



# The Health Advocate

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**Medication +  
collaboration**  
The push for integrated care

**Health funding**  
A consideration of  
alternative models

**+MORE  
INSIDE**



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# No drill, no needle

## Reducing anxiety in the treatment of dental decay

**D**ental decay (dental caries) is one of the most common chronic diseases in young children and its prevalence is increasing. Recent data shows that 48% of children have experienced caries by the age of five.<sup>1</sup> Childhood dental decay causes pain, abscesses and infection, and can cause great anxiety for children and their families in their interactions with oral health services, with long lasting implications for social, educational and health outcomes.

Oral health ranks highly in preventable hospital admissions data. In 2012-13, dental treatment was the second most common cause of hospitalisation, after asthma, for 0-14 year-olds with an average cost per admission of AU\$2,508.<sup>2,3</sup> Dental decay is largely preventable by forming positive early oral health habits. It is also becoming increasingly easier to treat, with early identification both via oral health clinicians and other early childhood professionals. In applying preventive and early detection methods, the need for costly interventions for dental treatment, such as general anaesthesia, can be reduced.

A relatively new method for managing early childhood caries is the Hall Technique (HT), a method of treating tooth decay in primary molars. It involves no tooth cutting and no local anaesthesia; no drill, no needle. A decayed primary molar that is not causing pain has a stainless steel crown cemented directly over the decayed area. The complete

sealing of the tooth in this way prevents the decay from progressing by isolating the bacteria and starving it of oxygen and simple carbohydrates that are required for the progression of decay within the tooth.

Identified in Scotland in the late 1990s by Dr Norna Hall, a randomised control trial was then undertaken to test the success and acceptability of the technique against conventional restorations. There were 132 children that each had one HT crown and one conventional restoration placed. At their three year follow-up, 19% of the teeth with

exhibited a clear preference for the HT over conventional restorations.<sup>4,5,6</sup> Another study found children who received the HT crown (n=100) reported less dental anxiety and were more likely to report enjoying their visit than those who received conventional restorations (n=90). After six months, those with conventional treatment had twice as many dental abscesses as those who received the HT, and nearly three times as many replacement fillings.<sup>7</sup>

Dental Health Services Victoria recently partnered with other local health agencies



conventional restorations failed and required extraction, compared to 3% of the teeth with HT crowns. This was a statistically significant finding. Children, carers and clinicians also

to conduct the first study of HT in Australia. Comprising 12 clinicians and 251 children, aged 3 to 7 years, the aim is to assess the acceptance, success and cost-effectiveness

of HT at six, 12 and 24 months, and to help develop guidelines, policy and training in the technique for oral health professionals.

The baseline results of the study were presented in July 2015 at the International Association of Paediatric Dentistry conference in Scotland. Using the Facial Image Scale, a validated tool for assessing anxiety in children as young as three years old, the children responded overwhelmingly positively to the experience of HT.<sup>8,9</sup> Their parents and carers were equally positive about the ease, comfort and speed of the technique, with 98% of carers reporting they would be happy for their child to have HT treatment in the future.

The Hall Technique has the real potential to reduce stress and anxiety for children and their families around dental treatment, and has the potential to reduce referrals for general anaesthesia for the management of dental decay in young children. Clinicians are already seeing the advantages of HT compared to the traditional filling method. Oral health therapist, Alyson Bettega said: "... it's so much better having the kids leave with the job done and no tears... I feel very confident in this technique and the parents are amazed at how easy and quick it is."

Sealing early-to-moderate levels of tooth decay stops it from getting worse. The majority of children in the HT study did not experience any discomfort during the sealing procedure, which is very simple and takes about five minutes to complete. This exciting

innovation could dramatically reduce the need for drilling and filling children's baby teeth, and thereby alleviate the suffering and anxiety many young children feel in the dental chair, and in more serious cases, in hospital. Children don't want to sit for very long in the chair, and very young children don't like drills, needles or the numb feeling and discomfort of conventional treatment.

For many children, a less anxious dental treatment experience will help to build resilience and encourage good oral health habits into the future; a future with less fearful adults who won't be so inclined to avoid preventative visits to the dentist. [ha](#)

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