



Alternate inexpensive pediatric dental chair

Peter A. Hayes, DMD, MS

Dr. Hayes is an associate professor, Department of Pediatric Dentistry and Orthodontics, Medical University of South Carolina, College of Dental Medicine; and Dr. Junkin is a pediatric dental resident, Medical University of South Carolina. Correspond with Dr. Hayes at hayespa@musc.edu

An ideal pediatric dental chair should satisfy not only the criteria of the pediatric dentist, but also that of the dental staff, parents, and patients. From the perspective of the parent and patient, the pediatric dental chair should be comfortable, stable, clean, and pleasant in appearance. To this, the pediatric dentist must include favorable economics with regard to the purchase price, anticipated maintenance, and repair costs of the chair. Furthermore, the form and function of the chair should hasten all steps of patient care before, during, and after treatment, optimize the health of the dental team, internal marketing and risk management. An alternative inexpensive pediatric dental chair (The Showcase House, Inc., PO Box 18, Memphis, TN, 38101) as shown in Fig 1. seems to meet and exceed many of these criteria when compared to the traditional electric dental chair.

There are only a few manufacturers that construct dental chairs specifically for children. Unfortunately, when compared to an adult dental chair the only difference is that the pediatric chair is smaller in size. Currently, this pediatric dental chair is the only chair exclusively designed for children. When the author was introduced to this chair nearly 16 years ago, his initial impression was that the design was too static, unable to accommodate the practitioner, staff, and variable size and type of children. In particular, he had doubts of its use for special need patients.

This construction of this chair is simple. It consists of a boxed cabinet with a padded, mildly inclined slate made principally of wood covered with foam and synthetic upholstery. The entire unit weighs an average 25 kgs (55 lbs). The cabinet supports the patient and provides ample space for storage, and two hinged doors provide easy access. According to the manufacturer, the most popular cover for the cabinet is a laminate wood pattern. However, almost any material can be applied to the cabinet that is typically used for a kitchen or bathroom cabinet.

The slate is inclined approximately 10 degrees at the knee joints and base of the spine. It is 66 inches long, 21 inches wide, and padded with two layers of 1-inch high-density foam. To eliminate head roll, pediatric dentists commonly request only a single layer of foam in this region. The double layer of foam on the rest of the slate is optimal for the patient's comfort and stability. Another modification is to make the headrest both longer and narrower than the standard 20 inches from the base, allowing closer proximity between operator and patient, as well as increasing the leg room for tall operators. There



Fig 1. The standard size of the pediatric dental chair. Note their pleasant appearance and easy access to the cabinet storage.

is also an option to place a hinge on the base and an adjustment for the head when operators of different heights share the chair. The most common cover is Nag Hyde because of its durability, ease of disinfection, low cost, and abundance of available colors. Once delivered, an option exercised by a minority of pediatric dentists, is to attach an air, water, and suction apparatus or a light to the dental chair. However, a rear delivery cart and ceiling mounted lights are ideal and most common choice by pediatric dentists.

This pediatric dental chair resembles common household furniture, such as a couch or bench. Its simple, seamless appearance puts most children and parents at ease. This, in turn, contributes to improved behavior and attitude of the patient and parent with an overall positive effect on internal marketing.

Patient and operator positioning are standardized with this chair. Adjustments in head tilt are accomplished by natural movement of the patient. Another option for altering head tilt and also to improve patient stability is to use a bean bag pillow or shoulder roll. The standard positioning of the operator and close proximity to the patient promotes proper posture and favorable muscular skeletal mechanics. Back pain and neck strain, the most common medical problems and disabilities affecting dentists and staff, are thus eliminated if due to improper chair-side posture or movements.

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Fig 2. Dental team members performing recall examinations. Note the close proximity between the operator and patient, different sizes of the patients, and upright position of the operator.

The chair closely adapts to wraps and boards used for patient immobilization. Risk management is optimized because of the cabinet's structural stability, close proximity between operator and patient, stability of the patient, and elimination of electrical manipulation. The relatively flat and broad slate will accommodate patients and parents to sit, as well as serve as a platform for treatment plan presentation. Another positive feature is that there is no loss in clinical time for electrical adjustments to acquire a desired chair position or for play therapy. Priced at less than seven hundred dollars, excluding shipment, with no costs for installation, this chair is a truly economical alternative to more traditional dental chairs costing approximately eight times this amount. This proven, functional dental chair has benefited all dental team members that have had the rare opportunity and willingness to experience it.

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ABSTRACTS OF THE SCIENTIFIC LITERATURE



THE USE OF THE LINGUAL ARCH IN THE MIXED DENTITION

The purpose of this study was to determine if a passive lingual arch can preserve arch length during the transition from the mixed dentition to the permanent dentition and in turn provide sufficient space to resolve incisor crowding during this period. The authors also attempted to measure arch dimensional changes during this transitional period. The study group consisted of 107 consecutively treated patients with an average age of 8.6 years who demonstrated mandibular incisor crowding or an early loss of a primary canine in the mixed dentition. There were 43 males and 64 females. Each patient received a passive mandibular lingual arch made from .036 SS wire and the lingual arch was in place during the transition for the mixed to the permanent dentition.. Diagnostic records were taken at two times during the experimental period. The first time (T1) being during the mixed dentition when the permanent mandibular incisors and molars as well as the second primary molars were present. The second (T2) set of records were obtained in the early permanent dentition when all permanent teeth were present mesial to the first molars. Several measurements were made on these T1 and T2 records. These included but were not limited to; intercanine width, interpremolar width, intermolar width, arch perimeter, dental crowding, and leeway space. The results showed that there was an average of 4.85 mm of incisor crowding at the time of the T1 records. At the time of the T2 records there was an average 0.2mm excess space available when tooth size was compared to arch size. Incisor crowding decreased in 105 of the 107 patients, remained the same in 1, and increased in only 1.%

Comments: There were many changes in other measurements i.e. intercanine width, and interpremolar width. The authors gave some suggestions as to why these measurements may have changed. Measurement of primary teeth at T1 and permanent teeth at T2 and the different positions in the arch when the teeth have drifted distally into leeway space may explain the differences in dental/arch width from T1 to T2. However, it may be appropriate to have more data in this area before drawing these conclusions. JEP

Address correspondence to: Anthony A. Gianelly, Department of Orthodontics, Boston University, Goldman School of Dental Medicine, Boston, MA 02118-2392

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15 references



COLONIZATION OF MUTANS STREPTOCOCCI IN 8 TO 15 MONTH OLD CHILDREN

The purpose of this study was to explore the relationship of age with MS colonization in infants. Inner-city children (149) between the ages of 8 and 15 months who were still using a baby bottle were sampled for MS. Colonization of MS was seen as early as 10 months and in the 15-month age group, 60% were colonized. The prevention of MS colonization may need to be initiated prior to the child's first birthday.

Comments: The parent/guardian or caretaker must be playing a role of being the carrier of the MS. LHS

Address correspondence to: Dr. Tinanoff, Dept. of Pediatric Dentistry, Univ. of Maryland Dental School, 666 West Baltimore Street, Baltimore, MD 21201

Colonization of Mutans Streptococci in 8 to 15 month old Children. Karn, T., O'Sullivan, D., and Tinanoff, N. *Journal Abbr: J Public Health Dent* 58: 248-49, 1998

11 references