

Mandatory Education for Parents of Children Receiving Dental Care Under General Anesthesia to Curb Recurrence of Caries After Dental Treatment.

Katarina Calilung and Gary Liu

Statement of Issue: Dental care for children under general anesthesia is a growing treatment modality in the United States. Shifting parental attitudes towards behavioral management of children in the dental setting and the increasing rate of caries in children is increasing the demand for different sedation modalities to accomplish comprehensive dental care safely. The cost of providing treatment under general anesthesia can range from \$2,500 in a private office setting to \$10,400 in a hospital setting.

While policies are in place to address childhood caries through providing dental treatment, there has been no apparent decrease in the rate of childhood caries. Childhood caries still remains the most common chronic childhood disease in the United States. Dental caries is a preventable disease, and greater emphasis must be placed on oral health education and prevention.

Significant relapse after general anesthesia: Of children who received dental treatment under general anesthesia - a population exposed to high caries risk - only 62% returned for at least one recall appointment within 12 months after comprehensive treatment under general anesthesia. Of those patient who returned for a recall examination, 24% of these had at least one new carious lesion. For patients who returned for a recall examination between 13-24 months following comprehensive treatment under general anesthesia, 53% had new carious lesions. Patients who previously received dental treatment under general anesthesia were more likely to relapse within a 19-24 month period in comparison to that of patients who received dental treatment without general anesthesia.

The need for follow-up after comprehensive treatment. A previous dental experience with general anesthesia may have an immediate positive impact on parents to promote healthy behaviours, but the challenges they face may eventually lead to failure of maintaining good oral health in the long term. A comprehensive, accessible, and frequent preventive approach is required to reduce the rate of recurrent caries for high risk patients following comprehensive dental treatment of childhood caries.

Policy Options:

A mandatory new CDT code should be placed for oral health education, oral hygiene instruction, and dietary counseling for parents of pediatric patients to receive comprehensive dental treatment under general anesthesia. This code must be completed in conjunction with D9223 (deep sedation/general anesthesia) in order to receive Medical reimbursement rates.

- **Advantages:** A mandatory CDT code increases the opportunity for parents to receive dental education and increase health literacy. Increasing health literacy increases the likelihood of positive, long term changes in oral health. This allows for dedicated time for dental providers and employees to discuss lifestyle changes with parents that will encourage and promote better outcomes post-operative outcomes.
- **Disadvantages:** Patient education does not necessarily correlate with increased positive outcomes. Parents are often preoccupied with concerns of their child's health during general anesthesia and may not be invested in learning dental education. This also requires more time from the health provider to thoroughly review oral health education, oral hygiene instructions, and dietary counseling.

A mandated discussion with social worker prior to the general anesthesia appointment will help provide any necessary resources to increased follow-up care and the maintenance of a dental home.

- **Advantages:** This encourages more patient education thereby increasing health literacy. Since there will be a dedicated time to discuss with parents the importance of maintaining a dental home, there will be a greater desire in the maintenance of the dental home. The social worker is another resource the family is introduced to and another ally that the family can confide in.
- **Disadvantages:** There is an additional cost in the social workers time to talk with the family. If dental treatment needs are urgent, this extra step could potentially delay treatment.

Policy Recommendations: Children who require general anesthesia to receive comprehensive dental treatment should not rely on this treatment modality for lifelong dental needs. With an increase rate of recurrent caries that is seen in children who receive dental treatment under general anesthesia, it is imperative to address the root cause of this situation -- the presence of dental caries, both new and recurrent. With proper oral hygiene and diet knowledge, parents and children can make lifestyle changes that will have a long term and positive impact on their oral health. By mandating oral education for families who are already predisposed to a high risk of caries, the need for successive treatment under general anesthesia can be greatly reduced.

Sources:

Amin MS, Bedard D, Gamble J. Early childhood caries: recurrence after comprehensive dental treatment under general anesthesia. Eur Arch Paediatr Dent. 2010 Dec;11(6):269-73.

H. Y. El Batawi. Factors affecting clinical outcome following treatment of early childhood caries under general anaesthesia: a two-year follow-up. European Archives of Paediatric Dentistry 2014 15:3 183-189

Green, K. et.al. A cost analysis of three pharmacologic behavior guidance modalities in pediatric dentistry. J Ped Dent 2018 40:7, 425-432