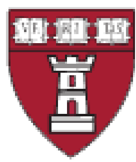

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A Note from HSDM ASDA

'Dental advocacy is the driving force of progress for our patients and our profession. We, as future dentists, are all dedicated to improving human health by integrating dentistry and medicine through patient care, education, research, and public health. The purpose of this journal is to break down the idea that one needs to be a public health dentist to get involved in dental advocacy. Please enjoy thoughts, research, and opinions from your peers in our first edition of the Student Journal of Dental Advocacy!'

- Chloe Zana
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I am a recent Biology graduate with minors in Healthcare Management and Chemistry. I am passionate about meeting community needs through education and prevention, two of the key pillars of public health. One of the primary goals of this journal is to help educate the reader on key issues in dentistry.

The lack of access to preventive dental care is a topic of high concern and one that deserves immediate attention. As future health care professionals entering the field of dentistry, we are responsible for addressing the disparities faced by underserved communities.

It is important that we care for all communities, not only those with insurance or access to quality care. I understand that we have a social responsibility to ensure that access to quality healthcare is a right that everyone receives, and is not seen as a privilege to those that can afford it.

Harkiran Ballagan

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I am a third-year student concentrating in nutritional science with minors in general business and global health with a focus on oral-systemic health in dentistry. Understanding that the mouth is the gateway to the whole body has made me a strong supporter of recognizing dentistry as a facet of medicine, not a separate entity.

The lack of awareness surrounding how important diet is in terms of oral health and thus overall health is something that I hope to fix as an aspiring dentist. I also hope to provide to lower-income communities, as I have commonly noticed that these individuals are unable to pay for basic healthcare.

Going to the dentist should not be viewed as a luxury, nor should it be not be seen as important as visiting a family doctor. As healthcare professionals, it is our duty to educate and prevent.

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Food Insecurity, the Impact of the COVID-19 Pandemic, and Health

Written by Lisbeth Garcia
HSDM '24

The U.S. Department of Agriculture (USDA) has defined food insecurity as "a lack of consistent access to enough food for an active, healthy life." ("What Is Food Insecurity in America?") The term "food insecurity" directly refers to the economic and social condition characterized by uncertain access to food at the household level. A 2019 national household survey disclosed conditions prevalent in low food security households, a few being: "worried food would run out," "food bought did not last," and "could not afford balanced meals." ("Definitions of Food Security.")
Lack of money and other resources resulted in the disruption of normal eating patterns in 13.7 million U.S. households (10.5% of U.S. households) at some time during 2019. In these households, there were about 35.2 million people and 5.3 million children that were living with food insecurity. ("Key Statistics & Graphics.") This meant that in 2019, 1 in 9 individuals and 1 in 7 children lived in a food insecure household. Surprisingly, this was the lowest food insecurity rate in more than 20 years. Data showed that unemployment and poverty influenced food insecurity rates, but importantly, underlying this were racial and ethnic disparities.

While 1 in 12 white, non-Hispanic individuals lived in a food insecure household in 2019, 1 in 6 Latino individuals; 1 in 5 Black, non-Hispanic individuals; and 1 in 4 Native American individuals lived in a food insecure household during the same year. ("The Impact of Coronavirus on Food Insecurity.")

There is a growing body of evidence supporting the relationship between food insecurity and health. A 2014 study by Hunger in America found that 58% of households served by Feeding America food banks had at least one member with hypertension and 33% had at least one member with diabetes. Frameworks suggest a highly stressful, cyclical relationship between food insecurity and chronic diseases like these. Food insecurity is characterized by a lower-quality diet and poor eating behaviors that contribute to the development of a chronic disease. A chronic disease like diabetes then results in greater healthcare expenditures and decreasing employability.

With worsening poverty, food insecurity is exacerbated. ("Causes and Consequences of Food Insecurity.") As a result, food security has become a public health concern and dentists seek to address its association with unmet dental care needs. Dr. Wiener et al. found that a higher percentage of adults with low food security had unmet dental care needs, when compared to adults with full food security in 2018. (Wiener, R Constance, et al.) When analyzing children's oral health outcomes, associations between oral health outcomes and household socioeconomic status (SES) and food security have been described. A cross-sectional study found that children in households with low food security had significantly higher prevalence of caries than children in food-secure households. (Chi, Donald L, et al.)

Unfortunately, in 2020, with the declaration of the COVID-19 global pandemic, the unemployment rate skyrocketed to a record high. In March 2021, Feeding America released updated projections on the impact of Coronavirus on National Food Insecurity. It projected that 42 million people and 13 million children may experience food insecurity in 2021. Additionally, the pandemic and consequent economic crisis most severely impacted subpopulations including
those that were already food-insecure or at risk of food insecurity pre-pandemic. ("The Impact of Coronavirus on Food Insecurity.") In 2020 during the COVID-19 pandemic, the Greater Boston Food Bank (GBFB) found that 1 in 8 residents and 1 in 5 children in Eastern Massachusetts were facing food insecurity in contrast to 1 in 13 residents and 1 in 11 children in Eastern Massachusetts that were facing food insecurity pre-COVID. GBFB's food distribution drastically increased by 65% from March to September of 2020— "the largest seven-month total in the 40-year history of GBFB" as they delivered 68.1 million pounds of food during this time period. ("FY20 Annual Report.") Since March 2020, numerous surveys have documented unprecedented levels of food insecurity.

The pandemic exacerbated existing disparities, both socioeconomic and racial/ethnic, with low-income Americans and Black and Hispanic Americans being the most affected. With increasing poverty rates and lack of food, long-term health consequences show widened disparities. ("The American Journal of Public Health (AJPH) from the American Public Health Association (APHA) Publications.") By October 2020, the percentage of U.S. households with children that are food-insecure had already doubled. Schools closing for in-person learning also limited children's access to free or reduced-price meals. (Julia A. Wolfson and Cindy W. Leung, 2020) Additionally, access to dental care dwindled during the pandemic as offices remained closed to preventive dental services in the interest of public health safety. ("Oral Health and COVID-19: Increasing the Need for Prevention and Access.") With declining food security and public health concerns, spillover effects of the COVID-19 pandemic may be driving detrimental effects in the health of non-COVID-19 patients, as well.

Dental professionals are encouraged to participate in educational programs and inquire about patients' food intake to screen for food insecurity and assess oral and overall health. Getting familiar with community resource options to be able to refer patients faced with low food security to social service providers is equally valuable. Outside the clinic, it is important to advocate for interventions and policies that ensure food security. Local representatives can be contacted and asked to push for food assistance programs that increase food security.

Programs that do this include the following: Supplemental Nutrition Assistance Program (SNAP); Women, Infants and Children (WIC); Free or Reduced School Lunch programs; School Breakfast programs; Senior Farmers' Market NutritionProgram (SFMNP); and Commodity Supplemental Food Program (CSFP), many of which are funded by the USDA. One can also volunteer with organizations like Feeding America, local food banks like the Greater Boston Food Bank, and local food rescue groups like Boston: Lovin' Spoonfuls. ("What Is Food Insecurity in America?")

Food security impacts oral and systemic health, and dentists can make an impact by inquiring about patients' food security, referring patients to appropriate resources, and volunteering their time to support food security.

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Effectiveness of Mobile Dental Units in Promoting Utilization of Dental Care Among Veterans

Written by Jasmine Villaflor
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Introduction

United States military veterans rely on the Veteran Administration for healthcare needs. However, a majority of the veteran population consists of older people, who may not qualify for care, or disabled veterans who cannot access care due to lack of mobility or physical distance from centers of care. For these reasons, veterans report below average for healthcare utilization, which is necessary for proper maintenance of oral health. Understanding the trends in veteran oral health allows us to identify methods to improve health care access for this population. Mobile dental units (MDU) are one technique that could target the issue of accessibility for veterans.

Discussion

Barriers to dental care are especially high for the elderly (1). This includes, but is not limited to, disabled veterans and those who live in rural communities, making them vulnerable populations (2, 3). Disabled veterans, a sub-group of the veteran community, not utilizing dental care can help us identify barriers and difficulties faced by this community that can be used to create improved methods for them to access care (4). Rural veterans with mental illness experience a greater oral disease burden and are likely to incur greater health care costs. The difficulties mentally ill and diseased veterans face when in need of health care access poses the need for significant change as they are not able to utilize the resources available to them (5). Veterans who are current smokers are less likely to utilize dental care compared to former smokers or individuals who have never smoked before, increasing their risk for oral diseases and limiting their dental care utilization (6).

Measures of Oral Health

Veterans reliant on Veterans Administration (VA) health care used clinical and self-reported data to demonstrate its value as a valid measure of oral health (7). A standardized Oral Health Assessment Tool (OHAT), along with pre and post-test surveys, identified risks for oral disorders within the veteran community to improve the quality of care provided at Veteran Affairs outpatient clinics (8). Data collected via clinical and self-reported measures, along with the use of the OHAT and pre/post-test surveys can be useful in understanding how different methods can be applied in measuring veteran oral health. Studies have shown that veterans prefer to receive information from VA publications and the web, though they currently only receive information from VA publications and other veterans (9). Understanding how to effectively inform veterans will aid in improving dental care utilization by better communicating how and when to access care. Disparities impacting access to care require local, state, and federal stakeholders to take advantage of the existing dental hygiene workforce, utilize

innovative delivery models, improve license reciprocity, reduce prohibitive supervision, and expand the dental hygiene scope of practice (10). Identifying and addressing the barriers to health care can be used to improve suggested methods for reform since vulnerable populations are more likely to have untreated dental disease and poorer oral health (11).

MDU Efficacy

Previous methods have been employed to increase health care utilization, however they have not shown much success (12). An MDU has been used to provide screenings for other types of diseases, but there is currently no significant evidence indicating that the presence of such programs contributes positively to overall oral health outcomes. Longitudinal clinical studies are required to assess the long term benefits of the use of MDUs at the community level (12). Thus, more research is needed to determine if MDUs would improve oral health among people in this hard-to-reach group.

Conclusion

The efficacy of MDUs among the veteran community has not been well established. This population includes many vulnerable sub-groups, such as disabled or elderly individuals. Identifying and understanding the barriers that impact these specific sub-group populations will aid in the improvement of dental care utilization in this community. Data collected via clinical and self-reported measures help us understand what methods, or specific aspects of previously utilized methods, can be applied in measuring veteran oral health. Previous studies have not yet proven increasing oral health care utilization in disabled veterans via MDUs, a sub-group of the veteran community. Therefore, focusing on methods to improve care for this especially hard-to-reach population may shed light on improving overall accessibility to dental care.

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A Closer Look at the Healthy People 2030 Oral Health Objectives

Written by Sukhprit Kaur
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The Healthy People 2030 is the federal government's preventative agenda for a healthier nation and its Oral Health Objectives act as a road map for bettering oral health and, by extension, overall health in the United States.

Oral Health Objective 1 of Healthy People 2030 seeks to reduce the proportion of children and adolescents with lifetime tooth decay. Similarly, Oral Health Objective 2 aims to reduce the proportion of children and adolescents with active and untreated tooth decay. Disparities in access to dental care are related to disparities in the incidence of these problems among children and adolescents. Simply put, those that have barriers to access are more likely to experience tooth decay.

To help those affected by such inequalities, Oral Health Objective 3 aims to reduce the proportion of adults with active or untreated tooth decay. It is estimated that 22.8 percent of adults had active or currently untreated tooth decay in 2013-206 and are hoping to bring that percentage down to 17.3 percent where an adult is anyone from age 20 to 74 (1). Oral Health Objective 4 intends to reduce the proportion of older adults with untreated root surface decay such as those previously described in Objective 3.

If left untreated this tooth decay can easily progress to an infection in the tooth which then, in turn, may lead to the removal of the tooth. A study from 2018 indicates that due to a lack of preventative dental care in rural areas, adults are 7% more likely to have missing teeth when compared to those in urban areas (3). Although in many cases it is possible to treat the infection by a root canal, due to the high cost of treatment, one may prefer to get the tooth extracted
instead. This is primarily the goal of Oral Health Objective 5 as its purpose is to reduce the proportion of adults over the age of 45 that have lost all their teeth.

An additional cause of tooth loss is gum disease, also known as periodontitis which is more likely in cigarette users and people with diabetes. Oral Health Objective 6 of Healthy People 2030 is to reduce the proportion of adults aged 45 years or older with moderate or severe periodontitis. Additionally, periodontitis has been linked with chronic illnesses such as diabetes, adverse pregnancy outcomes, atherosclerotic cardiovascular disease, rheumatoid arthritis, Alzheimer's disease, chronic obstructive pulmonary diseases, nonalcoholic fatty liver disease (1).

An additional cause of tooth loss is gum disease, also known as periodontitis which is more likely in cigarette users and people with diabetes. Oral Health Objective 6 of Healthy People 2030 is to reduce the proportion of adults aged 45 years or older with moderate or severe periodontitis. Additionally, periodontitis has been linked with chronic illnesses such as diabetes, adverse pregnancy outcomes, atherosclerotic cardiovascular disease, rheumatoid arthritis, Alzheimer's disease, chronic obstructive pulmonary diseases, nonalcoholic fatty liver disease (1). The authors of Sietz et al. as cited in the paper suggest that for those with comorbid or multimorbid chronic and dental conditions the correlations previously mentioned should be taken into account when creating their care plans.

Preventative care from one's dentist does not only help prevent oral diseases, but it can also help in the detection of oral and pharyngeal cancer. Oral and pharyngeal cancer is easier to treat when diagnosed early, something that can be easily done by a dental visit. Oral Health Objective 7 aspires to do that by increasing the proportion of oral and pharyngeal cancers detected at the earliest stage.
Ultimately, the importance of visiting the dentist for preventative care is enormous as it can prevent a number of health issues. Healthy People 2030 Oral Health Objective 8 wishes to increase the proportion of children, adolescents, and adults who use the oral health care system. Another study cited in the paper showed that in 2015, merely 43% of the U.S. population had a dental visit (1). Furthermore, another source has illustrated that rural children were less likely to receive preventative dental care as compared to children that live in urban areas (3).

Due to these disparities, children from these rural areas are less likely to report they have very good or excellent teeth. In order to combat this, the purpose of oral health objective 9 is to increase the proportion of young youth who have a preventative dental visit. One of the factors that act as a barrier between rural communities and oral healthcare is the lack of dental insurance. However, in many cases even if one does have insurance, they may not be able to find a dental provider nearby. Dentists may not accept Medicaid due to its low reimbursement rates as compared to those provided by a PPO. One study by Lee et al., as cited by Hannan et al. (1), conducted in Texas revealed that after Medicaid reform to increase reimbursement for dental care providers, "preventive care dental visits increased by 11.4%, caries-related surgeries increased by 0.01%, caries-related sedation increased by 1.7%, and caries-related emergency department visits decreased by 0.3% (1)."

Oral Health Objective 10 is to increase the proportion of children and adolescents who have received dental sealants on 1 or more of their primary or permanent molar teeth. The main purpose of placing the sealants is to prevent tooth decay. The objective focuses on the molars because the chewing surfaces of these teeth are at risk the most. This can be seen as in children aged 6 to 11 years with at least 1 decayed tooth, 90% of the disease is located in the first molars and among children and adolescents aged 12 to 17, 79% of disease is located the first and second molars (4). This study has also shown that when compared to groups that did not have sealants, those that did have them were less likely to develop carious lesions on the permanent molars by approximately 80% (4). Another preventative method that can be introduced is fluoride which has shown to stop and, in some cases, even reverse the tooth decay process.

It. is able to mineralize tooth surfaces in order to prevent cavities from forming and therefore is seen as one of the most effective methods to tooth decay.

The Healthy People 2030 Oral Health Objectives address disparities present in dentistry and the inequities in access to dental care all the while emphasizing the importance of preventive dental care. It is vital that dental professionals are familiar with these objectives as they work to combat the disparities. Prevention and patient education are key components. Preventative services can help reduce oral disease, tooth loss, chronic illnesses correlated with oral diseases, as well as detect oral and pharyngeal cancers at an early stage. Much like prevention, dental education is an integral part of dentistry as misperceptions regarding the urgency of dental health could easily discourage someone from seeking oral care. By educating the patients and those around them, dentists are able to make a difference both inside and outside of the operatory rooms.

KEY TERMS

Disparities: a great difference

Comorbid: denoting or relating to diseases or medical conditions that are simultaneously present in a patient (Multimorbid refers to more than 2)

Periodontitis: gum disease

PPO: Preferred Provider Organization that can be categorized as private insurance; tend to have higher premiums and deductibles

Molars: teeth located in the back of them mouth that grind food

Sealants: thin protective coating placed on chewing surface of back teeth

Carious lesions: area of decay or cavity

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A Comparative Perspective on the US and French Dental Systems

Written by Sophia Palacios
University of Minnesota

Living most of my life in the United States, it was quite the shock moving to France my Junior year of high school. Besides the cultural differences, experiencing another countries' healthcare system first hand was also eye opening. Healthcare in every country is extremely complex, but living in both countries truly highlighted major differences, especially in relation to pricing.

One of the largest differences noted between US and French healthcare is the presence of the “Carte Vitale”, which is the health insurance card for the healthcare system in France. This card is issued to all French residents over 16 and additionally contains all the administrative information the patients health insurance fund needs in order to be reimbursed for their healthcare expenses (1). Anyone who contributes to French society such as through their job, their work as a student or through their refugee status is offered the card which helps them gain affordable access to French healthcare. This card contains a memory chip and stores all necessary information for payment, while additionally giving patients the option to store medical information from the past 12 months which streamlines the process and impacts overall administrative costs.

It is estimated that US insurers and providers spent an astounding $812 billion on administration costs during 2017 (2). The United States still incurs the highest administrative costs when compared to other top spending countries such as Canada, England, France, Germany and the Netherlands with one fourth of all spending consisting of administrative costs (3). Although data was not collected for administrative costs in France the same year, it can be concluded that he total costs would be much lower. One reason for this is in France, administrative costs are limited to 5.5% whereas in the United States they are unrestricted and can climb to 20% of the total bill (4). Utilizing some form of smart card, such as the French Carte Vitale, would aid in lowering the percentage of administrative costs on the bill as all patient information is securely stored in one place and accessible at any care facility.

I am able to experience these differing prices whilst living in France and can compare with my care in the United States. Even before any insurance coverage, my general dentist appointments in Paris are typically $70 dollars. The same appointment in the United States before insurance costs around $300 although the care being received is the same. In addition to general dentist visits, there is also a substantial difference in price for procedures such as wisdom teeth extractions. When I got all four of my wisdom teeth removed in France, the cost was around $250 dollars before any insurance.

In the United States without insurance, this same procedure would typically cost around $1,000-3,000. Removing wisdom teeth is necessary in many cases because of the pain and other complicated issues they can create when there is not sufficient room in the mouth. These large differences in price directly relate back to the presence of the Carte Vitale and other initiatives to lower administrative costs on the bill for procedures.

These price differences are largely due to the French government implementing protective laws for patient pricing. For example, the pharmaceutical market is regulated to ensure there are no massive markups on essential products for profit. It is also key to acknowledge though, that in France there are laws in place requiring all residents to have some sort of health insurance, whether that be private or public. By requiring everyone to have health insurance, the price of said insurance will typically decrease as there are more people contributing to the system. Additionally, the healthcare system is partially funded by obligatory French social security contributions which average around 8% of an employees salary and 13% for employers (5). Surprisingly though, this is not that large of a difference than what is paid in the United States with around 6.2% of the salary deducted for social security from employees and employers contributing the same amount (6).

I have found that many factors go into the price variability between dental care in the United States and France, but these are some of the largest contributing factors for both countries. Simply stating the United States should adopt a more French/European approach to the healthcare system sounds great at first, but it discredits the complexity of the system and how multifaceted it is as a whole. There are so many groups involved in the healthcare system that it cannot simply be boiled down to just patients, doctors and insurance companies. There are schools, pharmaceutical companies, state and federal governments along with many more stakeholders which are looking to preserve their own interests. This is one of the largest reasons why it becomes so difficult to enact significant changes quickly and effectively in regards to healthcare.

The best thing we can do as individuals is come together in support of current advocacy measures being taken to improve the dental care system. For example, lobbying in support of combining dental insurance with health insurance could push insurance companies to possibly combine them in the future. This would additionally aid in shifting dental care being seen as a luxury rather than a rightful necessity. Staying up to date on legislation being presented to Congress from organizations focusing on dental advocacy such as the American Dental Association can also be extremely impactful in implementing changes. Bolstering preventative dentistry education in schools can also diminish needed dental procedures in someone's lifetime which will lessen the financial burden associated. This can be especially impactful in underserved communities where a lack of access to resources is already present and visits to the
dentist are out of reach. Below, I have included resources for those passionate about getting involved in dental advocacy or current measures being taken to increase equity within dental care.

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Dental Care and Patient with Special Needs

Written by Flora Inoa
Touro CDM'26

“It is best not to treat him at all,” advised the orthodontist. Leaving the practice disappointed, hoped the field of special needs dentistry could offer more holistic care to patients like my brother who has Beckwith-Wiedemann syndrome. How could no treatment be the safest form of treatment? How can we ensure that special needs patients receive the oral care they need?

When treating special needs patients, it is important to ensure they feel supported and valued throughout the duration of their treatment. The Americans With Disabilities Act advises dental offices to be wheelchair accessible. While this feature promotes equality and a friendly environment, we must also ensure that our practitioners have access to and knowledge about proper equipment necessary to facilitate not only a welcoming experience but also a mentally and emotionally safe place. Even though caregivers are an essential part of the patient’s life, it is important that the patient feels included in the treatment. Addressing the patient in a compassionate and inclusive manner will enhance their trust and therefore their chances of returning for routine care. According to mother and Stanford University physician Dr. Cori Poffenberger, “When caring for a patient with disability, strive to always address the patient first, then families and caregivers. And always take the patient's thoughts about their condition and their wishes seriously. If you are unfamiliar with a condition, say so. Be open-minded.”

With an open mind and an open heart are exactly how roughly 20% of Americans deserve to be treated. As of 2010, one in every five Americans live with a disability, totaling 56.7 million individuals. The scarcity of oral health professionals willing and able to care for this population leads to an increase in periodontal disease, cavities, and other oral health related issues. Understanding how to better approach patients with disabilities allows oral health providers to offer effective and meaningful care.

To consider best practices and our collective role for expanding inclusion, it is important to be aware of the various types of disabilities to properly accommodate these patients. Disabilities include individuals who have physical limitations, acquired or genetic medical conditions, developmental, or cognitive impairments, ranging from wheelchair use, down syndrome, autism, dementia, to blindness. Despite the type of disability, it is essential to accommodate the patient. Lack of inclusion and accessibility may compromise care for individuals with disabilities, leading to an increased risk of oral disease in this patient cohort. However, education on the treatment of patients with disabilities can improve access to care to this vulnerable population and empower dental practitioners to increase their efficacy within their communities.

Understanding how the patient communicates allows the dental professional to build rapport. Range of motion, bathroom breaks, comprehension and communication type are important factors when collecting a comprehensive medical history. For patients who are non-verbal, body language, facial expressions, and tone of voice are essential factors for proper communication. Attention to these movements ensure appropriate verbal and non-verbal communication with the patient. A tell-show-do approach can help reduce anxiety and familiarize the patient with the treatment. Distraction methods such as having the patient watch a movie can create a more enjoyable experience as well. Treatment modifications such as wide-handled power toothbrushes, pillows, mouth props, and stand-up dental treatments are a few moderations to accommodate special needs patients. Positive reinforcement when the patient completes a task will encourage them to continue the behavior. The patient and caregiver should follow at-home care instructions using terminology they can understand in order to maintain optimal oral health.

The conversation for inclusion has been decades in the making. In 1974, the University of Washington School of Dentistry in Seattle established a Dental Education in Care of Persons with Disabilities program to better educate their students. In 1985, Dental Lifeline Network founded a national nonprofit organization where oral health professionals volunteer to provide care for vulnerable populations, such as disabled patients. Furthermore, the Special Care Dentistry Association and The National Foundation of Dentistry for the Handicapped have aimed to increase access to oral healthcare by educating and providing network resources between patients and dental health professionals. In 2016, the American Dental Association Commission on Dental Accreditation included treatment of patients with special needs into their dental hygiene programs. It is important to bring awareness to expand and serve the special needs population and train our oral healthcare professionals earlier in their academic career, so they're prepared and confident to treat this population.

Important collaborative programs are already under way which offer a comprehensive approach and can contribute to overcoming the barriers of care faced by this community. Interdisciplinary collaboration amongst oral health professionals, physicians, nutritionists, social workers, caregivers and other individuals involved in the care of the patient can improve the outcome of the treatment plan. Despite the progress, we should reinforce and continue expanding efforts to include and better treat the special needs population.

Providing care to the special needs population can be a rewarding experience. Patients like my brother are grateful and look forward to caring for their teeth. Oral health professionals leave a lasting impact caring for the smiles of these individuals. Many are receptive to treatment and respond well to an inviting, inclusive environment. Ultimately, the efforts made to provide care to this patient cohort are life changing to both the provider and patient.

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Dental Care in U.S. Nursing Homes: A review on quality of care, barriers to access, and policy

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The percentage of older Americans (aged 65 years and older) is increasing and will continue to become a growing demographic in dental practices for quite some time. By 2060, the elderly will account for almost a quarter of the U.S. population (Colby & Ortman, 2014). With aging comes increased susceptibility to gum disease, untreated caries, tooth loss, and oral cancer (Centers for Disease Control and Prevention, 2021a). Though old age is a risk factor for numerous dental conditions, ethnicity, socioeconomic background, education level, and insurance can also influence oral health among the elderly (*Oral health*, 2020). The oral disease crisis has been described as a "silent epidemic," with the elderly developing, on average, one cavity a year, many of which are left untreated, or worse, unnoticed (Sifuentes & Lapane, 2020).

Studies have also demonstrated significant oral health disparities, especially among older minorities (Sifuentes & Lapane, 2020). Black Americans and Mexican Americans elders are up to three times more likely to have untreated tooth decay compared to non-Hispanic white elders (Centers for Disease Control and Prevention, 2021b). Another study also found that Black and Hispanic older adults, on average, rated their oral health more poorly than white older adults (Huang & Park, 2014). In terms of actual oral health, both minority groups reported more oral pain than white older adults (Huang & Park, 2014). To diminish such stark inequalities, The Department of Health and Human Services established the Oral Health Strategic Framework (2014-2017). The Oral Health Strategic Framework addresses five goals, along with action steps and strategies. These goals include the elimination of oral health disparities and increased access, increased oral health literacy, and the improved oral health outcomes (U.S. Department of Health and Human Services Oral Health Coordinating Committee, 2016).

However, when identifying methods to target health disparities among the elderly, an often overlooked and fairly large subgroup within the American elderly population are institutionalized elders. With about 1.4 million Americans residing in nursing homes, they tend to have poorer health outcomes than their noninstitutionalized counterparts (Sifuentes & Lapane, 2020). Such a disparity can be attributed to the inability for many institutionalized elderly to take care of themselves (Wong, Ng, & Leung, 2019). Access and the standardization of quality of oral health for nursing home residents still remains strictly underenforced. Studies have also revealed that only 16% of nursing home residents receive oral care and only 15% of residents have good oral hygiene (Zimmerman et al., 2017). Another study found that 20% of residents receive daily oral care even though 84% of residents cannot brush their own teeth (Zimmerman et al., 2014).

In order to improve their oral health outcomes, requirements have been enacted so that nursing home staff can be trained to give daily oral health cleanings for their patients (Sifuentes & Lapane, 2020). In 2008, to help manage poor oral health in nursing homes and other underserved populations, the Massachusetts state government looked at workforce solutions and established a new category of dental professionals called public health dental hygienists (PHDH). A PHDH is certified to provide oral hygiene check-ups and procedures to populations such as those institutionalized in nursing homes (*Resources for public health dental hygienists*, 2022). In 2017, there were about thirty licensed and public health dental hygienists in Massachusetts, making up less than two percent of the practicing dental hygienists in the state (Rainchuso & Salisbury, 2017). Among the ten PHDH surveyed, two of PHDH practice in geriatric settings (Rainchuso & Salisbury, 2017). However, the PHDH legislation prevents third-party reimbursements, posing a barrier to some nursing home residents from receiving care from PHDH, as many elderly have private dental insurance through Medicare Part C (Rainchuso & Salisbury, 2017). Furthermore, though actions have been made to increase oral care access for nursing home residents in Massachusetts, more steps must be taken to ensure that all nursing home residents receive dental care. Such steps could include expanding the PHDH program to serve a greater number of the institutionalized population, as they continue to remain a significant underserved population in oral care.

Aside from the shortage of adequately trained workforce, gaps in insurance coverage is another factor that contributes to poor oral care access in nursing home residents. In states without considerable Medicaid benefits for dental coverage, dental services may be an additional financial burden on top of the significant nursing home expenses. These gaps in coverage are especially imperative among institutionalized elders because Medicaid covers 60% of nursing home residents (Freed et al., 2021). For those on Medicare, Medicare Part A only covers dental services provided in certain facilities (e.g. hospitals, skilled nursing facilities, and hospice care; Medicare.gov). Medicare Advantage Part C, a supplemental insurance, includes dental services. Though Medicare Part C is an alternative for elderly seeking dental coverage, its additional premiums can be costly (*How to get Medicare Dental & Vision Coverage*, 2022). As of 2021, the Medicaid programs of 21 states and the District of Columbia offer extensive dental coverage (Vujicic et al., 2021). The remaining states provide limited, emergency, or no dental benefits (Vujicic et al., 2021). Consequently, scheduling regular dental visits and maintaining proper hygiene for elders in nursing homes may be overlooked by those with a limited budget.

To eliminate the prevalence of poor oral health among Americans in nursing homes, the federal government needs to enforce standardized methods of oral care delivery to nursing home residents. In addition, Medicare and Medicaid coverage should also be expanded with sufficient funding to promote access to adequate and affordable oral care outside of nursing homes. Most recently in November 2021, dental benefits in Medicare Part B as a part of the Build Back Better legislation package were not included (Garvin, 2021). According to the President of the American Dental Association (ADA), Cesar R. Sabates, the Medicare Part B proposal did not have adequate funding to be executed properly (Garvin, 2021).

The ADA continues to advocate for the inclusion of Part B dental benefits, even proposing "Medicare Part T" to separate dental from outpatient coverage (McKenzie, 2021). Ideally, such benefits would be available for only low-income elders 300% under the federal poverty line (McKenzie, 2021). Furthermore, Congressional Democrats have been pushing for an expansion of dental coverage for Medicare beneficiaries demonstrated by the Build Back Better legislative package, but this plan does not have enough funding to be smoothly implemented. However, the ADA's "Medicare Part T'' proposal specifically aims to benefit the disadvantaged elderly, especially the institutionalized who struggle to afford dental services due to the cost burden of nursing home expenses.

Moreover, states, such as Massachusetts, have taken steps (i.e. PHDH) to combat poor health among this population. However, further expansion of oral care access for institutionalized elders must occur through changes in legislation and increased funding. Such steps should also be encouraged in states with a larger proportion of elders, such as Maine (21.8%) and Florida (21.3%) (Kilduff, 2021). Though state initiatives are effective, federal action must be enacted to ensure nationwide standards are upheld. National changes in oral care delivery in nursing homes will ensure that the oral health of the institutionalized elderly and oral health disparities among states are universally addressed.

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