

Policy on Social Determinants of Children's Oral Health and Health Disparities

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The American Academy of Pediatric Dentistry (AAPD) recognizes the influence of social factors on children's oral health including access to care, dental disease, behaviors, and oral health inequalities. The AAPD encourages oral health professionals and policymakers to formally acknowledge the role that social determinants of health (SDH) have in producing and perpetuating poor oral health and oral health inequalities in children. Moreover, AAPD encourages the implementation of oral health promotion strategies that account for the SDH and appropriate clinical management protocols informed by and sensitive to the SDH. All relevant stakeholders (e.g., health professionals, researchers, educators) are encouraged to develop strategies that incorporate SDH-related knowledge to improve oral health behaviors, prevent dental disease, and address oral health inequalities in children.

Methods

This policy is based on a review of the current literature, including a search of PubMed®/MEDLINE database using the terms: social determinants AND dental; fields: all; limits: English. A total of 405 articles matched these criteria. Articles for review were selected from this list, the references within selected articles, and other articles from the literature.

Background

The World Health Organization defines social determinants of health as “the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life”.¹ The concept of SDH is based on the premise that improving social conditions is a necessary precursor for improving health outcomes for vulnerable populations, ameliorating inequalities, and achieving health equity and social justice. Health equity is defined as “the absence of systematic disparities in health between and within social groups that have different levels of underlying social advantages or disadvantages”.² Past work has demonstrated gradients in oral health outcomes based on socioeconomic position.³ Measures of socioeconomic position include income, educational attainment, occupation, and race/ethnicity.^{4,5} SDH are influenced by socioeconomic position and more broadly embody the social environment and context in which individuals live and make health-related decisions

over the life course. Various conceptual models from dentistry include SDH as upstream factors that influence oral health behaviors, dental disease rates, and oral health outcomes.⁶⁻¹¹ From a social justice perspective, addressing the SDH is a longer-term aspirational goal to improve oral health outcomes and reduce inequalities for children from socioeconomic vulnerable families and communities. A more immediate strategy is to ensure that interventions, programs, and policies properly acknowledge and account for the SDH.

In 2013, the American Academy of Pediatrics (AAP) published a policy statement entitled “Community Pediatrics: Navigating the Intersection of Medicine, Public Health, and Social Determinants of Children's Health”.¹² This statement included a reference to dental caries, which is an important acknowledgement of SDH and children's oral health. However, the statement did not include references from the scientific literature that provide empirical evidence for SDH, which has grown substantially in dentistry since 2013.

Findings from the social determinants of children's oral health literature can be organized into categories that provide guidance on how dentists, other health professionals, researchers, educators, and policy makers can account for the SDH to improve children's health outcomes. Examples are provided of past efforts and future opportunities to address children's oral health inequalities through SDH-based interventions, programs, and policies.

SDH are commonly measured at the caregiver- or household-level. The SDH that affect caregiver oral health outcomes similarly affect their children.¹³ Weak social ties and social networks are associated with poor oral health outcomes.¹⁴⁻¹⁷ Potential mechanisms include reduced health information that is transmitted through social ties and networks and increased allostatic load or stress, which is implicated in poor oral health behaviors and higher caries rates.¹⁸ This is particularly worrisome from a life course perspective.¹⁹ A small cross-sectional study suggests that chronic stress is related to higher levels

ABBREVIATIONS

AAP: American Academy of Pediatrics. **AAPD:** American Academy Pediatric Dentistry. **SDH:** Social determinants of health.

of dental caries in children potentially by affecting intraoral bacteria,²⁰ findings that need to be validated with additional studies. Furthermore, poverty and stress could influence child behaviors in dental settings, including the ability to cooperate for dental procedures,^{21,22} which has not yet been tested empirically. There are other oral health examples of social and biological interactions.²³ Other examples of SDH include household food insecurity (defined as disrupted eating patterns with or without reduced food intake)²⁴ and overcrowding.^{25,26} These factors can make it difficult for families to purchase healthy foods and to have designated spaces in the home for important routines like toothbrushing. Children living in settings with multiple social risks are at substantially greater risk for caries.²⁷ Many of these relationships need to be elucidated with additional studies.

SDH are also measured within neighborhoods and communities. Neighborhood income is positively associated with oral health-related behaviors like improved oral hygiene practices and lower dental disease levels for children.^{15,28-31} In addition, higher levels of income inequality within a community are associated with poorer oral health outcomes.³² Another important SDH is social capital, which is defined as resources that result from networks³³ and other sources like community centers.³⁴ Over 60 percent of women of childbearing age reside in neighborhoods with very poor or poor levels of social capital.³⁵ Studies generally have reported positive outcomes associated with greater levels of social capital,^{36,37} but at least one study found negative outcomes.³⁸ These findings suggest that enhancing social capital is beneficial, but that social norms can influence the way in which resources are deployed, which can lead to suboptimal oral health behaviors and poor outcomes.

An example of a public health intervention that circumvents the SDH is the Childsmile Program in Scotland.³⁹ Childsmile distributes free toothbrushes and toothpaste to children in communities during early childhood and to first and second graders living in disadvantaged areas. Within severely disadvantaged areas, at-risk children are referred to dental care support workers who provide dietary counseling. In addition, children in these areas receive twice yearly school-based fluoride varnish treatments. Childsmile does not attempt to modify SDH but circumvents the SDH by delivering more intense intervention activities within the neediest areas. Bolsa Família Program is a conditional cash transfer program in Brazil, part of a larger program aimed at improving use of primary care services for disadvantaged children.⁴⁰ The program does not have a formal oral health component even though there is high support by local Bolsa program supervisors. The study recommendation was to make child dental visits a mandatory precursor to Bolsa families receiving cash transfer payments, which would provide additional opportunities to influence parent and child behaviors and improve oral health outcomes. Programs like Childsmile and Bolsa require meaningful health care investments from central governments. Such investments are more prevalent in countries in which there is less income

inequality⁴¹ as well as the political will to address oral health inequalities.

Directly addressing the SDH will involve systematic policy and environmental changes that improve living conditions and alleviate poverty. Examples include universal housing programs, health insurance programs like Medicare for older Americans and Medicaid and Children's Health Insurance Program (CHIP) for children, and programs that prevent food insecurity. Broader policies are likely to have the long-term impact needed to improve the conditions in which vulnerable families and children live.

Policy Statement

Recognizing the importance of the social determinants of oral health for children, the AAPD:

- Supports broader policies and programs that help to alleviate poverty and social inequalities.
- Encourages dentists and the oral health care team to provide anticipatory guidance that is sensitive to the SDH, which involves collecting a social history from patients.⁴²
- Supports inter-professional educational approaches to train students as well as practicing dentists and health professionals on the social determinants of health.⁴³⁻⁴⁶
- Endorses interdisciplinary theory-based intervention approaches that account for the social determinants of oral health.^{47,48}
- Supports additional research to understand mechanisms underlying the social determinants of oral health.⁴⁹

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