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WHITE PAPER

Addressing Social Determinants of Health to Improve Dental Health Equity in Children

Social determinants of health (SDOH) have a significant impact on the health and well-being of children, particularly in terms of oral health.

SUMMARY OF CONTENTS

In this paper, Benevis covers social determinants of health effects on oral health and the ways these devastating health disparities can be addressed for the benefit of children and society.

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Introduction

In this white paper, Benevis addresses the effects social determinants of health (SDOH) have on children's oral health and what can be done to reduce these devastating health disparities. By working together with policymakers, healthcare providers, medical professionals, educators, and others, we can ensure that no child is left behind when it comes to achieving good oral health.

SDOH have a significant impact on the health and wellbeing of children, particularly in terms of oral health. **It is estimated that 23% of preschool age children suffer from dental caries and that dental caries are almost twice as likely to affect those living in poverty or minority populations**[1]. In addition to poverty levels, factors such as access to education and healthcare along with public health policies all play a role in children's oral health. Poor oral health can lead to pain, problems with eating, speaking, and learning, as well as an increased risk for developing more serious health conditions and diseases.[16] It can also affect the development of self-esteem and social relationships.[31]

The importance of tackling these disparities is increasingly being recognized by governments and other stakeholders who are taking proactive steps to reduce them through improved access to services, increased public awareness campaigns, and expanded funding for oral health initiatives. These are important steps in ensuring that all children have the opportunity to achieve a high level of health and well-being.

By addressing SDOH and oral health disparities in children early on, we can ensure that they have the opportunity to maintain good oral hygiene and health to reach their full potential in life.

Understanding social determinants of health

SDOH are the conditions that people are born into, grow up around, and work and live in through a lifetime. Each of these factors, whether social, environmental or economic, can affect a person's day-to-day living and ultimately their health.

Research shows the lower a person's socioeconomic status, the worse their health. The World Health Organization lists examples of SDOH that can impact health positively or negatively, including:[2]

- Income and social protection
- Education
- Employment and job security
- Working conditions
- Food security
- Housing, basic amenities and the environment
- Early childhood development
- Social inclusion and non-discrimination
- Structural conflict
- Accessible, affordable health services of decent quality

Caring for oral health in infancy and early childhood is a prerequisite to good oral health later in life.[12]

SDOH impact dental health in detrimental ways

The burden of oral disease is disproportionately greater for children of low socioeconomic status.[3] SDOH can negatively affect their dental health in many ways. Some of the most critical barriers include:

- **Insufficient Access to Affordable Care**: Dental care has the greatest financial barriers of any healthcare service.[4] Even with Medicaid coverage, it's often hard to find dental providers who accept it. Without regular visits to the dentist, it's difficult for children to maintain good oral health habits and receive preventive treatment.
- **Poor Nutrition**: Eating foods high in sugar, carbohydrates and acids can weaken tooth enamel and increase the risk of cavities.[5]
- **Lack of Education Contributing to Poor Oral Hygiene**: Without proper education about the importance of proper oral hygiene habits, children may be more likely to develop dental health issues. Neglecting to brush and floss regularly can lead to plaque buildup, tooth decay, and other oral health problems.[6]

- **Environmental Factors**: Poor living conditions including air pollution, water quality, and other environmental conditions can all affect children's dental health.[7]
- **Low Socioeconomic Status**: Kids from lower income families often lack the resources to purchase healthy foods for optimal nutrition or access public transportation for routine dental care. Additionally, parents or caregivers may not be able to get time off from work to take them to dental appointments.[8]
- **Limited Community Resources**: Communities unable to provide access to nutritious foods, fluoride-treated water, educational programs, and preventive dental care can create barriers to children's oral health.[8]
- **Social Support**: Not having supportive family and friends who prioritize oral health can make it harder for kids to maintain good dental hygiene habits.[33]
- **Stress**: Children living in stressful environments or facing mental health issues can have difficulty maintaining good oral hygiene practices.[9]

SDOH tied to children's oral health outcomes

SDOH are real risk factors that have direct links to oral health outcomes. In fact, **"about half of all American children do not receive regular dental care because of social, economic, and geographic obstacles,"** cites the NIH report on Oral Health in America: Advances and Challenges.[8]

~50%

U.S. kids lack dental care due to SDOH[8]

The relationship between SDOH and children's oral health is complex, but it can be broken down into two main components. First, poverty and education levels can have an impact on the oral health of children. For example, research has shown that in areas with higher levels of poverty, there is a greater prevalence of tooth decay and other oral health issues.[1] Additionally, lower education levels in the family can mean that children are not receiving the necessary information about oral hygiene and dietary habits that promote good dental health.[10]

Many children experience greater barriers to care and higher rates of disease based on lower family income levels.[1]

- **Approximately 1 of every 3 preschoolers living in poverty has a childhood carie.**[1]
- **Rates of untreated tooth decay are twice as high for children from low- or limited-income families compared with children from middle- or high-income families.**[1]
- **School-aged kids from high-income families saw a big decline in caries, from 23% to 13%, between 1998 and 2014, while kids living in poverty experienced a slighter decline, from 28% to 24% during that same timeframe.**[1]
- **At a global level, oral disease burdens almost half of the 3.5 billion people in the world. Three of every 4 people suffering from oral disease live in low- and middle-income countries, cites the World Health Organization.**[34]

The second component of the relationship between SDOH and children's oral health is access to quality care. In the U.S. and many parts of the world, access to dental care is limited due to a range of factors such as cost, distance, and availability of services. In fact, cost is the top reason for not visiting the dentist regardless of income, age or source of dental benefits.[4] This lack of access to care has a profound impact on the oral health of children living in these areas, as they are unable to receive regular checkups and timely treatment for any issues that arise. Unfortunately, deferring routine preventive and restorative dental care increases the need for more advanced and expensive dental services, which are even less accessible to the disadvantaged, further widening the disparities.

Effects of race or ethnicity on oral health

A child's race or ethnicity can have a significant impact on their oral health. **Studies have found that minority children are more likely to suffer from tooth decay and other oral health issues than White children.**[1] Minorities are also less likely to receive routine dental care or preventive treatments such as fluoride varnish, sealants, and dental sealers. In addition, minority children including Mexican-American, non-Hispanic Black, American Indian and Alaskan Native children are more likely to experience disparities in the quality of dental care they receive compared to White children.[10]

- **Mexican American and non-Hispanic Black preschool children have a 1-2x higher prevalence of caries than their non-Hispanic White peers.**[1]

- **American Indian and Alaskan Native children have the highest rate of childhood caries of any group. 71% have had a cavity by the age of 5.**[11]

There are a number of factors that can contribute to these disparities. These include limited access to oral health services, reduced insurance coverage for preventive treatments and restorative procedures, and lack of knowledge about proper oral healthcare.

Costs of ignoring SDOH in oral health

Addressing SDOH appropriately is critical in improving health inequities. From healthcare providers to policymakers, public health professionals and educators, it's our civic responsibility to take action for the betterment of children and society.

In addition to the emotional toll it takes on a child's ability to learn, communicate and thrive socially, there are also financial costs associated with delayed dental care. In 2014, **2.43 million visits to the emergency department (ED) for dental conditions cost the U.S. $1.6 billion and an average of $971 for each child visit.**[12] Poor oral health hurts economic productivity by limiting workforce participation, as well as by increasing healthcare costs.

Painful Price of Absent Oral Care

- **Painful dental issues like infections can inhibit eating, speaking, playing, and learning, all of which can affect growth in kids.**[16]
- **Dental challenges in childhood can adversely affect school performance and the ability to succeed later in life.**[15]
- **Poor oral health can be linked to behavioral health conditions.**[13]
- **In 2014, dental conditions treated in the ED cost the U.S. $1.6 billion.**[12]
- **Worst of all, left untreated, tooth decay can be deadly.**[32]

Since **tooth decay is the most common chronic disease for children and adults worldwide**, addressing SDOH in early childhood is essential to combatting dental health disparities.[12] Policymakers and public health professionals must work together to ensure that SDOH initiatives are effective so that all children have access to the preventive services they need to maintain a healthy mouth. SDOH initiatives should be tailored to meet the needs of disadvantaged populations in order to successfully reduce disparities.

Improvements in dental health to address disparities

A number of initiatives have been launched to help reduce dental health disparities in children. The Centers for Disease Control and Prevention (CDC) has developed the *Oral Health Strategic Plan* to identify evidence-based strategies that will improve access to oral healthcare and education. This plan is focused on increasing the capacity of states and communities to improve the oral health of their populations. Additionally, the CDC's *Healthy People 2030* initiative outlines specific goals and objectives to reduce disparities in access to oral healthcare and improve outcomes. At the state level, some initiatives include increasing funding for dental clinics that serve low-income children, providing preventive services such as fluoride treatments, and creating school-based programs that provide screenings and education.[17] Other initiatives focus on increasing awareness of the importance of good oral health and providing access to affordable dental care.

Policy Prioritization

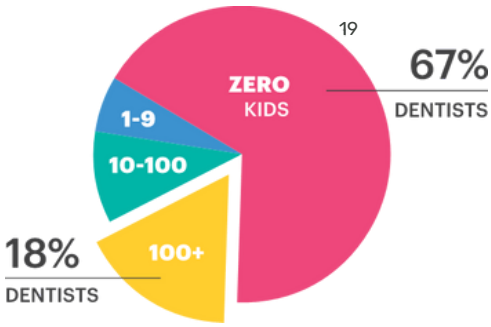
- **In 2022, the American Dental Association announced a new *Health Equity Action Team* demonstrating the association's commitment to advance access to oral care for social conditions people are born into, grow up with, and work and live in.**
- **In 2021, the Centers for Medicare and Medicaid Services appointed the first Chief Dental Officer, Natalia Chalmers, DDS, MHSc, PhD.**
- **The World Health Organization released the *Global Oral Health Status Report* in 2022 urging policy prioritization for universal health coverage by 2030.[34]**

> **Oral health and disparities are evident across the lifespan. Even if you look at young children … the disparities are very clear … we have to be intentional about closing these gaps.**
>
> **Dr. Natalia Chalmers**
> Chief Dental Officer, Centers for Medicare & Medicaid Services (CMS)

Another approach that received attention in the early 2000s involves policy that requires states to provide certification of a dental screening, examination or assessment for school entry. As of 2019, thirteen states and the District of Columbia require parents or caregivers to provide a dental certificate for school-aged children.[18] Although helpful, this policy has been challenging for states to enforce. Add to that a shortage of Medicaid dental providers, and thoughtful policymakers are hesitant to require screenings and exams.

Dental Provider Access

Access is one of the biggest barriers to high-quality dental care. While there are many social and economic factors that prevent children from attaining care, the small number of dentists participating in Medicaid or Children's Health Insurance Program (CHIP) plans present a significant barrier. **Including Benevis, only 18% of dentists in the U.S. treat 100 or more kids covered by Medicaid or CHIP plans. Out of the 43% of U.S. dentists signed up to participate in Medicaid, only 33% of them have treated any kids with Medicaid benefits.**[19]



Improving typically low reimbursement rates nationwide could help to expand the number of dentists willing to accept underserved children covered by these insurance plans. Children living in the nation's most vulnerable communities deserve equal access to quality oral healthcare.

Because millions of people visit their primary care physician yet never see the dentist, integrating dental and medical care is also more important than ever. Programs that have integrated oral healthcare into primary care practices can help break down barriers and improve access to oral healthcare.[20] One example may include administering an oral health or caries assessment during a child's medical well check visit.

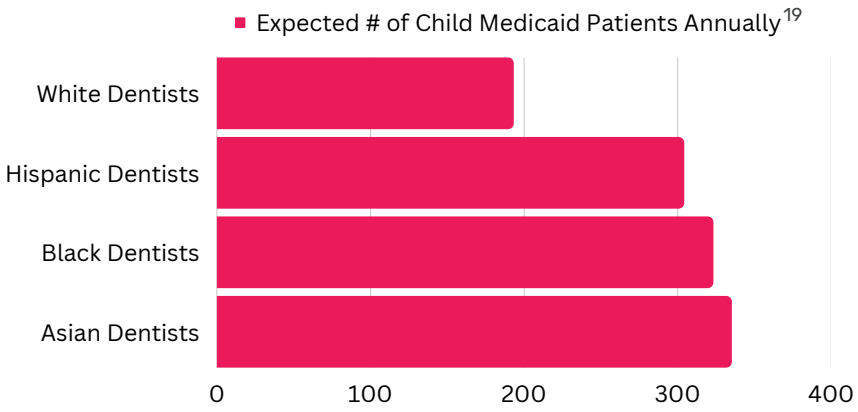
School Sealant Programs

School sealant programs are another effective way to reduce cavities and improve oral health, especially for children at higher risk of poor oral health.[21] **Sealants can prevent cavities for several years**, and children 6–11 years old with sealants have three times fewer cavities in their first molars than children without them.[22] Because we know that children from low-income families are more likely to have untreated cavities[23] and not visit the dentist as regularly as children from higher-income families, making dental sealants accessible through school programs is a useful solution.[24]

More policy changes are still needed to improve the systemic inequalities that exist in oral healthcare for so many of our children today. We must do better to deliver more integrated oral and medical care in schools, health centers, medical offices, and other community settings that support children's education and preventive care.

Diverse Dental Workforce

Making a greater effort to diversify the existing workforce of dental professionals to better support the demographics of underserved, minority children could also help to improve oral healthcare for this disadvantaged population. It begins by educating and training greater numbers of people from minority populations in dental professions. The reality is that dentists who treat larger numbers of Medicaid patients are more likely to be minorities who locate in non-White, rural or high-poverty areas, work in a large group practice, or be affiliated with a Federally Qualified Health Center (FQHC). This research is consistent with medical provider findings.[19]



- **Nationwide, minority dentists lead the charge in treating children on Medicaid.**
- **Asian and Black dentists treat the highest volume of children on Medicaid.**

Benevis serves a diverse population with diverse dentists.

33% of Benevis dentists are women from a minority group

21%

Less than 4% of U.S. dentists are Black,[25] while **21%** of Benevis dentists are Black

To improve our children's health and well-being, we must address the social, economic and environmental barriers that inhibit their dental care. Improvements in oral health, such as targeted interventions in elementary school children in underserved areas and better access to care can be best supported through legislative, system, and market solutions. It is also important that healthcare providers continue to educate their patients on the importance of preventive dental care and provide appropriate referrals for those who may not have access to care. With continued effort, we can help close the dental health disparity gap and ensure that all children have access to quality oral healthcare.

Dental disparities data

More low income kids suffer

Low-income kids ages 2-5 have twice the decay of high-income kids.[26]

2x more decay

Dental problems account for 1/3 of grade school absences among children from low-income families.[28]

33% absences

Many missed school hours

51 million school hours are missed by kids every year due to dental problems.[29] Kids with oral health problems are 3X more likely to miss school than their peers.[18]

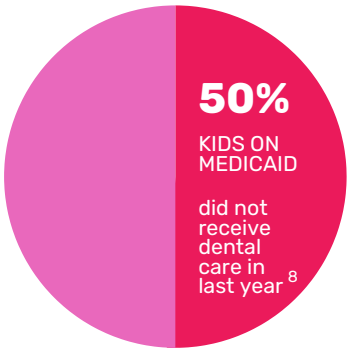
51 M hours

Costly emergent dental care

2.43 million visits to the emergency department for dental conditions cost the U.S. $1.6 billion and an average of $971 for each child visit.[12]

$ 1.6 billion

Poor oral health is a primary marker of social inequality.



SDOH can have a powerful impact on oral health.

The care received and choices made during childhood can influence oral health far into adulthood.

80-90%

Social, behavioral and economic factors influence up to 90% of health outcomes.[30]

50%

Approximately half of kids on Medicaid did not receive dental care in the last year.[8]

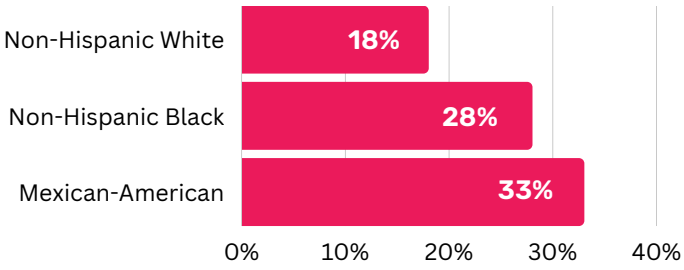
67%

Out of the 43% of dentists signed up to participate in Medicaid, only 33% of them treated at least one child on a Medicaid or CHIP plan. The remaining 67% of dentists did not treat any children.[19]

3x decay

Kids of mothers with higher untreated tooth decay are three times more likely to have treated or untreated dental caries as kids of mothers who have no untreated decay.[35]

UNTREATED TOOTH DECAY in 2-5 Year Olds[26]



Prevalence of untreated tooth decay is **1-2x** higher for Mexican American and Non-Hispanic Black children.[26] Eating, speech and future tooth placement depend on healthy baby teeth.

Dental Disparities Worse for Minority Kids

69% of Mexican-American adolescents have had cavities in permanent teeth vs. 54% of non-Hispanic White kids.[26]

71% of American Indian and Alaskan Native kids have had cavities by age 5. They also have the highest rate of early childhood cavities than any other race or ethnicity in the U.S.[27]

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Benevis is a leading dental support organization (DSO) for practices focused on delivering life-changing dental care and orthodontics. Through comprehensive dental practice support services that expand access to dentistry, Benevis has a 20-year history of providing the highest quality care to approximately 5 million children and adults in underserved communities. Its support services are employed in more than 100 locally branded dental offices that have delivered treatment during 1.2 million visits. Benevis also advocates for programs and legislation that ensure all families have access to the oral healthcare they need and deserve.

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