



dental health
services victoria
oral health for better health

5 December 2011

Infant Feeding Guidelines for Health Workers
Senior Project Officer
Strategic Partnerships Section
NHMRC
GPO Box 1421
CANBERRA ACT 2601

Dear Sir/Madam

Feedback on the draft infant feeding guidelines for health workers

Thank you for the opportunity to comment on the draft infant feeding guidelines for health workers.

DHSV is the lead public oral health agency in Victoria and is funded by the Victorian State government to provide dental and oral health services to people all around Victoria. DHSV also delivers oral health promotion programs to improve oral health in the community and reduce demand on public dental services. It also has a significant role in oral health research and supporting education and training for Victoria's current and future oral health professionals.

Oral health is fundamental to overall health and wellbeing and DHSV is passionate about improving Victoria's oral health. DHSV welcomes the opportunity to provide comment on the draft infant feeding guidelines for health workers to support improved oral health of babies and young children.

Please feel free to contact Sue Kearney, on (03) 9341 1390 to discuss our submission further or should you require additional information.

Deborah Cole

**Chief Executive Officer
Dental Health Services Victoria**

DHSV Response to Draft Infant Feeding Guidelines for Health Workers

The inclusion of the evidence concerning dental disease and recommendations for appropriate feeding practices that support good oral health is welcomed and supported. However the guidelines could be further strengthened with additional information to assist health professionals to support their clients to make positive changes to improve oral health.

DHSV offers the following suggestions to further enhance these guidelines and to support health workers to embed oral health promotion into their practice around supporting breastfeeding and introduction of healthy eating.

Importance of oral health

Recommendation

- *Include information on the prevalence, seriousness and preventability of oral disease.*

Prevalence

- Tooth decay is Victoria's most prevalent health problem, with more than half of all children and almost all adults affected.
- The treatment of oral disease is the most common reason for avoidable hospital admissions in young people between the ages of 0 -19 in Victoria.
- Dental problems consume substantial Medicare resources as patients access subsidised consultations from non-dentally trained health professionals, often without the problem being resolved.

Seriousness

- Dental caries is the second most costly diet-related disease in Australia, with an economic impact comparable with that of heart disease and diabetes. Approximately \$6.1 billion was spent on dental services in 2007-08, representing 6.2% of total health expenditure.¹
- Teeth can decay as soon as they erupt in the mouth. Tooth decay causes pain, sleep problems and can keep children from achieving a normal weight. Poor oral health can also affect speech development, communication and self esteem.
- Oral health is fundamental to general health. Many health conditions have been linked to poor oral health, including: cardiovascular disease, diabetes, preterm birth and low birth weight, pneumonia, hepatitis C, infective endocarditis and nutritional deficiencies in children and older adults.²
- Oral diseases are a key marker of social disparity. Groups that experience high levels of oral disease include: people on low incomes, dependent older people, some Aboriginal and Torres Strait Islander peoples, rural dwellers, people with a disability, and some immigrant groups from culturally and linguistically diverse backgrounds (particularly refugees)³.
- In most areas of Victoria, demand for public dental services is greater than availability with significant waiting times of up to 40 months for appointments for adults.

Preventable

- Almost all oral disease is preventable.
- A stronger preventive intervention focus especially in early childhood could reduce the burden of oral disease on individuals and government.

The role of health workers in improving child oral health

Recommendations

- *Include a recommendation for health workers to provide anticipatory guidance and advice on oral health to expectant and new parents.*

Health workers are well placed to deliver oral health advice to families

Given the links between general health and oral health and the significance of the issue, it is appropriate and important that all health professionals are able to support their clients by providing consistent and evidence-based oral health advice and promotion.

DHSV strongly believes that integrating oral health promotion within the role of non-dental health workers is essential in order to improve population oral health. In Australia, few children see a dental professional before the age of 2.⁴ Non-dental health care workers, who are more likely to see infants and toddlers, are well placed to deliver oral health advice to parents. Evidence also demonstrates that primary health workers can be as effective as specialised oral health promoters⁵.

Anticipatory guidance on oral health

Research evidence supports a need for early anticipatory advice to parents before their children's teeth erupt. An anticipatory guidance program in South Australia that provided information in the prenatal and postnatal period was successful in preventing tooth decay⁶.

Oral health advice

Recommendations:

- *Provide supporting information to increase oral health literacy of health professionals.*
- *Expand recommendations concerning the impact of diet and feeding practices on oral health.*

Comment on specific sections of the document:

Suggestions for strengthening existing recommendations are provided, below, for consideration.

Section	Page	Comment
<i>Summary</i> When an infant is not receiving breast milk	7	Consider inclusion of a recommendation to provide advice concerning the risk of early childhood caries from inappropriate bottle feeding practices.
<i>Summary</i> Other fluids in infant feeding	7	Fluoridation of public water supplies is the single most effective population health measure for reducing dental caries ⁷ . A high sugar diet and limited exposure to fluoride are risk factors for decay. Sugar-sweetened drinks are now possibly more important in causing decay than sugar-sweetened food ⁸ . Bottled water is an issue because of the impact on fluoride intake, in fluoridated areas. <ul style="list-style-type: none">• Consider emphasising tap water in preference to bottled water.• Consider expansion of the recommendation concerning limiting amount of fruit juice to include limiting intake to meal times and diluting with water to reduce risk of tooth decay (refer to comments on section 10.4 for more details). (Supporting information is provided below).

Section	Page	Comment
<i>Summary</i> The transition to solid foods	8	Consider inclusion of a recommendation to advise parents about transfer of cariogenic bacteria from carer to child through inappropriate feeding practices and the risk of early childhood caries (evidence provided below).
<i>Summary</i> Nutrition into the second year of life	9	Consider inclusion of a recommendation for health workers to reinforce link between healthy eating and oral health in their discussions with families.
<i>Summary</i> Dental caries	11	Expand recommendations concerning oral health: <ul style="list-style-type: none"> • Health workers providing nutrition and oral health advice can improve child oral health outcomes. • Provide advice about the transfer of cariogenic bacteria from carer to infant. (Supporting evidence is provided below). • Recommend that mothers chew sugar free gum, especially containing xylitol. (Supporting evidence is provided below). • Discuss the importance of the child's primary dentition with parents and caregivers. • Encourage parents/carers to wipe an infant's teeth, especially along the gum line, with a soft cloth after feeding from the breast or bottle. • Advise parents to begin brushing as soon as their child's first tooth appears. (Supporting information is provided below). • Include recommendations concerning use of fluorides consistent with the ARCPOH guidelines. (Supporting information is provided below). • Encourage parents to 'lift the lip' and look in the child's mouth for signs of tooth decay (white or brown spots on the teeth). • Children should have an oral health assessment by age 2.⁹
1.1.1 Benefits to the infant	33	<ul style="list-style-type: none"> • Breast milk is best for babies and is not associated with an increased risk of dental caries.⁹ • Exclusive breastfeeding may reduce the risk of the development of tooth decay due to decreased and delayed consumption of sugary meals and snacks (Feldens et al 2007 and 2010)⁸.
5.2 Feeding with expressed breast milk	97	<ul style="list-style-type: none"> • Recommend the inclusion of cross reference to section 8.4.3 <i>Reducing risks of bottle feeding</i>. • Include evidence concerning transfer of cariogenic bacteria from caregiver to infant at 8.4.3.
3.3.1 The effects of bottle and pacifier use	65	Consider inclusion of recommendations to: <ul style="list-style-type: none"> • Provide advice about risk of transfer of cariogenic bacteria from carer to infant when "cleaning" a dropped pacifier by mouth and tips to reduce the risk. • Integrate advice about not applying sweet liquids/syrups to pacifiers in this section.
8.4.5 Using a feeding cup	122	Consider: <ul style="list-style-type: none"> • Adding "and encourage cessation of use bottle by 12 months" to recommendation supporting introduction of a cup at 6 months. • Inclusion of information about the risk of early childhood caries from inappropriate feeding practices.

Section	Page	Comment
9 Introducing spoon (solid) foods		(9.4 Practical aspects of this guideline) Under <i>Practical Points</i> , consider including advice concerning reducing the transfer of cariogenic bacteria from carer to infant through inappropriate feeding practices such as sharing spoons and other utensils, tasting infant's food with shared utensils.
10.1 Honey		Advise parents of the risk of early childhood caries from frequent exposure to high sugar foods
10.4 Fruit juices	136	Strengthen recommendations concerning fruit juice. <ul style="list-style-type: none"> • Include evidence concerning consumption of high sugar, acidic drinks and oral health. • Encourage tap water as the drink of choice and emphasise water in preference to fruit juice. • As well as limiting amount (as per recommendation in guidelines), include advice to dilute juice with water and limit to meal times to reduce risk of tooth decay.

Preventing transfer of tooth decay causing bacteria from carer to infant

Caregivers (particularly the mother) can transmit decay causing bacteria to children, especially when they have high levels themselves¹⁰. The earlier the transmission, the greater the risk of decay.⁸ Feeding practices and other behaviours that facilitate this transfer include: sharing a spoon when tasting baby food, cleaning a dropped pacifier by mouth, wiping the baby's mouth with a cloth moistened with saliva and sharing of straws, cups or utensils.

The recently released '*Evidence-based oral health promotion resource*' includes evidence to support the use of xylitol chewing gum to prevent transmission of tooth decay causing bacteria (predominantly *Streptococcus mutans*) from mothers to babies.⁸

- Three systematic reviews on preventing decay in young children report that the evidence is strongest for the use of xylitol chewing gum by mothers in preventing transmission of *Streptococcus mutans* to their children (Kilpatrick et al, 2009; Douglass et al, 2008 and Twetman 2008).^{11,12,13}
- Mothers chewing xylitol-containing chewing gum during the period of primary teeth eruption, led to their children having significantly lower tooth decay rates (Isokangas et al, 2000 and Thorild et al, 2006).^{14,15}
- Maternal xylitol gum chewing led to less *S. mutans* colonisation in their young children compared to the control group (Nakai et al, 2010).¹⁶

Guidelines for the use of fluorides in Australia

In 2005 the Australian Research Centre for Population Oral Health (ARCPOH) hosted a workshop to develop evidence-based guidelines use of fluorides in Australia. The agreed messages relating to tooth brushing, fluoride supplements and fluoridation of water supplies are included below.¹⁷

Tooth brushing and fluoride supplements

The following messages relating to babies and young children were agreed:

- From the time that teeth first erupt (about six months of age) to the age of 17 months, children's teeth should be cleaned by a responsible adult, but not with toothpaste.
- For children aged 18 months to five years (inclusive), the teeth should be cleaned twice a day with toothpaste containing 0.4–0.55mg/g of fluoride. Toothpaste should always be used under supervision of a responsible adult, a small pea-sized amount should be applied to a child-sized soft toothbrush and children should spit out, not swallow, and not rinse.

- For children who do not consume fluoridated water or who are at elevated risk of developing caries for any other reason, guidelines about toothpaste usage should be varied, as needed, based on dental professional advice.
- Fluoride supplements in the form of drops or tablets to be chewed and/or swallowed should not be used.

Fluoridation of water supplies

The following messages concerning fluoridation of water were agreed:

- Water fluoridation should be continued as it remains an effective, efficient, socially equitable and safe population approach to the prevention of caries in Australia.
- Water fluoridation should be extended to as many people as possible living in non-fluoridated areas of Australia, ideally supported by all levels of government.
- The level of fluoride in the water supply should be within the range 0.6–1.1mg/L with variation within that range according to the mean maximum daily temperature.
- So people can choose to consume bottled or filtered waters containing fluoride, manufacturers should be encouraged to market bottled water containing approximately 1.0mg/L fluoride and water filters that do not remove fluoride. An integral part of this guideline is that all bottled water and water filters should be labelled to indicate the concentration of fluoride in water consumed or resulting from the use of such products.
- So people can choose to consume fluoridated water, sodium fluoride should be marketed as a water supplement, for addition to non-fluoridated water sources, thereby achieving a fluoride concentration of approximately 1mg/L.
- Infant formula nowadays is safe for consumption by infants when reconstituted using fluoridated or non-fluoridated water.

Conclusion

Oral health, healthy eating and feeding practices are inter-related. Health workers that provide advice about infant feeding are well placed to deliver oral health advice which can complement advice to families concerning establishing healthy eating habits.

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