ISSN 2055-0286
Advances in Social Sciences Research Journal; Vol. 13 No. 11 (2026) (476-482)
https://doi.org/10.14738/assrj.1311.12736

Preventable Healthcare Crisis: Why do Millions of People with Dental Caries Require Emergency Care?

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Abstract: Dental caries is the most common chronic disease of childhood and is largely preventable, yet children across the United States continue to experience severe dental pain, infections, abscesses, and complications requiring emergency department visits, hospitalization, and treatment under general anesthesia. The progression from an early carious lesion to a dental emergency rarely occurs without opportunities for prevention, early detection, and timely intervention. This article examines the systemic and socioeconomic factors that allow a manageable childhood disease to become a medical emergency, including the separation of oral health from general pediatric care, delayed preventive services, barriers to accessing dental treatment, limitations in Medicaid coverage, and inadequate continuity of care following emergency treatment. These challenges disproportionately affect children from low-income families, reinforcing persistent disparities in oral health outcomes. Although emergency departments play an essential role in managing acute complications, they cannot substitute for definitive dental treatment and sustained preventive care. Reducing avoidable dental emergencies requires a coordinated approach that integrates oral health into routine pediatric care, strengthens access to preventive and restorative services, addresses social determinants of health, and ensures timely follow-up. Ultimately, the true measure of progress in children's oral health should not be how effectively severe dental emergencies are managed, but how successfully health systems prevent children from reaching that point of suffering pain and losing their teeth and dental tissues.

Keywords: Dental caries, pediatric oral health, dental emergencies, preventive dentistry, oral health disparities, Medicaid, access to dental care.

INTRODUCTION: A PREVENTABLE DISEASE, AN AVOIDABLE EMERGENCY

A child or adult should not need emergency or hospital care because of dental caries. Yet across the United States, millions of children and adults continue to present with severe dental pain, facial swelling, infection, and abscesses, sometimes requiring hospitalization and treatment under general anesthesia.[1] In several countries the extraction of carious teeth is among the most common reasons for pediatric hospital admission. The paradox is striking, dental caries is the most common chronic disease of childhood, yet it is also largely preventable. By ages 6 to 9 years, approximately half of American children have experienced dental caries, with children living in poverty bearing a disproportionate burden.[2]

More troubling is that dental caries rarely becomes a hospital emergency problem overnight. It begins as a disease we know how to prevent, detect, and treat.[3] When those opportunities are missed, however, a small caries lesion can progress to destruction of the tooth, severe pain, infection, abscess, and ultimately complications requiring hospital care.[1] At nearly every stage along that path, there was an opportunity for the healthcare system to intervene.

When a largely preventable disease progresses until a child or adult requires emergency or hospital care, the problem is no longer simply the dental caries. It is the series of missed opportunities and social determinants of health that allowed the disease to progress that far. The urgent question, therefore, is not why children or adults develop dental diseases, but why, despite having the tools to prevent and treat them,[3] we still have a healthcare system that allows a preventable dental disease to become a hospital emergency case?

BURDEN OF DENTAL CARIES IN EMERGENCY DEPARTMENT CARE

Dental caries or tooth decay is not a marginal phenomenon. The U.S. national data show that in 2009, over 900,000 emergency department (ED) visits and nearly 13,000 hospital inpatient stays were related to dental conditions, and between 2006 and 2009 the incidence of ED visits for patients seeking dental treatment increased by 16 percent, rising from 874,000 to 936,432 visits.[4] The dental caries itself drives much of this volume: because dental caries was the first-listed diagnosis for 42% of the ER visits, and dental abscess, an infection that typically originates from dental caries, was the principal diagnosis for 63% of the hospital inpatient stays.[4]

The ER and hospitalization trend is worsening over time. The number of dental ER visits in the U.S. increased from 1.1 million in 2000 to 2.1 million in 2010,[5] and patients who present at an ER with a non-traumatic dental condition would be better served in a dental office setting due to the availability of definitive care. For the youngest children, the escalation is especially visible in the operating room: one New York State study found that the share of dental caries-related ER patients treated under general anesthesia rose from 34.9% in 2004 to 75.2% in 2008.[6] The financial toll on families is substantial as well: one analysis of the U.S. national data found total oral disease-related ER charges across the U.S. were $14.2 million, followed by total hospitalization charges of $162 million, with dental care expenditures and hospital resource charges for oral disease reaching 2.7 billion dollars over the same timeframe.[7]

THE HEALTHCARE SYSTEM SEPARATES ORAL HEALTH FROM CHILDREN'S OVERALL HEALTH

For too long, our health system has treated the mouth as though it were separate from the rest of the child.[8] Disease does not recognize that boundary. Untreated caries can cause pain, infection, and abscesses that extend beyond the tooth. Its effects can also disrupt a child's ability to eat, sleep, speak, learn, attend school, and participate fully in childhood.[9,10]

Yet oral health remains too often peripheral to pediatric health care, creating missed opportunities for prevention and early intervention. Every encounter with a child, whether in a pediatrician's office, community clinic, school, or dental practice, should be an opportunity to identify risk, educate families, recognize early disease, and connect children with care. A child's mouth is part of a child's health. Thus, our health care system should treat it that way long before a cavity becomes a medical emergency.

HEALTHCARE POLICIES INTERVENES TOO LATE

Dental caries gives us something medicine desperately seeks in many diseases: the opportunity to intervene before damage becomes irreversible. Fluoride, dental sealants, good oral hygiene, dietary modification, early dental visits, and regular preventive care can reduce disease,[3] while school based programs can reach children who might otherwise go without care. The problem is that too many children receive meaningful intervention only after the disease has progressed.[11] As opportunities are missed, treatment becomes increasingly invasive: prevention gives way to restoration, restoration may give way to extraction, and extensive disease may ultimately require sedation or general anesthesia.[1] What could have been prevented or treated simply becomes complex, costly, and potentially traumatic.[12] The safest, least invasive, and least costly dental caries to treat, is the one we prevent from progressing in the first place.

BARRIERS TO DENTAL CARE PUT CHILDREN'S ORAL HEALTH AT RISK

Cuts to children's Medicaid coverage are projected to worsen oral health outcomes and increase families' out of pocket health care costs.[13] Yet coverage alone does not guarantee care. Families may still face transportation difficulties, long travel distances, limited appointments, workforce shortages, and difficulty finding dentists who treat young children or accept public insurance.[14] These barriers delay prevention and treatment, giving early disease time to become a serious disease.[11] A caries lesion that could have been treated early may instead progress until pain, swelling, or infection, forces a family to seek care wherever it is available, sometimes in an emergency department.[1] The burden falls disproportionately on children from lower income families, who experience substantially higher rates of untreated decay.[14] Protecting coverage is essential, but the coverage must also translate into care. A dental benefit on paper cannot prevent dental disease in a child who cannot get into a dental chair.

HEALTHCARE TREATS THE EMERGENCY WITHOUT ALWAYS SOLVING THE DISEASE

Hospitals are indispensable when a child or adult develops severe infection, facial swelling, trauma, or other serious complications. But an emergency department was never designed to replace a dental office.10 It can relieve pain, control infection, and stabilize vital signs, but stabilizing the emergency is not the same as treating the disease that caused it. Without definitive dental treatment and ongoing prevention, dental caries can persist, and the child or adult will likely return in pain. For some patients, the disease becomes so extensive that restoring oral health requires multiple procedures under sedation or general anesthesia. What began as preventable decay has become a complex and costly episode of care.8 Success should therefore be measured not simply by whether we resolve today's emergency, but by whether we treat its cause and prevent the next one.

COVERAGE GAPS AND BARRIERS TO CARE

Insurance status itself shapes whether a child ever receives treatment. One national analysis found that the likelihood of not availing dental treatment is nearly two times or more higher for uninsured children than children having public insurance, private insurance, or a

combination of both, leading researchers to conclude that increased support and expansion of public health insurance will benefit oral health care for children.[8]

But coverage alone does not guarantee care. Families may still face transportation difficulties, long travel distances, limited appointments, workforce shortages, and difficulty finding dentists who treat young children or accept public insurance. Disparities tied to insurance type persist even within the pediatric dental specialty: one recent study of chronic disease management for early childhood caries found meaningfully different practice patterns for privately insured children (≤26%) than publicly insured children (>75%), reflecting how coverage type can shape the care a child actually receives.[8]

A summary of the reasons why childhood caries becomes emergency cases, even though this is a preventable crisis is shown in figure 1.

HEALTHCARE TREATS THE EMERGENCY WITHOUT ALWAYS SOLVING THE DISEASE

Hospitals are indispensable when a child develops severe infection, facial swelling, trauma, or other serious complications. But an emergency department (ED) was never designed to replace a dental office.[14] It can relieve pain, control infection, and stabilize a child, but stabilizing the emergency is not the same as treating the disease that caused it. Most ED encounters reflect this limitation directly: most dental ED visits are for non-traumatic dental conditions, and in most cases, ED healthcare providers provide prescriptions for pain or antibiotics for infections rather than definitive treatment.

Without follow-up dental care, disease can persist, and the child may return in pain, often times to the same emergency department.[14] This cycle of recurrent, unresolved visits is well documented: research tracking dental-related ED visits found that many patients who visit the ED for a dental problem return for the same complaint within a short period, often because the underlying disease was never actually treated, only the acute symptom. For some children, by the time they are finally connected to definitive care, disease has become so extensive that restoring oral health requires multiple procedures under sedation or general anesthesia. What began as preventable decay has become a complex and costly episode of care.[12] Success should therefore be measured not simply by whether we resolve today's emergency, but by whether we treat its cause and prevent the next one.

DENTAL DISEASE REFLECTS THE CONDITIONS IN WHICH CHILDREN LIVE

Tooth decay is biological, but its burden is profoundly shaped by the conditions in which children grow up. Diet, fluoride exposure, caregiver health literacy, financial constraints, geography, access to clinicians, and preventive care, all influence whether early disease is prevented, treated, or allowed to progress.[8] These conditions also help determine who suffers the most. Children from lower income families experience substantially more untreated tooth decay than their more affluent peers.[13,14] Severe dental disease may therefore reflect not simply what is happening inside the mouth, but the barriers surrounding the child.

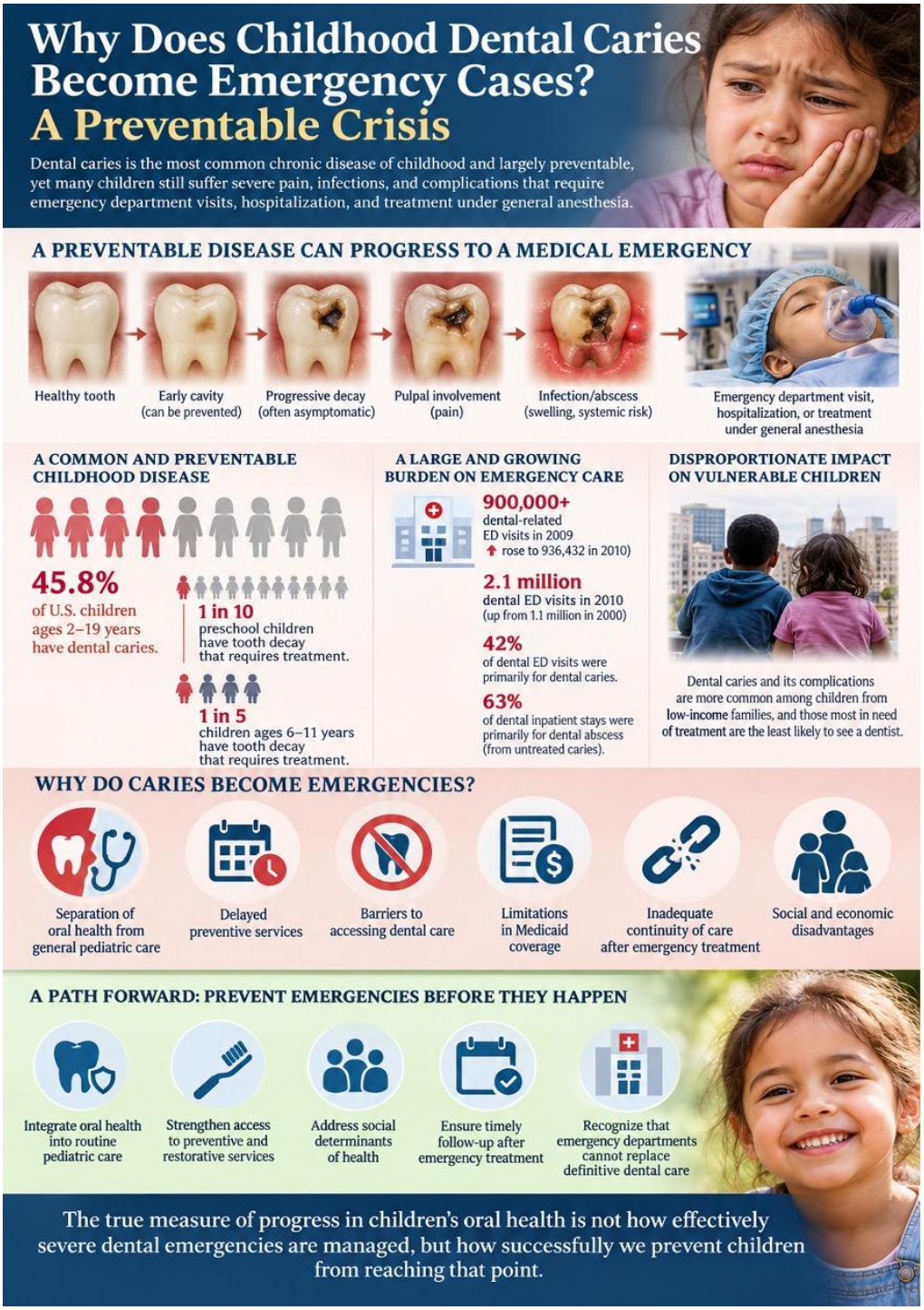

Figure 1

That is why we cannot drill our way out of the problem. Dentistry remains essential, but reducing severe childhood dental disease also requires pediatricians, schools, communities, insurers, policymakers, and families working together to make prevention and early treatment accessible. We should not wait for pain, infection, or a hospital visit to bring vulnerable children into care. Prevention must reach children before dental disease does, though a national infant Oral Health Program,[15] and other coordinated initiatives, before another generation of Americans suffer pain and diminished quality of life from dental disease.

CONCLUSION

A child's and adult's journey from a caries lesion to a hospital emergency room is rarely the story of a single decayed tooth. More often, it is the culmination of absent or failed healthcare policies and missed opportunities: oral health separated from overall health, prevention delayed until the disease has progressed too far, insurance coverage that failed to become care, emergencies treated without addressing their cause, and barriers that placed timely dental treatment beyond a family's reach.

What makes this progression especially troubling is that much of it is preventable. Dentists know how to reduce the risk of dental disease, detect it early, and intervene before a small caries lesion becomes severe pain, infection, or an abscess. Severe childhood dental disease is therefore more than an oral health problem. It is a measure of whether our health system can reach children early enough to stop manageable disease from becoming a preventable emergency.

The real measure of progress should not be how effectively we treat children and adults once their dental diseases becomes severe, but how rarely they are allowed to reach that point of suffering excruciating pain and medical complications at all. A hospital should be where we save children and adults from emergencies, not where a preventable decayed tooth finally becomes one.

The absence of a practicable policy to address this dental healthcare crisis is itself a policy for failure. The next generation of Americans will pay the price though pain, emergency healthcare expenses, and diminished quality of life.

Disclosure

The authors did not report any disclosures.

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