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Disparities in Oral Health: Socioeconomic Status and Policies to Increase Access to Primary Dental Care

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University of Nebraska at Omaha

**Disparities in Oral Health: Socioeconomic Status and Policies to Increase Access to
Primary Dental Care**

by

McKenzie L. Nutter

A THESIS SUBMITTED
IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE

Bachelors of Science in Biology

IN EFFORTS WITH:

University of Nebraska at Omaha Honors
Program

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December 14, 2020

Abstract

Primary dental care is a patient-centered service consisting of routine dental checkups. The oral cavity is the first point of entrance to the body for many harmful pathogens. Therefore, primary dental care is essential to not only prevent and treat conditions in the mouth, but to also reduce the number of systemic diseases in the rest of the body. However, people with higher incomes or wealth have increased access to primary dental care. People with low socioeconomic status have decreased access to primary dental care, at least in part due to difficulties in paying for separate dental insurance. Disparities in oral health are a growing problem. Preventative services need to be available to ensure everyone is receiving quality dental care. This policy analysis identifies barriers to accessing primary dental care for people with low socioeconomic status and evaluates policy solutions to increase primary dental care access and overall dental health.

Introduction

A person's health is multifaceted and affected by many different aspects of their life. These influences range from genetics and luck, to lifestyle and environment, to social and economic factors. Our knowledge of health, treatment, and technology has improved dramatically since the 1900s. Researchers have been able to use gene therapy to treat blood cancers, use the mechanisms of 3D printing for artificial body parts, and even implant neurological sensors into human brains to treat epilepsy (Heritage, 2018). From a research standpoint, these are huge medical breakthroughs that are drastically changing the longevity of the human race. But these advancements are expensive. Improvements in health are not experienced equally over the population; in fact, they are unevenly distributed by socioeconomic status. Those better off economically have the upper hand when choosing medical treatment (Oberoi et al, 2016). Those with a low income, education, or occupational status can have more extensive health problems and an earlier death than their more affluent counterparts. Over the past decade, "efforts to eliminate disparities and achieve health equity have focused primarily on eliminating diseases or illnesses and on health care services. However, the absence of disease does not automatically equate to good health" (Office of Disease Prevention and Health Promotion [ODPHP], 2020a).

Oral health has become an extremely important factor in a person's overall health. Poor oral hygiene has been linked to diseases such as cardiovascular disease and pneumonia (ODPHP, 2020b). The mouth acts as the first entry point for many harmful pathogens and ignoring regular brushing and flossing allows for these bacteria to reach the digestive, circulatory, and respiratory systems to cause further problems. Most improvements in oral health are a direct result of effective prevention and treatment efforts that come with yearly dental checkups. However, not

everyone has adequate access to dentists and their prevention methods. People without these services have greater rates of periodontal disease, oral and pharyngeal cancers, and tooth decay (ODPHP, 2020b). Major breakthroughs have occurred in society's oral health, but the lack of access to dental care is still a public health challenge. A person's ability to receive proper oral care is linked to factors such as education, income, race, and ethnicity (ODPHP, 2020b).

Secondary socioeconomic factors such as tobacco use, alcohol consumption, and diet are behavioral factors that can also lead to poor oral health. The Government Accountability Office (GAO) highlights the issue stating that it is considerably difficult for low-income children to access dental care. Additionally, the GAO reported that children on Medicaid plans experience an increase in dental visits, but still fewer than those with private insurances (ODPHP, 2020b). Socioeconomic status plays a crucial role in a person's ability to access proper dental care.

Primary dental care is the first point of contact an individual has with their oral healthcare provider. It contrasts dramatically from secondary dental care, which is a more specialized area of dentistry that treats complex problems like orthodontics for mandibular reconstruction or endodontics for a root canal (Campbell & Tickle, 2013). Primary dental care is an ongoing, patient-centered service, with some people seeing the same provider across the lifespan. Primary care is both comprehensive and integrative because it addresses the commonly encountered needs of the patient while also utilizing specialists for patients with more complex issues. Dentistry is most often a primary healthcare service and can be crucial for diagnosing additional medical conditions not directly associated with oral care (Campbell & Tickle, 2013). Forgoing primary dental checkups can be detrimental to all aspects of a patient's health. The present review of the literature discusses how factors related to socioeconomic status prevent access to

primary dental care while also outlining potential policy solutions to increase primary dental care access and overall dental health.

Social Class Defined

The term “social class” refers to one’s position in society based on several factors. Choi (2015) states that social class can be understood as a societal hierarchy from high to low based on wealth, power, behavior, and prestige. Choi also described how objective social class identifies social class standing based on socioeconomic values such as income, education, and occupation (2015). Generally, there is a direct correlation between objective social class and health – having a higher socioeconomic status (SES) equates to a better health outcome (2015). Subjective social class on the other hand, refers to an individual's perception of their own position in the social hierarchy (Choi et al., 2015). This view of social class can be a better measure of health rather than objective social class because it focuses on health-related quality of life, which describes an individual's intuition about their physical, mental, and social wellbeing. Perceptions of general health are good predictors of future health, including both mortality and morbidity. Moreover, those who have low subjective social class tend to also have poor self-rated health and therefore, more detrimental health outcomes (Choi et al., 2015).

There is a clear connection between objective and subjective social classes and health inequalities. The reasoning for why this relationship occurs, however, is disputed. First, one could argue whether low social class has led to the poor health or if the poor health has led to the decline of social class. Health problems early in life lead to an accumulation of medical bills that can be challenging for one to stay on top of. However, most chronic diseases occur later in life, well after occupations have been decided (Knott & Cox, 2015). Secondly, Knott and Cox (2015) also believe there is a cultural stigma that suggests that people with lower social class prefer a

less healthy lifestyle. It is presumed that people with lower social class consume more fatty foods, have a higher rate of drug and alcohol use, and get less exercise than those in the middle or upper class. Those in the lower class also have less money to spend on healthy foods. Despite these assumptions, people of all social classes engage in drug and alcohol use and use is not concentrated within any one social class (Knott & Cox, 2015). People in lower social classes tend to work jobs that require them to be on their feet all day. They are less likely to participate in evening activities, even though their jobs often do not provide sufficient exercise to their cardiorespiratory system (Knott & Cox, 2015). Lastly, there is a material explanation linking poverty to the health disparities experienced by people with lower social class standing. Poor living conditions, the lack of education and resources, and the higher-risk jobs performed by people with lower social class can all be a direct link to health problems. Therefore, life expectancy among those in poverty is significantly lower (Knott & Cox, 2015).

“Physicians who care for the underserved must have a number of skills, including ability to recognize that the patient may have unexpressed needs, an appreciation of local epidemiological factors, knowledge of community resources, and a willingness to take on the role of the patient’s advocate” (Huang, 2011). They may also possess critical communication skills, willingness to get to know their patients’ financial and medical history, and patience to treat multiple issues ranging from chronic diseases, emotional distress, and lifestyle counseling. Many healthcare providers follow a tradition of service by working with medically impoverished people (Huang, 2011).

The medically underserved are people with the highest disease rates and the least access to care. This population is generally low-income or uninsured. The United States Census Bureau (2019) reported that 27.5 million people (8.5% of the population) were without health insurance

in 2019. Without health insurance, a serious injury or health issue with an expensive treatment plan can result in extremely high medical bills. If not paid off in time, this medical problem can lead to poor credit and even bankruptcy. Those without health insurance are often unable to access recommended preventative measures and screenings, which can lead to worse outcomes for chronic diseases overtime. Many of the underserved populations also lack primary care providers and other health resources (Huang, 2011).

Importance of Primary Dental Care

Primary care is the basic health care one is expected to have regularly. Primary care providers include pharmacists, family doctors, ophthalmologists, and general dentists. For the consumers of these healthcare services, “this is their first point of contact with the healthcare system. That means these providers are often the first to see depression, early signs of cancer or chronic disease, and other health concerns” (Primary Care Progress, 2020). These health professionals can then work with secondary care specialists to further treat the patient. Primary care is crucial for positive health outcomes and health equity. Since the mid-19th century, healthcare has transitioned from diseased-oriented etiology to treating the interaction of predictable conditions due to environmental factors. By focusing on managing the foreseeable future rather than only the present issues, healthcare providers are able to provide more patient-centered and community-oriented care (Shi, 2012).

Primary care not only provides treatment benefits, but financial benefits, as well. Through routine medical visits, primary care can expose problems before they become a serious issue, often catching them before extensive treatment is needed. Those who have a primary care provider are 19% less likely to die at an earlier age than those who directly see specialists only when an issue presents itself (Primary Care Progress, 2020). The monetary value of primary care

is also important. Access to regular primary care checkups helps prevent patients from utilizing the emergency room, which upcharges diagnostic tests more than four times the amount they would cost at primary care clinics (Primary Care Progress, 2020). Not to mention, catching a disease early can lessen the amount of treatment a patient needs as well as reduce the number of times a patient is required to see a specialist. Primary care is estimated to cost 33% less than that of specialty care (Primary Care Progress, 2020). Thus, primary care is not only essential for preventing detrimental medical conditions but can also reduce the upfront cost of healthcare in general.

Primary care in medicine and dentistry differ slightly. They both adhere to the same foundational principles, but differ in the issues they treat, as well as the frequency of visits needed. Primary dental care visits are needed to prevent and treat diseases in the oral cavity. As a person ages, their teeth are normally susceptible to conditions such as dry mouth, root canals, and periodontitis (Gambhir, 2015). With routine dental checkups ranging from once a year to several times a year, these problems can be slowed or even entirely prevented. Primary dental care, however, is more than just treating diseases of the mouth. “For too long, the mouth has been considered separate from the rest of the body. The more we study this, the more we realize all the important connections there are” (Gambhir, 2015). There is a direct correlation between oral health and systemic diseases affecting the entire body. There are many access points of the human anatomy where pathogens can enter and cause bodily harm, such as the eyes, nose, mouth, and urogenital canals. By practicing daily oral health habits such as brushing, flossing, and rinsing, the number of pathogens entering through the oral cavity is significantly reduced (Pennsylvania Dental Association, 2008).

Periodontal disease is a condition where the gum tissue becomes severely infected. When this happens, the supportive structure of our teeth begins to weaken, and bone loss in the jawbone occurs (Pennsylvania Dental Association, 2008). This not only causes painful, puffy gums, but it can also increase the rate and frequency of tooth loss. Plaque-forming bacteria that cause periodontitis can enter the bloodstream and travel to other locations in the body. The Pennsylvania Dental Association (2008) reports that those who suffer from periodontal disease are at a substantially increased risk of cardiovascular disease, stroke, pneumonia, and pregnancy complications. Periodontitis makes patients three times more likely to develop deep vein thrombosis (blood clots) and heart disease (Pennsylvania Dental Association, 2008).

Aside from pain and discomfort, oral health diseases can complicate the tasks of speaking, chewing, and swallowing. This can affect oxygen and food consumption which can lead to an array of respiratory and nutrition problems (Pennsylvania Dental Association, 2008). The relationship between dental health and systemic health is known. Although the mouth is the main focus of oral health providers, primary dental care is relevant in preventing and diagnosing diseases of the entire body. Unfortunately, the lack of access to and utilization of primary dental care can lead to negative health consequences. To maximize the benefits of primary dental care, its importance must be recognized, and services must be available to everyone (Kane, 2017).

Additional Socioeconomic Factors

Factors affecting socioeconomic status include income, education, occupation, or a combination of the three. These affect many things, including the ability of a person to make healthy choices and their ability to afford medical care. While lower incomes are connected to negative health outcomes, there are many other factors resulting from socioeconomic status that tend to be overlooked but play an important role in dental health. Characteristics affecting oral

hygiene can be grouped into the following categories: lack of dental education, inability to afford basic home oral care, difficulties obtaining separate dental insurance, consequences of poor nutrition, and problems with primary medical care that affect quality of dental care. These issues disproportionately impact people with low socioeconomic status and need to be addressed in order to meet the needs of these patients.

Lack of Dental Education

Learning proper oral hygiene is the first step one can take to prevent dental decay. Regular brushing and flossing aids in fighting off harmful oral bacteria, which can help keep dental problems from emerging. Understanding how to properly brush and how often to floss is key to maintaining oral health. Factors like brushing too hard, not brushing every tooth surface, or using different types of toothpastes require consideration when properly caring for the teeth. However, not everybody is taught good oral hygiene during their childhood. Studies show that family income has an impact on the quality of dental education a child receives (Saldunaite et al., 2014). Parental attitudes toward the importance of their children's oral care can affect their child's dental health habits. Saldunaite (2014) also writes that oral disease also tends to be higher in low-income children in part because of the lack of education they receive on how to appropriately brush their teeth. For example, a parent who works long nights or early mornings to make ends meet may not be around to enforce good brushing habits. Similarly, a parent who has never been taught how to adequately brush their own teeth may not have the knowledge to teach their children. A young child may not be able monitor their own oral health, so having a parent or guardian who is knowledgeable on the basics of oral hygiene may help prevent a serious problem before it starts. (Saldunaite et al., 2014).

Home Oral Care Expenses

Home oral care is essential to maintaining oral health and preventing more extensive dental intervention in the future. While it may be easy for some low-income families to obtain a basic toothbrush and tube of toothpaste, others may struggle in gathering these basic necessity items. Not all patients require the same oral care practices for their unique situations. Some may be more at risk for gum disease or plaque buildup based on factors not related to socioeconomic status. In these situations, normal brushing and flossing may not help. Having personalized oral care recommendations can help slow the progression of these issues. Fluoridated mouth rinse is useful for reducing gum inflammation and symptoms of tooth decay. Interdental cleaning tools, such as waterpik flossers, may ease flossing for patients with tight spaces between their teeth. Using a high-speed electric toothbrush at home can help break up plaque for those who experience abnormally large amounts of plaque buildup (American Dental Association, 2020b). Affording these home remedies can be difficult for those who have a low income. Those with high socioeconomic status are able to afford these more expensive at home care treatments when situations like plaque buildup or gum disease arise. Ignoring these specialized remedies can be detrimental to oral health and cause further ramifications in the long run (American Dental Association, 2020b).

Obtaining Dental Insurance

According to the American Dental Association (2019a), one in every three adults ages 19-64 are without dental coverage. Additionally, only slightly more than half (59%) of adults have dental benefits through private insurance, while 7.4% of adults rely on Medicaid for dental insurance. Among children in the U.S., 10.3% do not have dental benefits (American Dental

Association, 2019a). Dental insurance is not like medical insurance; medical insurances are often used to protect patients from the large burden of medical bills after an illness or an injury strikes.

However, dental insurance is primarily used to help stop problems before they start with preventative measures. The separation between dental and medical benefits, although absurd, may be because dentistry and medicine have traditionally been viewed as separate practices, both by the healthcare community and by insurance companies themselves (Khazan, 2014).

Therefore, unless employers offer dental insurance as an employee benefit, people are either forced to pay out of pocket for dental benefits, or simply take the risk and go without dental insurance. Many people with low socioeconomic status do not have jobs that cover dental insurance and are forced to take on the financial burden of any dental issues that arise (Khazan, 2014). Although it is an option to go without dental insurance, this comes with substantial risk.

Even if someone is in great oral health, regular brushing and flossing alone cannot remove all of the cavity-causing bacteria in the mouth. Visiting the dentist once or twice a year is the only way to ensure one's mouth is completely clear of these bacteria. Additionally, Medicare Parts A and B do not cover preventative dental care, tooth extractions, or dentures, which can leave individuals over the age of 65 without the means to pay for these essential services, unless they have benefits through a current employer or independent financial means (U.S. Centers for Medicare & Medicaid Services, 2020). Medicaid does offer dental benefits to poor adults in some states. However, many dentists either do not accept Medicaid or limit the number of Medicaid patients they see every month. (Khazan, 2014).

Consequences of Poor Nutrition on Oral Health

A likely contributor to the socioeconomic patterning in diets is the cost of food. Typically, less nutritious foods are often cheaper, while higher diet quality has been associated

with an increased cost (Pecheya & Monsivais, 2016). Food expenditure can be a significant financial burden for people with lower socioeconomic status, which can make cheaper and longer lasting food options appealing, even if they are less nutritious. However, the types of foods consumed affects the health of the mouth tissue. The American Dental Association (2019b) states that having a diet high in sugar and other complex carbohydrates provide an acidic environment for dental bacteria to lurk. Frequently consuming sugary products plays a dramatic role in the development of tooth decay. Those who consume large amounts of soda, fruit juices, or other beverages high in sugar are at higher risk for enamel erosion due to the low acidity of these drinks (Pecheya & Monsivais, 2016). On the other hand, consuming calcium-rich foods, which are often more expensive, can promote the maintenance of healthy bones and teeth. Additionally, nutrition also affects how well the immune system is able to fight off plaque-forming bacteria. Lower income-families are at risk for dental erosion and cavities simply because they cannot afford nutritious foods (American Dental Association, 2019b).

Dental Effects of Medical Conditions

Inequality in healthcare between social classes has led to disproportionate levels of systemic diseases in those with low socioeconomic status. Just as conditions within the oral cavity can have an effect on the whole body, diseases elsewhere in the body can also take a toll on the teeth. Patients who cannot afford care for some medical conditions may be putting themselves at risk for certain dental diseases. Those with diabetes are more likely to develop periodontitis and dry mouth as a result. Dentists must be thorough in their treatment planning when they encounter a patient with diabetes because it is a disease that could impair the inflammatory effects of the gums, could delay postoperative wound healing, or could cause

increased severity of infection after a dental procedure is performed (American Dental Association, 2020b).

Medications used to treat high blood pressure can have side effects that are detrimental to the patient's oral health. Many of them cause dry mouth and ultimately alter the physiological makeup of the gum tissue, which can cause destruction of the supportive bone structure and cause the teeth to fall out (American Dental Association, 2020b). Patients who experience arrhythmia may have a cardiac regulator device. Having a pacemaker can make it difficult for dentists to perform certain procedures because of the electromagnetic interference that electric dental instruments can have on the regulator device. Therefore, it is likely that a dentist will not be able to properly clean the teeth to completely remove the plaque buildup, which could lead to further dental decay and oral health problems (American Dental Association, 2020b).

Osteoporosis is a condition in which the body fails to produce an adequate amount of bone tissue and is characterized by weak, brittle bones. Teeth are embedded in the jawbone, so degradation of bone mass in this area could cause extreme tooth loss and recession of the gum line. Osteoporosis could also make it difficult for patients to be properly fitted for dentures as they age (American Dental Association, 2020b). Many other systemic diseases can affect the quality of dental care one receives. By not having access to good healthcare due to socioeconomic status, one may not be able to address issues elsewhere in the body, which could increase their risk of certain dental diseases as well.

Interventions to Improve Oral Health

Dental health disparities experienced by lower income families is a growing problem and an increase in assistance and awareness is needed to help improve oral health. *Healthy People 2020* is a national project at the forefront of advocating for better dental health in these

individuals. Through increased access to preventative services and quality dental care, *Healthy People 2020* sets ambitious goals to reduce dental disparities and craniofacial diseases in all Americans (Centers for Disease Control, 2020c).

Community Water Fluoridation

The American Dental Association (2020a) has shown that drinking fluoridated water helps to reduce the number of cavities in the safest way possible. Fluoride is a natural compound that rebuilds damaged enamel, reverses early symptoms of tooth decay, and prevents the growth of plaque-causing bacteria in the mouth. According to the American Dental Association (2020a), drinking fluoridated water has been used for more than 70 years and is supported by several health organizations including the U.S. Office of the Surgeon General, the Centers for Disease Control and Prevention (CDC), and the World Health Organization. Almost all water sources have some trace amounts of fluoride already in them, but not enough to prevent tooth decay. Adding fluoride to low-income communities' water sources has already reduced the number of cavities in both children and adults by 25% since the effort began. Additionally, it is an affordable solution that has helped both families and the entire healthcare system to reduce dental care costs (CDC, 2020a).

School-Based Dental Sealant Programs

A dental sealant is a thin liquid coating that is painted on the chewing surfaces of teeth that, once hardened, form a shield on the teeth to prevent cavities for a number of years. According to the CDC (2020d), this type of program usually targets schools that serve children in low-income families because they are less likely to receive routine dental care. A sealant prevents up to 80% of cavities for the first two years after application, and up to 50% for the following four years (CDC, 2020d). The CDC (2020d) reported that children (ages 6-11) who are

without a dental sealant are three times more likely to have molar cavities. However, only less than half of all children in the United States actually have dental sealants. The CDC (2020d) reports that poorer children “are 15% less likely to have dental sealants than their affluent counterparts and twice as likely to have untreated cavities,” which can cause “pain, infection, and problems eating, speaking, and learning”. School-based sealant programs are an extremely efficient way to provide preventative dental care to children who are less likely to visit a private dental practice. Furthermore, the use of sealants can help save over 70 million dollars in dental treatment costs nationwide each year. The CDC currently funds 20 states for school-based sealant programs to support the basic oral health needs of those who cannot afford it (CDC, 2020d).

Free and Reduced Dental Clinics

There are several organizations across the country that offer reduced priced dental services to low-income families. Many universities and dental schools are an important source of quality, affordable dental care. According to the American Dental Association (2020b), university clinics are used for dental students to gain experience treating patients under faculty supervision and, because the students do not receive compensation, these clinics can provide adequate care at low costs. Dental schools receive federal or state funding to pay for the majority of expenses to offer reduced care (Department of Health and Human Services, 2020). The fee charged to the patient associated with these clinics is income-based.

Clinical trials put on by the National Institute of Dental and Craniofacial Research are another option for individuals with specific dental conditions to receive free or low-cost dental treatments. Typically, this type of care is free because researchers want specific cases for the particular condition they are studying. These research trials usually receive subsidies or grants to

offer free or reduced dental assistance. Additionally, many local health departments offer annual programs that offer basic cleanings and preventative care (Department of Health and Human Services, 2020).

Lastly, organizations like the Mission of Mercy Mobile Clinic offer basic free dental care to the uninsured or underinsured population. This non-profit group receives no government funding and relies on donations for the conditions they treat. Therefore, it can provide necessary dental care without any pre-qualifications or monetary stipulations (Mission of Mercy, 2020).

Prevention of Craniofacial Injuries and Oral Cancers

Educating the public is one of the easiest and most effective ways to detect potentially dangerous oral conditions and to protect against craniofacial injuries. The Community Preventive Services Task Force (CPSTF) seeks to educate the public about the risk factors and symptoms of oral cancers. Through community outreach programs, the CPSTF uses screenings in various clinics or health fairs to detect oral cancers and offer follow-up appointments for those with suspicious conditions. This organization also encourages the use of helmets, mouthguards, and facemasks in youth sports to prevent injuries to the skull, jaw, or teeth. The CPSTF aims to promote the use of this equipment by providing reduced costs for these items or by offering incentives when using these items. Oral diseases ranging from cancer and accidental craniofacial injuries are preventable. Thus, the goal of CPSTF is to educate the public of the basic oral healthcare knowledge in an attempt to reduce the number of cases relating to these conditions (CPSTF, 2013).

Policy Analysis Methodology

It is evident that socioeconomic status plays a major role in accessing primary dental care services. Efforts have been made to increase overall dental health and provide more access to

primary dental care through water fluoridation and sealant programs, as well reduced cost clinics. However, even with these programs available, there are still many people without primary dental care. In order to increase access to this service, dental insurance needs to be available for those with a low socioeconomic status. Dental insurance is the main source of accessing primary dental care and yet one-third of adults are without it. Implementing a policy that provides dental insurance could guarantee access to primary dental care for more patients.

A formal policy analysis is a helpful tool when deciding which policy will have the most success if implemented. For my policy analysis, I used the steps laid out by Collins (2005) to study the potential impact of proposed policies for increasing the number of low socioeconomic individuals who have dental insurance and make a policy recommendation. The steps I followed to perform a policy analysis include: 1) define the context, 2) state the problem, 3) gather evidence, 4) identify policy alternatives, 5) determine evaluation criteria, 6) weigh the tradeoffs, and 7) decide which policy to pursue. These steps provided a framework to guide my analysis of current policies and provide a policy recommendation rooted in specific health outcomes (Collins, 2005). By using this structured method, I was able to identify the best policy for providing the most access to primary dental care for people with low socioeconomic status.

Step 1: Define the Context

This step of policy analysis is crucial because many different countries apply different rules and policies to their healthcare system. Defining the context provides knowledge about the state of the country's current health status. Additionally, socioeconomic factors are not the same in every country and understanding background information to understand these determinants of health care access is an important perspective to have. To put my specific topic in context, I used expert sources such as the American Dental Association, the Centers for Disease Control and

Prevention, and the Office of the Surgeon General to perform the above literature review, which describes socioeconomic status, primary dental care, and barriers to dental health and dental insurance in the United States.

Step 2: State the Problem

To perform a policy analysis, a clear problem must be defined. A problem statement is used to address a current issue that is affecting people's health and should be revisited through the policy analysis process (Collins, 2005). There is a lack of access to dental insurance for those with a low socioeconomic status, which affects the number of primary dental care visits one has and dramatically increases their risk for oral health problems.

It is evident that people with low socioeconomic status are less likely to be able to access primary dental care services, which are essential for the health of not only the oral cavity, but the entire body. According to the CDC (2020b), only 65% of Americans had a visit to their primary dentist last year. While there have been some efforts to increase primary dental care, having dental insurance is the most consistent way to receive primary dental services, as dental insurance covers the costs of the recommended bi-annual primary dental checkups. However, the ADA (2019a) reports that only 7.6% of Americans receive dental benefits through Medicaid, while 33.6% are completely without dental coverage. This means that 33.6% of Americans either pay out of pocket for all dental services they receive or simply forgo primary dental visits all together. People with a low SES are 50% less likely to visit their dentist due to financial barriers (American Dental Association, 2019a). Forgoing primary dental care comes with significant health risks.

Step 3: Gather the Evidence

The purpose of this step is to obtain data and evidence that clearly shows significant features of the problem and provide ways this could be solved. In order to correctly do this, Collin (2005) suggests narrowly defining the policy issue. The main focus of my policy analysis is to identify and analyze policies that make dental insurance available for more people with low SES. To gather my supporting evidence, I performed the above literature review to detail the importance of primary dental care and how various socioeconomic factors hinder one's ability to receive these services. From this review I was able to gather information that outlined socioeconomic status and its relation to healthcare, as well as identify current programs and assistance methods the United States has to improve the oral health of its citizens.

Step 4: Identify Policy Alternatives

In this step policy options are identified as "alternative approaches to the problem as possible interventions in the system that hold the problem in place" (Collins, 2005). To identify policy alternatives, I conducted a literature search through *Google Scholar* using four specific terms: dental insurance, access, low-income, policy. Through the search, I identified the three following policies that closely aligned to the problem statement for this analysis: Medicaid Expansion, Medicare Inclusion, and National Dental Insurance Coverage.

Step 5: Determine Evaluation Criteria

Once alternative policy options have been identified, they must be evaluated to determine the likelihood of their outcomes. In order to perform a meaningful evaluation, criteria guidelines need to be established. Based on my problem statement along with Collin's (2005) recommendations, I chose three evaluation categories: dental access outcomes, equity value, and cost-to-benefit ratio. Dental access outcomes refers to the number of people that will now have

dental insurance due to a policy implantation who did not previously have dental insurance.

Equity value describes the percentage of low-income people out of the total number of people receiving dental insurance through the proposed policy. Cost-to-benefit ratio describes the cost to obtain dental insurance per person under a particular policy.

Step 6: Weigh the Trade Offs

After the criteria has been applied, the outcomes must be considered in relation to one another. It is unlikely that one policy option will simultaneously provide the greatest dental access outcomes, the greatest equity value, and the greatest cost-to-benefit ration, so the relative merits of each policy must be considered. In this step, I applied a ranking system for each of my evaluation criteria to guide my final recommendation.

Step 7: Decide Which Policy to Pursue

When the outcomes and tradeoffs have been assessed, a recommendation can be made. The recommendation must take into account the problem statement, the evidence, the evaluation criteria, and the projected outcomes. Based on all of these factors, I was able to recommend a policy that would increase dental insurance coverage for those with a low SES and subsequently increase the number of primary dental care visits they receive.

Policy Analysis Results

I identified three policy options that could address my guiding problem statement: Medicaid expansion, Medicare inclusion, and a national dental coverage program. The following sections identify what current policy is in place (if applicable) for that specific area of dental insurance and describes a policy option to either replace the current policy or be implemented as a new policy. The alternative policies are ones that have been proposed and not yet implemented or have been implemented somewhere other than the United States.

Alternative Policy 1: Medicaid Expansion

As of October 2020, there are 12 states that have yet to adopt Medicaid expansion, which would include coverage of primary dental care visits (Kaiser Family Foundation, 2020). Of the 38 states that have expanded Medicaid, 35 of those provide at least limited dental benefits for adults, which means that 15 states in total do not provide any dental benefits through Medicaid (American Dental Association, 2015). Medicaid expansion is not federally mandated and, therefore, states are not required to provide dental coverage to adults. States that expand Medicaid access have significantly higher access to dental insurance and, therefore, preventative care services. The following policy proposal outlines strategies that states can implement to improve adult dental benefits through Medicaid.

To increase Medicaid dental coverage, non-participating states would need to decide if it would be an asset to them based on two considerations: 1) their perception of the oral health needs of the underserved population and 2) the overarching costs associated with it. States deciding on whether or not to offer dental coverage first need to realize there is an issue. Most states recognize that oral health is an important aspect of an overall healthy lifestyle. The American Dental Association (2019a) states that low-income individuals are 50% less likely to have access to a dentist because of their financial standing. This indicates that these low-income individuals have unmet oral healthcare needs, and more often than not, states are aware of this. Recognizing the problem is a first step towards expanding Medicaid to covering dental issues. States have the opportunity to choose between three types of Medicaid dental coverage plans, including emergency services, limited services, and extensive services. Emergency services would provide attention only in certain emergency situations that cause extreme harm to the patient's mouth. Limited services provide preventative, diagnostic, and minor procedures up to

\$1000 or less per person per year. Currently, there are 16 states that provide limited dental services through Medicaid. Extensive services provide preventative, diagnostic and more complex dental procedures. The dollar cap is at least \$1000 in care per patient per year. There are currently 19 states participating in extensive dental services as of 2015 (Center for Health Care Strategies, 2015).

Extending access of even limited dental care through Medicaid expansion to the other 15 states would, at minimum, provide the preventative dental care that is needed to maintain good oral health. As of February 2020, 7.4% of the adult American population were receiving Medicaid with dental benefits while 6.1% of the adult population was receiving Medicaid without dental benefits (American Dental Association, 2019a). If the remaining 15 states provided limited dental services through Medicaid expansion policy, an additional 20 million people would have dental insurance and access to primary dental care.

Cost is a key component for states contemplating Medicaid dental expansion. The Health Policy Institute of the American Dental Association estimated that the annual cost of offering dental benefits under Medicaid for the remaining 15 states would be approximately \$417.5 million per state per year on top of existing Medicaid expenditures. This would be a 1.5% increase in Medicaid spending per state. Adding dental coverage to the remaining 15 states under Medicaid would cost the federal government about \$820.3 million on top of the already \$597.4 billion it already spends on Medicaid coverage (American Dental Association, 2015).

The strategies outlined by this policy will potentially help states overcome challenges associated with adding dental Medicaid coverage. First, states will need to expand outreach services to make sure these benefits are reaching everybody that is eligible. States will need to automatically transition current recipients into this dental expansion group. Specifically, efforts

will need to be geared towards reaching homeless people, those with criminal justice involvement, and qualified immigrants. Outreach allows the states to fully educate the beneficiaries on the scope of dental coverage options, eligibility criteria, and the importance of utilizing dental coverage. Furthermore, the point of expanding Medicaid to cover dental insurance is to increase access to primary dental care. This step promotes the utilization of dental services and ensures that the expansion will actually support the those who need it most (Center for Health Care Strategies, 2015).

Secondly, states must consider improving oral health provider participation through financial and nonfinancial incentives. This step measures the capacity of each provider office by assessing the number of dentists in each office, the ability of the provider to see new patients, and the age of the patients the dentist is willing to accept. To guarantee dental provider participation, the state needs to consider the dental reimbursement rate, as well as if they will provide a monetary reimbursement or a non-monetary reimbursement, such as opportunities for professional growth through performance feedback. Currently, some states also allow dentists to define the quantity and types of Medicaid dental patients assigned to them, which gives the provider a level of control. There are a few options that states can take to increase the number of dentists who provide Medicaid services. Ultimately, getting dentists to participate in Medicaid programs is just as important as providing the Medicaid benefits (Center for Health Care Strategies, 2015).

Lastly, states may need to consider expanding the dental workforce, depending on the population of low-income individuals and the number of dental providers. Mid-level providers, such as dental assistants and dental hygienists, can be certified to provide preventative care and minor restorative dental procedures, if needed. This would allow more providers to treat

Medicaid recipients and let the dentist focus on more advanced procedures. Some states have previously allowed the licensure of dental assistants to increase the number of dentists available. If more people take part in routine oral health care, increasing the number of providers able to provide preventative dental care may help accommodate the demand (Center for Health Care Strategy, 2015).

The suggestions outlined in this policy aim to increase the number of states offering dental coverage through Medicaid by detailing how current states offering the benefits are successful. In order to achieve the greatest clinical and equitable value from expanding Medicaid to cover dental insurance, non-participating states should consider the strategies outlined in policy one.

Alternative Policy 2: Medicare Inclusion

Medicare is a federal program that provides health insurance to individuals 65 years of age and older, as well as younger adults with long-term disability, regardless of their income or medical history. This program provides health and financial security by paying for a wide range of medical care services (Kaiser Family Foundation, 2019a). Many older adults or younger people with disabilities are unable to work, and therefore do not receive insurance benefits from an employer. They rely on this program to financially assist them in meeting their medical needs. There are four different Medicare plans that each cover a range of health services (Kaiser Family Foundation, 2019a). Medicare Part A covers inpatient hospital stays, in-home healthcare, and hospice. Medicare Part B covers any doctor visits, outpatient services, and preventative medical appointments. Medicare Part C is a Medicare Advantage plan in which beneficiaries can enroll in private health plans to receive all the benefits outlined in Medicare Parts A and B, and some benefits in Medicare Part D. Medicare Part D covers outpatient prescription drugs. Currently,

dental services such as cleanings, fillings, tooth extractions, and dentures are not covered by any Medicare plans (Kaiser Family Foundation, 2019a).

The exceptions to this include Medicare Parts A and C. Medicare Part A may pay for any severe dental services one receives if they are in the hospital and if emergency dental complications arise. Medicare Part C offers a few advantage plans in which private insurance companies are contracted with Medicare to cover some extra benefits, such as dental services. Beneficiaries still have to pay a copay to receive these extra services (Kaiser Family Foundation, 2019b). In 2019, there were 61 million people in the United States receiving Medicare benefits. Some of these beneficiaries may still have dental coverage through Medicare Advantage Plans, Medicaid, or from a private insurer for which they pay out of pocket. However, almost two-thirds of the individuals receiving Medicare, 37 million individuals, have no dental insurance whatsoever (Kaiser Family Foundation, 2019b). The following proposal describes a potential policy option to include dental coverage for all preventative dentistry services under Medicare Part B for individuals on Medicare, and specifically for the 10 million low-income beneficiaries receiving both Medicaid and Medicare (Kaiser Family Foundation, 2019b).

Medicare Part B already covers preventative medical services for those enrolled. Adding a dental benefit to this plan would cover dental services for the beneficiaries, just as other outpatient services are covered. Enrolling in Medicare Part B is voluntary, and the enrollees pay a standard monthly premium that covers 25% of the expenditures under this plan. Higher income individuals pay an income-based premium, while lower-income individuals have their premiums paid for through Medicare Savings Programs.

There are a few things that need to be considered if this policy were to be implemented (Kaiser Family Foundation, 2019b). First, defining the range of dental services that are covered

under this expansion must be established. The plan has the option to only cover preventative services, to cover the full scope of dental services, or cover a number of services between the two. The Social Security Administration (SSA) would need to determine which dental services are reasonable and necessary for the beneficiaries, such as primary care services, minor and major restorative procedures, as well as tooth extractions and dentures. It is expected that the more benefits offered under this plan, the higher the premiums will be.

Second, there may need to be annual spending caps on each individual that limits how much the plan will pay for yearly dental services. It is important to note that this is standard among private dental insurance plans. Some Medicare Advantage Plans under Medicare Part C cover up to \$1,000 per year per enrollee. This cap would pay for, at minimum, the recommended preventative services and perhaps some elective services. Under extreme cases where a patient needed multiple dental procedures in a fiscal year, it is unlikely this \$1000 cap would cover all of those procedures. Adding a cap to the services would not only limit spending from the SSA, but it would also limit the increase in the yearly premium that beneficiaries pay (Kaiser Family Foundation, 2019b).

Third, the plan would need sufficient provider participation. This proposed policy would only work if a wide range of geographically dispersed dentists accepted the Medicare payment rates for the services they provide to the beneficiaries. Similar to the Medicaid proposal policy, a government outreach program would need to happen in order to increase enrollment of dentists in the Medicare plan. Finally, the government would need to consider the low-income beneficiaries, specifically the 10 million people who are dual enrolled in both Medicaid and Medicare. If dental insurance was provided under Medicare, these individuals could have their premiums automatically paid for through joint funding of federal and local governments. To

reduce overall federal costs toward dental care, it would be advantageous to shift state Medicaid spending to federal Medicare spending, resulting in lower expenditures for states to pay for low-income individuals' dental coverage (Kaiser Family Foundation, 2019b).

If this policy were to be implemented, it would provide an option for dental insurance to two-thirds of the beneficiaries enrolled in Medicare that are currently without it. At minimum, it would provide these individuals with insurance, and thus, the preventative care measures they would need to maintain good oral hygiene. Additionally, it would dramatically help the 10 million dual beneficiaries of Medicaid and Medicare by covering their dental expenses completely. It is important to remember that these 10 million dual-enrolled individuals only account for the low-income individuals who are medically disabled or over the age of 65; it does not account for the low-income individuals receiving only Medicaid (Kaiser Family Foundation, 2019b).

Including dental coverage under Medicare Part B would, of course, increase Medicare spending. The magnitude of this increase would depend on how many beneficiaries chose to pay the premiums, what the annual cap would be, and how many services would be covered. Overall, because Medicare Part B pays 80% of the fee for the services in this plan, adding preventative dental benefits to it would significantly increase costs to the Medicare program. If this policy were to be implemented and the annual costs were to be capped at \$1000 per year per enrollee, it would cost the government \$800 per individual. However, if the individual was dual enrolled in Medicaid, the SSA and state governments would be paying the full \$1000 for those people. If you were to multiply that by 10 million dual enrolled beneficiaries, there would be a huge increase in spending under the Medicare program (Kaiser Family Foundation, 2019b).

This policy would add preventative dental care services under Medicare Part B, the plan of Medicare that already includes preventative medical services. In order to achieve the greatest clinical and equitable value while including dental insurance under Medicare, the Social Security Administration would need to the policy's cost spending on covered benefits and annual caps, as well as the recommendation of assistance for low-income beneficiaries.

Alternative Policy 3: National Dental Insurance Coverage

The final policy proposal outlines a tax-funded plan implemented in Switzerland which provide dental coverage as a standard benefit to all of their residents. In the context of Europe, Switzerland ranks first for the highest out-of-pocket dental care expenditures, with patients paying 90% of their dental costs (Bella, et al., 2018). About 95% of dental expenditures in the U.S. in 2017 was paid for out-of-pocket by the patients or by private dental insurances (American Dental Association, 2017). This proposal aims to provide free and comprehensive dental care to the 8.48 million citizens in Switzerland. While this policy may work for the Swiss government, one needs to consider that the United States has 319 million more people than Switzerland does, indicating that it would cost the U.S. far more money to insure the entire population. The proposal has two main components: addressing the unmet dental needs of the population and enforcing a tax increase as a means to pay for the reform (Bella, et al., 2018).

Switzerland, like the United States, does have unmet dental needs, especially among low-income groups. It is known that low-income individuals are typically excluded from private dental care due to the financial costs. The ultimate goal of having dental insurance for the whole population is to dramatically reduce the dental hardships that low-income individuals face. However, those who oppose this policy have discussed that while providing dental insurance to the whole population is helpful, it does not address solely the inadequate access to dental care

among lower-income individuals. The Swiss government needs to make certain there is a level of quality of dental care being provided to all participants and that providers are not be overwhelmed by the excess demand. If the reform were to be successfully implemented, people with unmet dental needs due to economic barriers would have them met under this policy (Bella, et al., 2018). Additionally, Switzerland does not utilize free state-provided health insurance (such as Medicaid) to their low-income population. Attempting to implement a policy like this in the United States might be different because we already have programs like Medicaid that specifically target low SES peoples.

A key consideration for this policy proposal is cost and the proposed tax plan to pay for the added benefits. Financing this reform of free dental insurance in Switzerland would come from a 1% income tax that is equally divided between employers and employees. This would provide about 3.5 billion Swiss francs (CHF), which is equivalent to 3.93 billion U.S. dollars. However, this number is suspected to provide only 85% of actual dental care expenditure for the entire Swiss population, which will limit the amount of guaranteed dental services per individual. The policy suggests two options to help cover for the remaining 15%. First, the Swiss government has the option to decrease the number of procedures covered under the reform. Very extensive, uncommon procedures could be removed from the list outlined by the Swiss Dental Association, so it is guaranteed that the reform covers the most common dental procedures. Second, to increase the available spending for the reform, the Swiss government can implement a tax on sugary drinks as well as increase the tax on tobacco products. This would not only provide a large sum of money to finance the remaining 15% of the expenditures, but it may also contribute to cutbacks on the number of sugary drinks consumed or tobacco product used, which

would ultimately limit the number of dental diseases in the overall population (Bella, et al., 2018).

The total expenditure for dental care in Switzerland is about 4.1 billion CHF for its 8.48 million citizens each year, about 483 CHF per citizen. On the other hand, the United States spends about \$124 billion on their total dental expenditure per year, which is roughly \$382 per citizen (American Dental Association, 2017). If the United States were to adopt a policy similar to Switzerland's to provide dental coverage for the total population, there would need to be, at minimum, \$124 billion dollars generated from tax revenue to pay for this. Additionally, dental expenditures are on the rise for the United States and will continue to require a larger sum of money through the coming years. It is also important to remember that the United States does have some public funding already in place for dental benefits for lower income families as well as Medicare plans for older and disabled adults. Although a 1% tax on income would likely cover the \$124 billion in dental expenditures, it could be politically challenging to implement in the United States considering an individual's income is already taxed for services such as Medicaid and Medicare (Bella, et al., 2018).

A policy like this one is very hard to implement, especially for a larger population, like the United States. There are many things that have to be considered when attempting to meet the dental needs of the entire population. There needs to be a continuity of high-quality dental care provided at all levels of dentistry. Formulating a plan to pay for 100% of the dental expenditures that does not disrupt government budgets and that citizens are willing to pay for are likely to be the most difficult aspects of implementing a national dental coverage policy.

Evaluation Criteria and Assessing the Alternative Policies

The fifth step in Collin's (2005) policy analysis procedure is to evaluate the alternative policies based on the selected criteria. My policy analysis addresses the following research question: What policy option provides the most low-income individuals with dental coverage in the most cost-effective way? To determine how likely it is that either of my three policies would be successful if implemented, I chose the following three evaluation criteria: dental coverage outcomes, equity value, and cost-to-benefit ratio. The evidence collected in the policy review stage was sufficient enough to evaluate all three policies across all the criteria. The full evaluation data can be found in the Policy Analysis Evaluation Rubric (Table 1). I have used colors to help visualize which policy provides the most preferred outcome (green), which policy provides the least preferred outcome (red), and which policy is moderately advantageous between the other two (yellow) for each particular criteria. The recommended policy is the one that has the most preferred outcomes across the three criteria.

The first evaluation criteria is the dental coverage outcome. The dental coverage outcome is a criteria that measures the total number of people who will now have access to dental care through insurance who previously did not if the policy is implemented. Each policy outlines one way to provide dental insurance to a portion of the population. The first policy option, Medicaid expansion to the remaining 15 states, would provide dental insurance to 20 million beneficiaries who do not currently have dental benefits (Center for Health Care Strategies, 2015). The second policy option, Medicare inclusion, will provide dental insurance to those on Medicare without dental coverage, which is 37 million individuals (Kaiser Family Foundation, 2019). The third policy, a nationalized dental coverage program, will provide dental insurance to the remaining 74 million Americans without any form of dental benefits (American Dental Association, 2015).

This number of 74 million people also includes the 20 million and 37 million individuals on Medicaid without dental insurance and Medicare without dental insurance, respectively. The purpose of this criteria measure is to compare the total number of new people that each policy will be providing dental insurance to as a means to weigh the reach of each policy.

The second criteria measure is the equity value of each policy. This evaluation benchmark is specifically important to my problem statement as it compares the amount of high need (i.e., low-income) individuals receiving the dental insurance from each policy. For example, if one policy reaches a larger number of individuals, but only a small portion of those individuals are in high financial need, that policy would not be very effective in addressing my specific problem statement. Those with a low socioeconomic status are more in need of dental insurance than those who are not. This criteria helps show which policy is the best at helping the most vulnerable groups. There were two means of comparison for this criteria. The first mean was a standard high, medium, and low judgement call to qualitatively show which policy would help the lowest SES individuals. High refers to the fact that a particular policy will have a large impact for the low-income population, while low refers that a particular policy will only have a small impact on the low-income population. Medium refers to a particular policy that has a moderate impact for the low-income population, somewhere in between the two other policies. The second means of comparison for this criteria was a percentage showing the proportion of low-income individuals receiving dental insurance over the total number of individuals that would receive the dental insurance from a particular policy.

Medicaid expansion would be providing 20 million Americans with dental insurance. All 20 million of these recipients are low-income individuals, so this policy is providing dental insurance to a group of 100% low SES people (Center for Health Care Strategy, 2015). The

impact for the low-income population of this policy option is high. Medicare inclusion would be providing 37 million beneficiaries with dental insurance. Of this 37 million, 10 million people, or 27% of the individuals receiving dental insurance from this policy, would be low-income people (Kaiser Family Foundation, 2019b). The impact for the low-income population of this policy option is medium. A nationalized dental insurance program would provide all 328.2 million Americans with dental insurance, with only 75 million of those individuals being low-income. This indicates that only 22% of the recipients receiving dental insurance from this policy would be high need. The impact for the low-income population obtaining dental insurance from policy three is low (ada.org, 2020).

The final criteria is a measure of the cost-to-benefit ratio of each policy, which is the cost to the government to obtain dental insurance per person under the policy. This ratio compares the estimated monetary amount of implementing these policies (cost) divided by the number of people getting access to dental care who did not previously have dental insurance (benefit). Policy one of Medicaid expansion will provide dental insurance to 20 million individuals. This is estimated to cost the federal government \$820.3 million and each of the remaining 15 states \$417.5 million, for a total spending of \$7.08 billion. If we divide this amount by 20 million, the cost will be approximately \$354 per Medicaid dental beneficiary (American Dental Association, 2015). The second policy option, Medicare inclusion, will match the Medicare Advantage Plans for spending on dental care. This would cost up to \$1000 in dental expenditure per individual. However, each Medicare plan has a 20% coinsurance rate, which for extension of Medicare Part B would cost an individual up to \$200. Therefore, the Social Security Administration would be paying up to \$800 per Medicare dental beneficiary (Kaiser Family Foundation, 2019b). The third policy option would provide coverage for 328.2 million individuals. The U.S. as a whole in 2017

spent 124 billion dollars on dental expenditures. If we divide the number of individuals by the total number of dental expenditures, a national dental coverage reform would cost the government approximately \$378 per individual (American Dental Association, 2017). This assumes that dental expenditures will not increase as access increases, which is unlikely. The actual cost per individual is likely to be higher than this estimate.

Policy Recommendation

Primary dental care is the routine dental care one should receive to prevent extensive oral diseases. It is a service that is essential to maintain the health of the oral cavity, as well as the health of many other bodily systems. Not only does participating in primary dental services benefit the health of the patient, but it also helps lessen the financial burden of needing higher level dental care in the future. Unfortunately, the lack of access to and utilization of primary dental care opens the door to negative health consequences. Primary dental care is a service that can be covered by dental insurance. However, those with a low socioeconomic status have less access to primary dental care because of the cost of dental insurance. Dental coverage is not a service covered under medical insurance benefits and must be purchased and utilized separately. The importance of primary care and having dental insurance must be brought to attention and readily available for every individual.

Preventative services need to be available to ensure everyone is receiving quality dental care. This policy analysis was completed to identify policies that would best increase access to dental insurance for low-income individuals. Having better access to dental insurance is the most effective way to increase the number of primary care visits for low SES people, which would lessen the number of oral problems they encounter. I searched multiple databases to locate three policy proposals that have the potential to increase the number of low-income people with dental

insurance. The first policy I identified would expand Medicaid dental coverage to the remaining 15 states, as well as outlined what states can do to get the most out of this expansion. The second policy would add dental coverage to Medicare Part B as a preventative measure for the 65 and older population. The third policy is a national dental coverage program, modeled after one under consideration in Switzerland.

While all three policies had their advantages, one policy best addressed the problem statement, which specified the need for dental insurance coverage for people with low SES. In this context, Medicaid expansion is the best policy for my problem statement because 100% of its beneficiaries are low-income people and it costs the lowest amount of money per recipient of the three policies. Although it only provides dental insurance to 20 million people who did not previously have dental insurance, all of those 20 million people would greatly benefit from Medicaid expansion. For these reasons, Medicaid expansion is the recommended policy.

Although the third policy option, nationalized coverage, provides the entire country with dental insurance, only 22% of the recipients would be low-income individuals. Even though this policy may cost as little as \$378 per individual, it would be the most expensive policy to pursue as a whole. For these reasons, it would likely be the most difficult to pass and not be a promising policy to go forward with at this time. Medicare inclusion, even with a 20% coinsurance rate, would cost up to \$800 per individual receiving the coverage, which is the most expensive per person of the three policies. Also, only 27% of the recipients of this proposal would be considered low-income. For these reasons, Medicare inclusion is less favorable than Medicaid expansion.

I believe that many low-income individuals could dramatically increase their oral health if the benefits of Medicaid expansion were seriously considered. Providing dental insurance to

the low SES population would greatly increase their access to primary dental care and reduce the number of oral problems they encounter. Expanding Medicaid coverage to include dental insurance to the remaining 15 states would help more than 20 million vulnerable individuals. It is the recommended policy solution to the growing problem of oral health disparities between social classes because it maximizes the benefits to low-income people.

Appendix

Table 1. Policy Analysis Evaluation Rubric				
Criteria	Dental Coverage Outcome: Number of people to have dental access who did not before.	Equity Value: Proportion of high need (i.e., low SES) persons who receive the dental insurance.		Cost-to-Benefit Analysis: Cost per person with dental insurance.
Scoring Definitions	<i>Number: Refers to the total number of people in each policy that will now have dental insurance, and thus, access to dental care who did not previously have dental insurance.</i>	<i>High: large impact for low-income population. Medium: moderate impact for low-income population. Low: small impact for low-income population.</i>	<i>Amount: Percent of low-income individuals over total number of individuals receiving the dental insurance.</i>	<i>Amount: This ratio compares the monetary amount of implementing these policies (cost) divided by the number of people getting access to dental care who did not previously have dental insurance (benefit).</i>
Policy 1: Medicaid Expansion	20 million	<input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	100%	\$354/per individual
Policy 2: Medicare Inclusion	37 million	<input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low	27%	\$800/per individual
Policy 3: Nationalized Coverage	74 million	<input type="checkbox"/> High <input type="checkbox"/> Medium <input checked="" type="checkbox"/> Low	22%	\$378/per individual

Table 1. Policy Analysis Evaluation Rubric. Each policy was analyzed using the three criteria components to measure how advantageous each policy would be to pursue. The criteria were then compared to each other and color-coded to show which policy has the best outcome within each criteria column (green indicates the best outcome, red indicates the worst).

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