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My Fair Land: The Need For Specialized Dental Care

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Abstract

Pediatric dentistry is a unique field that requires a specialized approach, distinct from adult dentistry, to meet the growing and evolving needs of children. This article highlights the importance of tailored care for young patients, focusing on early intervention, prevention, and behavior management. It explores how pediatric dentists are trained to address the developmental, emotional, and psychological factors that influence children's dental health, ensuring positive experiences and lifelong habits. By emphasizing the need for expertise in pediatric care, this article argues that children deserve their own "fair land" of dental care—one that recognizes their specific needs and fosters healthy smiles from an early age.

Key words: pediatric dentistry, children, development, oral health

Introduction

FAIRNESS DOES NOT MEAN EVERYONE GETS THE SAME, FAIRNESS MEANS EVERYONE GETS WHAT THEY NEED.

-RICK RIORDAN

Pediatric dentistry is an age-defined specialty that provides both primary and comprehensive preventive and therapeutic oral health care for infants and children through adolescence, including those with special health care needs.(1) When it comes to pediatric dentistry, the familiar adage "one size fits all" doesn't apply. Just as a child's world is vastly different from an adult's, so too are their dental needs—requiring a specialized, child-centric approach that goes far beyond what general dentistry can offer. The journey to a healthy smile begins in early childhood, and it is crucial that children receive dental care that is tailored to their age, development, and emotional needs. This is where pediatric dentistry steps in, offering a unique realm of care that recognizes the distinct differences between young patients and adults.

In this "My Fair Land" of pediatric dentistry, the approach to oral health is designed not only to address teeth and gums, but to nurture the child's entire dental experience—from building trust and alleviating fear to fostering good lifelong habits. Pediatric dentists are trained to understand the nuances of children's growing teeth, the developmental stages that impact oral health, and the psychological tools needed to ensure a positive dental journey. Unlike adult dentistry, which tends to focus on routine maintenance and complex restorative care, pediatric dentistry is a world where prevention, early intervention, and emotional care take center stage.

This article explores why pediatric dentistry should be considered a specialized field in its own right—distinct from adult dentistry—and why children's dental needs deserve a "fair land" of their own, with experts who can provide the compassionate, age-appropriate care that ensures their bright smiles for years to come.

The Dental Set Up

When designing a pediatric dental clinic, the choice of colors plays a crucial role in creating an environment that is both welcoming and calming for young patients. Colors can significantly influence a child's emotional state and perception of the dental experience. The color yellow, which is favored by anxious and younger children for its

association with positive emotions, creates a cheerful and uplifting atmosphere. On the other hand, blue, which is preferred by older and less anxious children, fosters a calming environment. Goethe (1840) developed a color wheel that illustrated the psychological impact of different colors. He observed that blue evokes a sense of coolness, while yellow has a warming effect. This suggests that yellow could be the dominant color in a pediatric dental setting, with blue serving as a complementary accent. Colors like black and red should be avoided, as they may have a negative psychological impact.(2)

Walls adorned with playful cartoon images create a fun, familiar atmosphere that distracts and reassures young patients. Soothing music playing in the background further helps to reduce anxiety, while a pleasant, fresh aroma can make the space feel inviting. Additionally, audiovisual distractions, such as television screens where children can watch their favorite shows or movies during treatment, are highly effective in diverting attention from the procedure and creating a more relaxed experience. These elements work together to transform the dental visit into a positive, stress-free event for children.(3)

Diagnostics And Isolation

Miniature, colorful diagnostic and isolation tools are designed to examine and access difficult-to-reach areas within a child's smaller oral cavity. These specialized instruments facilitate treatment by ensuring better access, improved isolation, reducing the risk of trauma, and making the procedure appear less intimidating and more approachable for the child. Available in child-sized versions, these instruments include mouth mirrors, tweezers, spoon excavators, intra-oral mirrors, cheek retractors, impression trays, cotton rolls, rubber dam instrument kits, and bite blocks.(4)

When using mouth props, there is a risk that loose primary teeth could be dislodged and potentially swallowed or aspirated. To prevent this, it is recommended to first assess the child's dentition before introducing any mouth props. According to the American Academy of Pediatric Dentistry (AAPD) Behavior Guidance guidelines, the use of a mouth prop on a cooperative child is not considered stabilization. However, if the child is uncooperative, the use of a mouth prop is classified as protective stabilization, which requires informed consent. Pediatric dentists utilize various types of mouth props, including McKesson-style, Molt adjustable props, props with extraoral handles, and disposable foam options, among others.(5)

The Isolite System Isolation is an innovative tool that features a disposable soft silicone attachment, which integrates a bite block, a retractor, and high-speed suction, along with a built-in Light Emitting Diode (LED) light to improve visibility. The retractor helps in moving the tongue and cheek out of the way during treatment, while the high-speed suction ensures a contamination-free working area. Another recently developed system is Dry shield isolation, which is similar to Isolite but with a few key differences: DSI does not include an LED light and can be sterilized through autoclaving.(6)

Pediatric Endodontics

Mini head airotors and short-shank burs facilitate treatment by improving accessibility in a child's mouth. The longer length of adult files can pose difficulties in pediatric cases, as they increase the risk of breakage and cause greater mouth fatigue compared to shorter files. Therefore, it is recommended to use shorter hand files (18mm and 21mm) in pediatric patients. A key challenge when using adult rotary files in primary teeth is their potential to cause lateral perforations due to the thinner, more curved roots with a ribbon-like shape. This underscores the need for specially designed pediatric endodontic rotary files.(7)

Radiographic Imaging And Scanning

Pediatric sensors for radiography have revolutionized diagnostic imaging in pediatric dentistry by providing a safer, more comfortable, and accurate means of assessing oral health in children. These digital sensors are smaller than traditional adult sensors, making them ideal for a child's smaller oral cavity. The advanced technology allows for high-quality images with reduced radiation exposure, which is crucial for protecting young patients from unnecessary risk. Pediatric sensors are designed to fit comfortably in a child's mouth, minimizing discomfort during the imaging process, and can be used to detect cavities, tooth development issues, or bone abnormalities with greater precision. They are

considered as a boon to modern dentistry. Eg: Gendex™ External Dimensions = 22 X 35mm and GXS-700 size 1 – perfect for pediatric patients.(8)

Nowadays, instead of the traditional wall mounted x ray unit, we have the hand held portable xray unit which can be compared to that of a " Nurf gun" or a " photographic camera" which makes it easily acceptable by the children.(9)

Dexis Carivu is a caries detection device used in dentistry to help diagnose early-stage dental caries and tooth decay. It is a non-invasive, radiation-free diagnostic tool that uses near-infrared light to detect carious lesions within the tooth structure, particularly in areas that may not be visible through traditional radiographs. Dexis Carivu uses near-infrared light instead of X-rays, ensuring no radiation is involved. Dexis Carivu can detect early enamel caries before they become visible or require invasive treatments. Traditional X-rays can be intimidating for children, especially those who are younger or have dental anxiety. The Carivu device is small, portable, and easy to use, and its procedure does not require the patient to bite down on any film or sensor, which can be uncomfortable for children.(10)

LOCAL ANESTHESIA

The Wand Injection System is a modern, computer-controlled local anesthesia delivery system that is widely used in pediatric dentistry to provide a more comfortable and less anxiety-provoking injection experience for children. This system is designed to enhance patient comfort during injections, which is especially important for pediatric patients who may have a heightened fear or sensitivity to traditional injections. By providing gentle, precise, and pain-free anesthesia, it helps reduce the discomfort typically associated with dental injections, making dental visits less stressful for young patients. This system not only ensures effective pain management during routine procedures but also helps in building positive dental experiences, which can lead to better oral health outcomes in the future. (11)

Jet injection is a method of delivering local anesthesia without the use of needles. It uses high-pressure gas to force an anesthetic solution through the skin or mucous membranes, creating a pain-free injection experience. This technology has gained attention in pediatric dentistry because of its ability to eliminate the fear and anxiety often associated with traditional needle-based injections, making it particularly useful for children. The system helps alleviate anxiety, enhances patient cooperation, and reduces the overall stress of dental procedures. While jet injection is most effective for surface procedures and mild to moderate dental treatments, it can be a valuable tool in improving the dental experience for children and fostering a more positive relationship with dental care.(12)

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