat butter cookies, brownies, doughnuts, creamy and oily salad dressings, fried or fatty food in general.
- **Fruits, Vegetables & Juice.** Orange juice, lemon, lemonade, grapefruit juice, cranberry juice, tomato, mashed potatoes, French fries, raw onion, potato salad.
- **Other Beverages.** Liquor, wine, coffee, and tea.
- **Grains.** Macaroni and cheese, spaghetti with marinara sauce.
- **Dairy.** Sour cream, milk shake, ice cream, regular cottage cheese.
  http://www.webmd.com/heartburn-gerd/features/heartburn-foods-to-avoid

Nutrition

[For Reference/Handout]

- Drink Plenty of Water
- Eat and maintain 5 major food groups, containing
  - Whole grains
  - Milk and other dairy products
  - Fruits
  - Vegetables
  - Lean protein:
    - Beef
    - Skinless Poultry and Fish
    - Dry beans
    - Peas
    - Legumes

To control the amount of sugar you eat, read the nutrition facts and ingredient labels on foods and beverages and choose options that are lowest in sugar.

Sample label for Macaroni & Cheese

1. Start Here
2. Check Calories
3. Limit these Nutrients
4. Get Enough of these Nutrients
5. Footnote
6. Quick Guide to % DV
   - 5% or less is Low
   - 20% or more is High

Nutrition Facts

Serving Size 1 cup (228g)
Servings Per Container 2

Amount Per Serving	
Calories 250	Calories from Fat 110
	% Daily Value*
Total Fat 12g	18%
Saturated Fat 3g	15%
Trans Fat 3g	
Cholesterol 30mg	10%
Sodium 470mg	20%
Total Carbohydrate 31g	10%
Dietary Fiber 0g	0%
Sugars 5g	
Protein 5g	
Vitamin A	4%
Vitamin C	2%
Calcium	20%
Iron	4%

* Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs.

	Calories	2,000	2,500
Total Fat	Less than	65g	80g
Sat Fat	Less than	20g	25g
Cholesterol	Less than	300mg	300mg
Sodium	Less than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

[For Reference/Handout]

Tobacco Use

- **Smokers are twice as likely to lose their teeth as non-smokers. According to a 30-year study, Tufts University has researched the relationship between smoking and tobacco use.**
  http://jdr.sagepub.com/content/76/10/1653.abstract

Smoking increases risk of **mouth pain, cavities, gum recession, gum (Eke et al.) disease** and **tooth loss. (50% of adults who smoke have gum disease)**

Smokeless Tobacco causes bad breath, discolors teeth, and leads to **tooth loss**. It decreases the sense of smell and taste. Lastly, users have a **50% greater risk** of developing **cancers** of the cheek, gums, and lining of the lips.

http://oralhealth.deltadental.com

AVOID IT!

[For Reference/Handout]

Free/Affordable Dental Care

University Of Pittsburgh School of Dental Medicine Student Clinic

3501 Terrace St, Salk Hall
Pittsburgh, PA 15261
(412) 648-8616

Hours: Monday through Friday, 8 a.m. – 4:30 p.m., by appointment only.

Services: All, including a walk-in emergency clinic

Patient Eligibility: No Criteria

Fees:
-Fee-for-service; some procedures require a down payment.
-Medical Assistance and other insurances are accepted.
-Reduced fees are available for low-income patients.

Area Served: Anyone in need

Contact: Patient Representative: (412) 648-8616

Website: http://www.dental.pitt.edu/patients/

Primary Care Health Services, Inc. –Rankin Family Health Center

300 Rankin Blvd
Rankin, PA 15104
(412) 351-4555

Hours: Monday, 11 a.m. – 7:30 p.m. and Tuesday through Friday, 9 a.m. – 5:30 p.m.

Services: General dentistry, oral surgery, orthodontics, endodontics, periodontics and prosthodontics.

Patient Eligibility: Care will be provided to anyone in need.
Fees: Contact the center for information on accepted insurance plans or other payment methods.

Area Served: Allegheny County
Contact: Wilford A. Payne, Executive Director, (412) 244-4700

Website: www.pchspitt.org

Primary Care Health Services, Inc. – Manchester West End Family Dental Center

441 South Main St
Pittsburgh, PA 15220
(412) 922-5636

Hours: Monday, 10:30 a.m. – 7 p.m. and Tuesday, 8:30 a.m. – 5 p.m.

Services: General dentistry and limited oral surgery.

Patient Eligibility: Provides care to anyone in need.

Fees: Contact the center for information on accepted insurance plans and other payment options.

Contact: Wilford A. Payne, Executive Director, (412) 922-5636

Website: www.pchspitt.org

Primary Care Health Services, Inc. – Hill House Health Center

1835 Center Ave
Pittsburgh, PA 15219
(412) 261-0937

Hours: Monday, 11 a.m. – 7:30 p.m. and Tuesday through Friday, 9 a.m. – 5:30 p.m.

Services: General dentistry, oral surgery, orthodontics, endodontics, periodontics and prosthodontics.

Patient Eligibility: Care will be provided anyone in need.

Fees: Contact the center for information on accepted insurance plans and other payment options.

Area Served: Allegheny County

Contact: Wilford A. Payne, Executive Director, (412) 244-4700

Website: www.pchspitt.org

Primary Care Health Services, Inc. – Alma Illery Medical Center

7227 Hamilton Avenue
Pittsburgh, PA 15208
(412) 244-4700

Hours:
Monday, Wednesday, Thursday and Friday, 8:30 a.m – 5 p.m., Tuesday, 10:30 a.m. – 8 p.m. and every other Sunday, 9 a.m. – 1 p.m.

Services: General Dentistry

Patient Eligibility: Care will be provided to anyone in need.

Fees: Contact the center for information on accepted insurance plans and other payment options; sliding fee scale available for low-income patients.

Area Served: Allegheny County

Contact: Wilford A. Payne, Executive Director, (412) 244-4700

Website: www.pchspitt.org

Primary Care Health Services, Inc. – West End Health Center

415 Neptune St
Pittsburgh, PA 15220
(412) 921-7200

Hours: Monday, 11 a.m. – 7:30 p.m. and Tuesday through Friday, 9 a.m. – 5:30 p.m.

Services: General dentistry, oral surgery, orthodontics, endodontics, periodontics and prosthodontics.

Patient Eligibility: Care will be provided anyone in need.

Fees: Contact the center for information on accepted insurance plans and other payment options.

Area Served: Allegheny County

Contact: Wilford A. Payne, Executive Director, (412) 244-4700

Website: www.pchspitt.org

East Liberty Family Health Services

7171 Churchland Street
Pittsburgh, PA 15206
(412) 345-0400

Hours: Monday, Tuesday, Thursday and Friday, 8 a.m. – 4 p.m. and Wednesday, 8 a.m. – 1:30 p.m.

Services: General Dentistry

Patient Eligibility: Care will be provided to anyone in need.

Fees: Contact the center for information on accepted insurance plans or other payments options.

Area Served: Pittsburgh and the surrounding area. Please note the bus tickets are furnished upon request.

Contact: Lynne Medley- Long, Executive Director, (412) 361-8284

Website: www.elfhcc.com

Donated Dental Services – Pennsylvania Donated Dental

907 West Street, 2nd Floor
Pittsburgh, PA 15221
(412) 243-4866
(412) 247-7815 -Fax
(888) 683-9158

Hours: By appointment only
Services: Major dental treatment, including oral surgery, periodontics, orthodontics, endodontics, and prosthodontics. (Dentists provide treatment in their own offices)

Patient Eligibility: Applicants must disabled or elderly (receiving SSI, SSDI, or SSA). In addition, applicants need to meet financial guidelines, have no dental insurance and have major dental need. Children with chronic illnesses, emotional issues, developmental delays, or learning issues also may be eligible for the program.

Fees: Free

Area Served: Allegheny County, Armstrong, Beaver, Bedford, Blair, Bradford, Butler, Cambria, Cameron, Centre, Clarion, Clearfield, Clinton, Columbia, Crawford Elk, Erie, Fayette, Forest, Greene Huntingdon, Indiana, Jefferson, Juniata, Lawrence, Luzerne, Lycoming, McKean,

Mercer, Mifflin, Montour, Northumberland, Pike, Potter, Snyder, Somerset, Sullivan, Susquehanna, Tioga, Union, Venango, Warren, Washington, Wayne, Westmoreland and Wyoming counties.

Catholic Charities Free Health Care Center

Suite 301
212 Ninth Street (Corner of 9th & Liberty)
Pittsburgh, PA 15222
(412) 456-6911

Hours: Monday through Friday, 9:00 a.m. – 4:00 p.m., by appointment only.

Services: Cleanings, dentures (partial & full), exams, X-rays, extractions, fillings, root canals and single crowns

Patient Eligibility: Working individuals, ages 18-64, with no insurance

Fees: Free

Area Served: Pittsburgh area

Contact: (412) 456-6911

Allegheny County Health Department Dental Program

The program has 4 locations to better serve Allegheny County residents.

Hill District Clinic
1835 Center Avenue
Pittsburgh, PA 15219
(412) 392-4441

Lawrenceville Clinic
3936 Butler Street
Pittsburgh, PA 15201
(412) 578-8169

McKeesport Clinic
Wander Building
339 Fifth Avenue
McKeesport, PA 15132
(412) 664-8858

[For Reference/Handout]

Southside Clinic
Mt. Oliver Family Health Center
1630 Arlington Avenue
Pittsburgh, PA 15210
(412) 432-1620

***The clinic details described below are the same for each location.**

Hours: By appointment only.

Services: Cleanings, fluoride treatments, dental health education, exams, fillings, sealants, extractions, and space maintainers.

Patient Eligibility: Allegheny County children, ages 1-20, who meet financial guidelines, Accepts Medical Assistance. Contact the center for more information.

Fees: Free

Contact: Dr. Larry Kanterman, Dental Administrator, (412) 578-8378

Website: www.achd.net

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