

# A Menace to the Mouth: Child Dental Neglect in the US

Rachel Kim<sup>1</sup> and Janine Kucik<sup>#</sup>

<sup>1</sup>Reservoir High School, Fulton, MD, USA

<sup>#</sup>Advisor

## ABSTRACT

Rates of tooth decay in children significantly increased at the beginning of the 21st century, according to the National Institute of Dental and Craniofacial Research. To address this sudden trend reversal, this paper looks into possible solutions to eliminate the problem of child dental neglect, which could be a plausible reason why the general adolescent population's oral health is so poor. Specifically, this research's aim was to find ways dentists could help lower cases of child dental neglect in the US. An interview and careful analyses of numerous sources were done in order to gather new data and information for this research paper.

## **Introduction**

In 2007, 12-year-old Deamonte Driver from Prince George's County, Maryland, passed away due to tooth cavity infections that spread to his brain. This devastating and preventable tragedy occurred because Deamonte's mother could not afford proper treatment. According to the National Institute of Dental and Craniofacial Research (2018a), rates of tooth decay in children significantly increased at the beginning of the 21st century. This sudden trend reversal caused concern and showed an urgent need for further research. Since then, researchers have conducted many more studies and legislators have even adopted child dental neglect laws and regulations. However, the existing action plans to combat child dental neglect remain underdeveloped. To prevent further child dental neglect cases in the US, dentists should inform parents and children about the devastating effects of tooth cavities and how to prevent them, effectively and efficiently treat adolescent patients, and make efforts to reach out to children in need by volunteering in dental health programs and talking to primary care doctors.

## **Informing parents and children**

Firstly, dentists should inform parents and children that dental caries is a serious disease that has a multitude of shocking adverse effects on the body. For example, cavities can worsen specific diseases or increase one's chances of catching them (Heilmann, 2015). In addition, studies show that children with tooth cavities are more often underweight than children without cavities (Ayhan et al., 1996; Acs et al., 1992). This results in children with untreated cavities being at a higher risk of emergency dental visits, hospitalizations, school absences, and restricted learning ability (Sheiham, 2006). Even looking to the future, poor oral health as a child predicts poor oral health as an adult: children with cavities grow to become adults with cavities (Heilmann, 2015). In summary, tooth decay hurts children not just in the mouth, but in the rest of their body, mind, and even in adulthood.

Being aware of the consequences of tooth caries can move parents to put dental health as a priority for their children. However, it is clear that more parents need to know about these negative implications, as childhood caries are unfortunately commonplace. According to the National Institute of Dental and Craniofacial Research (2018a), 42% of 2-11-year-old children have had tooth decay in their primary (baby) teeth in the past, while 23% of the same age group still have untreated cavities in their mouths. These statistics suggest that many children in the US are not getting the dental care they need. Sadly, the victims of child dental neglect have to unjustly suffer the effects of bad

oral health on the mind and body. The American Academy of Pediatric Dentistry (2020) defines child dental neglect as the “willful failure of parent or guardian to seek and follow through with treatment necessary to ensure a level of oral health essential for adequate function and freedom from pain and infection.” Child dental neglect is a problem with huge impacts and with more victims than may be perceived.

To stop child dental neglect, dentists should inform parents on how to prevent cavities in their children. Perhaps one of the most important things is to instruct parents to start brushing their young child’s teeth twice a day as soon as the first tooth appears (Schwartz, 2020). As a supplement, dentists should also spread awareness about what cavities really are to prevent misunderstanding. Parents should take note that cavity-causing bacteria is an infectious disease that feeds on sugar and is transmitted through saliva (Lin, 2021). One way dentists and staff can share this information is by handing out materials to parents when they come for an appointment (Schwartz, 2020). It is the parents’ responsibility to evaluate their children’s oral health and make sure they get the care they need, and it is absolutely crucial that they do so. Accurately evaluating oral health is important because most children judge their oral health as good, even if it is not (Oliveira et al., 2020). To summarize, “it’s always ultimately up to the parents. The best that [dentists] can do is explain and demonstrate... and discuss the effects of not addressing dental issues” (L. Vinson, personal communication, February 28, 2022).

Furthermore, dentists must inform parents about the risk factors of caries so that they can minimize them. One of the most well-known factors is family socioeconomic status (Ramazani et al., 2010). People with lower levels of education, poor childhood socioeconomic status, and irregular dental appointments have higher levels of plaque throughout their life (Broadbent et al., 2011). Also, the percentage of children who have never gone to the dentist is higher in lower-income families than in higher-income families by a difference of more than 5 percent (NIDCR, 2018b). Evidently, the reason for this disparity is monetary. Many parents cannot afford dental care and insurance may not cover heavy procedures; “there’s plenty of [insurance] coverage for prevention [of cavities], but if a child does need treatment, the coverage for that tends to go down easily to 50% or less” (L. Vinson, personal communication, February 28, 2022). If a child is not able to visit the dentist early enough, dental problems can exacerbate and treatment costs can multiply and even be unattainable. The question becomes how dentists can care for these underserved children, which will be answered later on.

## Using effective and efficient treatments during appointments

As cavities are very serious, treating the disease can be complicated, especially in children. Dentists should treat tooth decay without causing dental fear or stress in their adolescent patients. The Australian and New Zealand Academy of Special Needs Dentistry (2021) defines dental anxiety as stress or fear in dental treatment situations while defining dental phobia as severe and irrational dental anxiety. There are many established techniques for dentists to effectively and efficiently treat their adolescent patients, which will be covered later. Again, the basis and belief behind these methods is that dentists should make appointments as stress-free and comfortable as possible for children. This is especially important, as already 11% of adolescent patients do not like dental visits, while 12% are afraid of appointments (Alsarheed, 2011). Adding more urgency to the problem, children will most likely share negative experiences with each other, spreading fear. In fact, 10% of adolescent patients have a sibling that dislikes dental appointments, and 18% have a sibling that is afraid of dental appointments (Alsarheed, 2011). Additionally, when children with dental fear become adults, that fear could hurt their own children. Parents will project their opinions and feelings onto their children, and “there have been many studies that show the effect of maternal anxiety on dental anxiety in children... Because parents have those anxieties and phobias, they don’t want to take their children [to the dentist]” (L. Vinson, personal communication, February 28, 2022).

Next, the traditional fear of dentistry is a major obstacle to providing quality dental care (Corah et al., 1979). Children report that, regarding dental treatment, they are most anxious about injections (74% of children), tooth extractions (31%), drilling (27%), and the sight of dental equipment (12%) (Alsarheed, 2011). Interestingly, children linked instances of pain and discomfort to mostly actual aspects of the procedure (such as the equipment) and did not

blame the operators (Oliveira et al., 2020). This evidence that children trust their dentists brings hope that dentists can help them overcome their fear of dental treatment. To prevent misunderstanding of dental treatment and equipment, dentists can use a technique called “Tell-Show-Do”, in which they first describe and demonstrate a procedure before actually doing it (Schwartz, 2020). Similarly, to make dental equipment less intimidating, dentists can use substitute names (e.g. referring to fluoride as “tooth vitamins”) (Schwartz, 2020). Also, dentists should accommodate children's preferences and make sure they follow regulations. Notably, 69% of children prefer dentists that wear protective equipment (e.g. masks), and 82% prefer dentists that wear formal attire (Alsarheed, 2011). Furthermore, dentists should keep in mind that children will see dental appointments as largely unfamiliar and scary, so the best dental treatments are short (yet still effective) in order to make the patient willing to return (Schwartz, 2020). Every child patient has a different personality and temperament, so dentists must be flexible and able to use a variety of handling methods during procedures (Oliveira et al., 2020; Schwartz, 2020). As dental anxiety and phobia in adulthood often stem from distressing or traumatic dental experiences in childhood (Oliveira et al., 2020), dentists should help adolescent patients be comfortable and fearless during appointments. Bad experiences will stay with children forever, as will good experiences.

Regarding the actual treatment process, dentists should use non-invasive and cavity-preventing treatments on adolescent patients. For instance, the Atraumatic Restorative Treatment (ART) is a cavity treatment that does not require a painkiller injection and is, therefore, more “child-friendly” (World Health Organization [WHO], 2020). Non-invasive treatments do not puncture the skin, preventing unnecessary physical or mental trauma to children. Research recommends dentists prioritize less invasive treatments over more invasive treatments because they are more efficient, are less of a financial burden, and cause less discomfort to child patients (Duangthip et al., 2017). Also, if a child only comes for appointments sporadically, cavity-preventing treatments can help prevent tooth decay from forming during those vulnerable periods of time. Another good non-invasive option is glass-ionomer sealants in the back teeth to slow the development of new cavities in children (WHO, 2020). Therefore, dentists should favor and prioritize dental treatments that are age-appropriate for their youth patients.

More broadly, dentists should carefully consider and formulate a unique treatment plan for each patient. Dentists and pediatricians can do this by using an oral health risk assessment tool to check for risk factors and ultimately create a treatment plan to fit the child’s needs (American Academy of Pediatrics [AAP], 2011). A more specific and personal treatment plan will ensure better results for that patient’s mouth. With this, dentists can effectively treat all the unique problems of each child patient that come into their practice. However, there are many children who cannot access dental care but desperately need it.

## **Volunteering in dental health programs and reaching out**

In order to best serve patients in need, dentists should volunteer their time and skills through non-profit dental health programs and reach out to primary care professionals. Many dentists may not be able to do all of the actions mentioned above; however, operators should be willing to accept and take adolescent patients. General dentists must be able to treat adolescent patients, as there are not enough pediatric dentists to treat the entire adolescent population (Schwartz, 2020). Another reason this is crucial is that with “earlier care and exposure, [children] are more likely to have a positive experience” (L. Vinson, personal communication, February 28, 2022). Building positive experiences early on can prevent irrational fear and anxiety later on, and make patients more willing to come back for appointments. If dentists are willing to accept and make appointments a positive experience for young patients, their practice will in turn thrive and benefit (Schwartz, 2020).

To directly serve children in need, dentists should become part of volunteer organizations, such as Give Kids a Smile (GKAS). This organization gives dentists a chance to provide free treatment to underserved youth in their communities (American Dental Association [ADA], 2021). Obviously, opportunities for free dental care help children get the care they might not otherwise be able to get. However, an inapparent benefit of dental volunteer organizations is that they can target specific population groups and tackle dental health inequality. For instance, in 2019, the Indian

Health Service organized 113 GKAS events targeting American Indian and Alaska Native adolescent patients (ADA, 2021).

Finally, dentists should reach out to primary care professionals and urge them to promote good oral health. As children who are under six years old usually see general doctors more often than dentists (WHO, 2020), primary doctors have more chances to emphasize the importance of oral health to parents. Also, primary care professionals can be trained how to detect cavities in children (Pierce et al., 2002), and act quickly to refer parents to dentists. If primary doctors and dentists work together, they can attract more patients to their practices (through doctor recommendations), and better help their patients stay in tip-top shape in every area of their bodies. Since “the mouth is the head of the body, and everything that we eat, we drink, has to go through the mouth” (L. Vinson, personal communication, February 28, 2022), the field of dentistry must stay closely linked and connected to general health.

## Conclusion

Child dental neglect in the US is a serious issue, and cases must be lowered through outstanding efforts. As seen in Deamonte's case, child dental neglect can quickly escalate and become fatal. Even if most child dental neglect cases do not result in death, it has enormous repercussions on the mind and body. However, childhood caries in the adolescent population can be reduced significantly with dentists' help and support. Dentists can reduce cases by informing parents and children about tooth cavities and how to prevent them, effectively and efficiently treating adolescent patients, and serving children in need by volunteering in non-profit dental health programs and reaching out to primary care professionals. These efforts attack the complicated problem of child dental neglect from many sides, ensuring effective and equal results.

## References

- Acs, G., Lodolini, G., Kaminsky, S., & Cisneros, G. J. (1992). Effect of nursing caries on body weight in a pediatric population. *Pediatric Dentistry*, 14(5), 302-305.  
<https://www.aapd.org/globalassets/media/publications/archives/acs-14-05.pdf>
- AlSarheed, M. (2011). Children's perception of their dentists. *European Journal of Dentistry*, 5(2), 186-190.  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3075993/>
- American Academy of Pediatric Dentistry. (2020). Definition of dental neglect. *The Reference Manual of Pediatric Dentistry*, 16. <https://www.aapd.org/research/oral-health-policies--recommendations/dental-neglect/>
- American Academy of Pediatrics. (2011). Oral health risk assessment tool. *Aetna Better Health*.  
<https://www.aetnabetterhealth.com/florida/assets/pdf/provider/oralhealthRiskAssessmentTool.pdf>
- American Dental Association. (2021, February 5). *Give Kids A Smile 2021 virtual kick-off celebration* [Video].  
<https://www.youtube.com/watch?v=oqgjmxdxpE>
- The Australian & New Zealand Academy of Special Needs Dentistry. (2021). *Dental anxiety and phobia*.  
<https://www.betterhealth.vic.gov.au/health/conditionsandtreatments/dental-anxiety-and-phobia#bhc-content>
- Ayhan, H., Suskan, E., & Yildirim, S. (1996). The effect of nursing or rampant caries on height, body weight and head circumference. *The Journal of Clinical Pediatric Dentistry*.

[https://www.academia.edu/1454006/The\\_effect\\_of\\_nursing\\_or\\_rampant\\_caries\\_on\\_height\\_body\\_weight\\_and\\_head\\_circumference?pop\\_sutd=false](https://www.academia.edu/1454006/The_effect_of_nursing_or_rampant_caries_on_height_body_weight_and_head_circumference?pop_sutd=false)

- Broadbent, J. M., Thomson, W. M., Boyens, J. V., & Poulton, R. (2011). Dental plaque and oral health during the first 32 years of life. *The Journal of the American Dental Association*, 142(4), 415-426.  
<https://doi.org/10.14219/jada.archive.2011.0197>
- Corah, N. L., Gale, E. N., & Illig, S. J. (1979). The use of relaxation and distraction to reduce psychological stress during dental procedures. *The Journal of the American Dental Association*, 98(3), 390-394.  
<https://doi.org/10.14219/jada.archive.1979.0049>
- Duangthip, D., Chen, K., Gao, S., Lo, E., & Chu, C. (2017). Managing early childhood caries with atraumatic restorative treatment and topical silver and fluoride agents. *International Journal of Environmental Research and Public Health*, 14(10), 1204. <https://doi.org/10.3390/ijerph14101204>
- Heilmann, A., Tsakos, G., & Watt, R. G. (2015). Oral health over the life course. *A Life Course Perspective on Health Trajectories and Transitions*, 39-59. <https://doi.org/10.1007/978-3-319-20484-03>
- Lin, J., & Orynich, A. (2021, May 25). Why does my child keep getting cavities? *Hurst Pediatric Dentistry*.  
<https://hurstpediatricdentistry.com/2021/05/25/why-does-my-child-keep-getting-cavities/>
- Moynihan, P., Tanner, L., Holmes, R., Hillier-brown, F., Mashayekhi, A., Kelly, S., & Craig, D. (2019). Systematic review of evidence pertaining to factors that modify risk of early childhood caries. *JDR Clinical & Translational Research*, 4(3), 202-216. <https://doi.org/10.1177/2380084418824262>
- National Institute of Dental and Craniofacial Research. (2018a). *Dental caries (tooth decay) in children age 2 to 11*. National Institutes of Health. <https://www.nidcr.nih.gov/research/data-statistics/dental-caries/children>
- National Institute of Dental and Craniofacial Research. (2018b). *Treatment needs in children (age 2 to 11)*. National Institutes of Health. <https://www.nidcr.nih.gov/research/data-statistics/treatment-needs/children>
- Oliveira, E. C., Marques, E. F., Santos, M. M., Borges, T. S., & Bitencourt, L. C. (2020). Children's perception about dental care in patients attended at Ceulp-Ulbra school clinic. *Interventions in Pediatric Dentistry Open Access Journal*, 4(4), 354-358. <https://lupinepublishers.com/pediatric-dentistry-journal/fulltext/childrens-perception-about-dental-care-in-patients-attended-at-ceulp-ulbra-school-clinic.ID.000193.php>
- Pierce, K. M., Rozier, R. G., & Vann, W. F., Jr. (2002). Accuracy of pediatric primary care providers' screening and referral for early childhood caries. *Pediatrics*, 109(5). <https://doi.org/10.1542/peds.109.5.e82>
- Ramazani, N., Poureslami, H. R., Ahmadi, R., & Ramazani, M. (2010). Early childhood caries and the role of pediatricians in its prevention. *Journal of Comprehensive Pediatrics*, 2(2), 47-52.  
<https://brief.land/jcp/articles/72912.html>
- Schwartz, S., & Vinson, L. A. (2020, April 9). *Basic techniques for management of the infant and toddler dental patient*. <https://www.dentalcare.com/en-us/professional-education/ce-courses/ce54/toc>

Sheiham, A. (2006). Dental caries affects body weight, growth and quality of life in pre-school children. *British Dental Journal*, 201(10), 625-626. <https://www.nature.com/articles/4814259>

World Health Organization. (2020). *Ending childhood dental caries: WHO implementation manual*. <https://www.who.int/publications/i/item/ending-childhood-dental-carries-who-implementation-manual>