Early Childhood Oral Health
A toolkit for District Health Boards, primary health care and public health providers and for oral health services relating to infant and preschool oral health
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Introduction

The New Zealand Health Strategy provides an overarching framework for the health sector and is supported by key national strategies and policy documents that include:

- Primary Health Care Strategy
- He Korowai Oranga: Māori Health Strategy
- Health of Older People Strategy
- New Zealand Disability Strategy
- Pacific Health and Disability Action Plan
- Reducing Inequalities in Health.

Improving oral health is one of the 13 population health objectives for the Ministry of Health and District Health Boards (DHBs) in the New Zealand Health Strategy and is supported by the strategic vision for oral health Good Oral Health for All, for Life (Ministry of Health 2006b).

Re-orientating child and adolescent oral health services is one of the seven action areas identified in Good Oral Health for All, for Life, which are considered key to achieving improved oral health (ibid). While approximately 50 percent of five-year-old children are free of dental caries, there are significant differences in oral health status associated with ethnicity, region and access to water fluoridation. Inequalities in oral health, particularly inequalities in oral health between Māori and non-Māori, have widened, and there are significant differences in the severity of oral disease in young children.

Increasing the focus on preschool oral health is a key objective in re-orientating oral health services for young people. Increasing the preventive focus for child oral health will require greater links with other providers of primary health care, earlier access to oral health services especially for preschool children at greatest risk of oral disease and a greater focus on preventive oral health activities for preschool children.

This toolkit has been developed to guide policy makers, funders, managers, clinical leaders and clinicians. The key objective is to suggest a strategy to improve early childhood oral health by identifying children at greatest risk early and targeting finite resources to children at highest need. The aim is to reduce inequalities while maintaining a programme of universal access for all infants and preschool children.
Early Childhood Oral Health

Children’s primary teeth begin to erupt into the mouth from approximately six months of age, and by the second birthday, children will have many of their primary teeth present in the mouth.

Teeth are at risk of dental caries (dental decay) from the time they start to appear in the mouth, and, therefore, children from approximately six months of age onwards are at risk of dental caries. However, not all children develop dental caries, and many preschool children will develop little or no decay. The influences of oral health-related environments, such as the oral health of the child’s main caregiver, access to water fluoridation and oral health-related behaviours (including regularity of brushing teeth with fluoride toothpaste, diet content and dietary habits) will largely determine whether a child gets dental caries, and if so, how severely.

In 2005, just over half of five-year-old New Zealand children (52 percent) were caries free. The proportion of children caries-free at five years of age ranged from 31.4 percent to 65.9 percent in New Zealand DHBs. However, this also means that an average of just over 48 percent had experienced dental caries by the end of the preschool years, and while many children experience relatively little dental caries in their primary teeth, a small group experience significant disease. International research into the patterns of dental caries indicates that the highest levels of dental caries in any area will be concentrated in approximately 10 to 20 percent of the children.

Preventing and treating early childhood caries

Early childhood caries (ECC) is the term used to describe the form of dental caries that affects the teeth of infants and young children and has been identified as an important health problem that affects the growth, development and quality of life of many preschool children (Sheiham 2006) and impacts on the family as a whole. It is the leading oral health problem of early childhood. Preschool children may also have dental care needs as a result of developmental abnormalities and oro-facial trauma.

ECC varies in severity from children who have a small number of teeth with dental caries by five years of age through to extensive dental caries in the primary teeth commencing early in childhood (and frequently soon after the teeth commence erupting into the mouth).

Severe ECC is a particularly virulent form of dental caries that is characterised by an overwhelming infectious challenge from the bacteria in the mouth, supported by dietary practices that provide frequent and high levels of refined carbohydrates (sugars) (Berkowitz 2003).
Preventing ECC is possible by:

- modifying dietary practices to reduce exposure to fermentable carbohydrates, especially non-milk extrinsic sugars
- reducing the bacterial load through regular tooth cleaning
- reducing the bacterial load by enhanced maternal health
- increasing the resistance of teeth to dental caries with the appropriate use of fluorides.

A model of oral health assessment and early contact aimed at reducing early childhood caries

The age of a child’s first visit to a dental clinic has been a topic of debate for many years. Nowak stated in an article for *Pediatric Dentistry* (Nowak 1997):

... only tradition supports (the) age three years as the best time for the first dental visit. Evidence about oral disease, its initiation, and the benefits of a comprehensive preventive programme all point to a first dental visit at one year of age.

Child oral health services in New Zealand have traditionally enrolled children from approximately 2½ years of age, although in some DHB regions, programmes to routinely enrol children earlier than 2½ years have been in place for a number of years.

The Child Oral Health Services Service Specification requires all enrolled children to be examined on average every 12 months. Those services unable to provide each child with an annual completion are required to have a strategy for managing those children (Ministry of Health 2004a). Currently, children under 2½ years of age identified at higher risk of dental caries or with apparent dental problems should be enrolled and managed by oral health services.

Evidence about the prevention and early management of early childhood caries supports children being enrolled and assessed, and where necessary commenced on preventive or treatment regimens for dental caries, much earlier than has traditionally been the case. However, not all children are at significant risk of early childhood caries, and many children at low risk of the disease will receive little additional benefit from significant numbers of early childhood and preschool oral health visits.

A United Kingdom community-based oral health promotion programme aimed at reducing early childhood caries has reported that children attending health clinics for eight-month developmental checks and/or 12- to 15-month measles/mumps/rubella (MMR) vaccinations and whose families were in a programme that provided them with trainer cups, fluoridated toothpaste, toothbrushes and written, pictorial and verbal advice on oral health experienced a lower prevalence and severity of early childhood caries. This research illustrates the potentially positive benefits of an oral health promotion and education programme for this age group.
However, the programme report also cautions that comparison of the two communities at population levels, including non-participant children, did dilute the impact of the health intervention (Davies et al 2007).

**Recommendations**

This toolkit recommends a standardised programme of enrolment with and risk assessment by oral health services before a child reaches 12 months of age. The age of first contact can be variable and is dependent upon the risk assessment for dental caries of each child and the application of a targeted strategy for management based upon this assessment.

It is recognised that earlier attendance by some preschool children will require reallocation of clinical and staff resources. This toolkit does not recommend an examination of every preschool child every 12 months as the caries risk level of children varies.

This toolkit recommends:

- the development of a standardised national programme of enrolment and early risk assessment
- an enrolment and risk assessment process to be undertaken between 9 and 12 months by Well Child/Tamariki Ora and other non-oral health providers with the resulting documents sent to the community oral health services
- early contact at approximately 12 months of age for examination and where necessary preventive and treatment services with an oral health provider for children identified at highest risk of early childhood caries from the risk assessment process
- contact with an oral health service for all preschool children by 2½ years of age
- the development of subsequent individualised review appointments, which may vary depending upon the assessed risk of dental caries development
- continued monitoring of early childhood oral health inequalities to assess the effectiveness of the approaches recommended in this toolkit.

These recommendations will require development of:

- a risk assessment tool to be used by Well Child/Tamariki Ora and other non-oral health professionals in conjunction with completion of the enrolment form for any child between 9 and 12 months of age
- training for Well Child/Tamariki Ora and other non-oral health professionals in using the risk assessment tool and in recognising early childhood oral health changes, using Lift the Lip.

It is further recommended that all children be seen at age five years and that the subsequent oral health review interval is again determined by the assessed risk of dental caries development.
Table 1 (Appendix 1) outlines a model of care and pattern of health service contact for children aged 0 to 5 years that is targeted to reduce the incidence of severe early childhood caries.
Who Should Be Involved?

The risk of dental caries starts from the time teeth begin to erupt into the mouth (at approximately six months of age). There is a significant opportunity for different primary health care and public health programmes and health professionals to work together to prevent early childhood caries and provide early intervention if disease is identified.

Primary health care services and professionals/PHOs

Australian research into early childhood oral health has confirmed that children have numerous contacts with primary health care providers in the first 12 months of life and that many of these contacts provide an opportunity for anticipatory guidance (Gussy et al 2006). However, the same study also reported a need for clear consistent messages and agreed roles and responsibilities. In New Zealand, general medical practices (GPs and practice nurses) are frequently contacted in regard to children younger than five years of age.

Primary health care providers are well positioned to provide early anticipatory guidance (in the first six months) about the prevention of dental caries, to follow up on the anticipatory guidance provided by other carers (Lead Maternity Carers (LMCs) and Well Child/Tamariki Ora providers) about the prevention of dental caries and, particularly, to identify changes to the teeth through the intervention known as Lift the Lip. Children should be referred to oral health services if early dental changes or overt dental caries are identified.

However, it is also important to appreciate that infants and whānau with the highest risk of dental disease, and particularly for ECC, are frequently intermittent and episodic users of primary health services. Therefore, a broader approach is required to maximise prevention of oral disease for children/tamariki from this group.

Primary health care providers are also well positioned to check that children over 12 months of age are enrolled with oral health services and to provide secondary ‘safety net’ services (after Well Child/Tamariki Ora providers) to ensure that children have been enrolled with oral health services and have had risk assessment profiles completed.

Lead maternity carers

Lead maternity carers (LMCs) are well positioned to provide anticipatory guidance about preventive oral health behaviours, including breast feeding, issues associated with bottle feeding, when to start tooth brushing and the importance of parental oral health (particularly the main caregiver).

However, LMCs generally transfer the care of infants to other primary health care providers and to Well Child/Tamariki Ora providers when the child is approximately four to six weeks of age, which is well before the first teeth erupt at approximately six months of age. The focus of attention for many parents at this time is on maternal and infant health and establishing lactation, rather than oral health. The opportunity for LMCs to provide timely anticipatory guidance must, therefore, be weighed against the competing need to focus on other aspects of maternal and infant health.
Well Child/Tamariki Ora providers

The Well Child Framework offers screening, education and support services to all New Zealand children from birth to 5 years of age, and to their families/whānau. Well Child/Tamariki Ora services encompass health education and promotion, health protection and clinical support, and family/whānau support. They also ensure that parents are linked to other early childhood services, such as early childhood education and social support services, if required.

The primary objective of The Well Child Framework is to support families/whānau to maximise their child’s developmental potential and health status from birth to five years of age to establish a strong foundation for ongoing healthy development.

Under the current Well Child Schedule (Ministry of Health 2002b), 12 health checks are offered to children from 0 to 5 years of age (eight of these are offered between the ages of six weeks and five years). Additional services are also offered to first-time parents and to families who are identified as needing more support.

Providers of Well Child/Tamariki Ora services include registered nurses and community health workers/kaiāwhina who have specific training in child health. Many kaiāwhina are also trained to assist whānau with broader issues, such as nutrition, hygiene and budgeting advice.

Well Child/Tamariki Ora providers are well positioned to provide early anticipatory guidance (in the first six months) about the prevention of dental caries, to follow up on the anticipatory guidance and to identify changes to the teeth through an intervention known as Lift the Lip. Well Child/Tamariki Ora providers can also ensure that children have a dental caries risk assessment profile and be enrolled with a dental service by 12 months of age.

Recommendations

This toolkit recommends that Well Child/Tamariki Ora providers:

- be linked to early childhood dental services in all DHBs, and have a strong working relationship with these services
- have training that encompasses child and infant oral health, and dental caries risk assessment
- provide anticipatory guidance about oral health from birth, and certainly by six months of age, to all whānau/families
- provide Lift the Lip screening for dental caries and early dental changes and make immediate referrals to oral health services where necessary
- ensure that every child has a dental caries risk assessment profile completed and is enrolled with a dental service by 12 months of age and that the information from the assessment is sent to the local DHB child oral health services provider.
Community oral health services

Community oral health services have an important role in the prevention and management of early childhood caries. Oral health professionals include dentists, dental therapists, dental hygienists and dental assistants. Community oral health services provide:

- oral health examination and assessment and advice in the management of early dental caries lesions
- preventive advice and guidance to reduce the risk of future dental caries
- professional preventive treatments, including the use of high concentration fluoride varnish to reduce the risk of dental caries in some children
- treatment services, including dental fillings and extraction of teeth for children with advanced dental caries who require interceptive treatment.

Children who experience ECC are at greater risk of subsequent caries development, and so aggressive preventive and therapeutic measures such as regimented applications of topical fluoride and restorative treatments, including tooth crown coverage treatments and tooth extraction, are often necessary. The oral health care provider must assess the patient’s developmental level, comprehension skills and the disease process to decide the most appropriate management for the oral situation and the individual child.
What is Lift the Lip?

Lift the Lip is a quick and easy technique for screening infants’ and toddlers’ teeth for dental caries. It involves understanding the easiest ways to manage infants and toddlers so that the lip can be retracted to expose the teeth and understanding the appearance of early and well-developed dental caries in anterior primary teeth.

The technique can be learned quickly and easily by non oral-health professionals, including parents and caregivers. It provides the skills to identify infants and toddlers who have early and active dental caries so that they can be referred for management to oral health services.
Reducing Inequalities

Reducing inequalities in oral health outcomes and access to oral health services is one of the seven key action areas identified in Good Oral Health for All, for Life (Ministry of Health 2006b). Reducing inequalities is also one of the goals of the New Zealand Health Strategy and is an important component of the Whānau Ora Strategic Framework articulated in He Korowai Oranga: Māori Health Strategy (Minister of Health and Associate Minister of Health 2002).

Evidence-based guidelines and systematic reviews of oral health promotion (Scottish Intercollegiate Guidelines Network 2005; Sprod et al 1996) have reported that uniform approaches to community-based health programmes can have the effect of increasing inequalities, but strategies targeting high-risk groups within a whole population might help to reduce inequalities in oral health.

This toolkit focuses particularly on the use of primary health care and oral health services resources to facilitate earlier and increased contact with preschool children who are at the highest risk of dental caries. The intent is to reduce the level of ECC in at-risk groups, thereby reducing inequalities in oral health among preschool and early primary school aged children.

The purpose of this early contact is to provide improved opportunities for early anticipatory guidance and increased preventive clinical activities, including the use of topical fluorides. Inequalities in child oral health are also affected by the wider social determinants of health. It is important that oral health programmes that target early childhood caries also consider the interrelationship with wider oral health (Quinonez et al 2001; Hallett and O’Rourke 2003) and general health promotion, for example, activities in the Healthy Eating – Healthy Action programmes.

Successfully reducing inequalities in oral health outcomes will depend, in part, upon services continuing to assess whether population groups in greatest need are accessing oral health services early and whether the provided preventive programmes are being successful.
Water Fluoridation

Early childhood caries is affected by children’s access to fluoridated water. New Zealand research and international reviews confirm that approximately 15 percent more children with access to optimally fluoridated water are caries-free and that the level of dental caries in five-year-old children is approximately 30 percent lower (McDonagh et al 2000; Lee and Dennison 2004). Fluoridated water is one of the most effective measures for reducing oral health inequalities.

Advocacy for access to fluoridated water should be a fundamental part of strategies to reduce early childhood caries.
Resource Implications of this Toolkit

The Business Case Guidelines for Investment in Child and Adolescent Oral Health Services (Ministry of Health 2006a, section 2.2 page 12) outlines anticipated target service coverage levels by age group.

For children aged 0–2 years, the recommended enrolment target is 50 percent of eligible children, and this is 85 percent for children aged 3–4 years.

This toolkit has developed a more detailed and targeted approach to the allocation of oral health programme resources for the infant and early childhood group. Table 2 (Appendix 2) outlines the number of assessment and prevention visits for 100 children potentially anticipated by the toolkit versus a simple application of the guidance provided in the Business Case Guidelines for Investment in Child and Adolescent Oral Health Services (ibid).

The targeted programme does involve a potentially higher number of visits for the population group than the percentage enrolment figures in the Business Case Guidelines for Investment in Child and Adolescent Oral Health Services. However, this assessment does not take into account the length of the visits – it is anticipated that many of the intermediary visits (identified by an asterisk in Table 2) will be relatively short. The intermediary visits will reassess for active caries, reinforce preventive oral health advice and apply topical fluoride. It may be possible for some of the activities (for example, reinforcing preventive advice) to be undertaken by associated oral health staff such as dental assistants.

This analysis also does not account for treatment visits associated with preschool children who require treatment care. If the targeted programme successfully reduces caries levels, it could reduce the treatment visit levels required within services.
Further Information

The *Child Oral Health Services Service Specification* (Ministry of Health 2004a) outlines the range of dental services provided by DHB-delivered and/or funded oral health services, and these services include:

- **diagnostic services**: including oral examinations, radiographs where necessary, identification of a child’s dental needs and consultation with the parent/guardian and child
- **preventive care**: including scaling, cleaning, fluoride treatments and fissure sealing where appropriate
- **oral health promotion and educative services**: including the provision of individual, group and caregiver advice on oral hygiene, diet, fluoride and other factors affecting oral health
- **treatment of oral disease**:
  - **restorative (or reparative) services**: including the treatment of dental disease and restoration of tooth tissue. Where necessary, this will require co-ordination and referral to other health services and providers, including referral under the Special Dental Benefits scheme, and
  - **minor surgical services**: including the extraction of deciduous teeth.
Professionally Applied Fluoride Regimens

This toolkit recommends that children who are seen by oral health services because they have been assessed as being at high caries risk be placed on a professionally applied topical fluoride programme.

The toolkit does not advocate a particular method for delivering professionally applied fluoride and notes that the literature includes a variety of fluoride vehicles and recommendations. It is also noted that a recent Cochrane Collaboration review (Marinho et al 2004) concluded that fluoride toothpastes, mouth rinses and gels reduce tooth decay in children and adolescents to a similar extent; that toothpastes are more likely to be regularly used; and that there is no strong evidence that varnishes are more effective than other types of topical fluoride.

If a topical, professionally applied fluoride regimen is selected, it is important to ensure that the product is used according to appropriate programme guidelines that are consistent with the regulatory environment for the fluoride product and is applied by appropriately trained and registered health professionals.

Recommendation

It is recommended that guidelines be developed for the use of professionally applied fluorides in early childhood caries in New Zealand.
References and Bibliography


## Appendix 1

### Table 1: Age guide to the model of care and pattern of health service involvement up to age five years to reduce early childhood caries

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Key Health Professionals and/or Services</th>
<th>Key Health System Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–12 months</td>
<td>Lead maternity carers, Well Child/Tamariki Ora providers, All primary health care professionals, All child health professionals</td>
<td>Lead maternity carers – anticipatory guidance. Well Child/Tamariki Ora providers are undertaking screening, education and support services. Primary health care providers have multiple contacts for preventive, health promotion and episodic health issues. All primary health care providers should be knowledgeable and aware of the opportunity to provide anticipatory guidance about avoiding early childhood caries development. Key health professionals should be aware of Lift the Lip, competent to assess oral health at that level and completing Lift the Lip checks as teeth begin to erupt.</td>
</tr>
<tr>
<td>9–12 months</td>
<td>Well Child/Tamariki Ora providers, All primary health care professionals, All child health professionals, Oral health services, Dental therapists</td>
<td>Oral health services, primarily provided by dental therapists, should see the highest-risk group of children identified from enrolment and caries risk assessment processes. Oral health services should also see children identified by other health care workers as being at risk of dental caries.</td>
</tr>
<tr>
<td>12–24 months</td>
<td>All primary health care professionals, Well Child/Tamariki Ora providers, Oral health services, Dental therapists</td>
<td>Entry point for as many children as possible to community oral health services. Oral health services should commence receipt of enrolment and caries risk assessment forms and assess children at highest dental caries risk for early assessment.</td>
</tr>
<tr>
<td>2–2½ years</td>
<td>Oral health services primarily provided by dental therapists, All primary health care professionals, All child health professionals, Well Child/Tamariki Ora providers</td>
<td>Children assessed in the highest caries risk group of the service’s population group should continue on the oral health service’s high-caries risk programme with professionally applied topical fluoride six-monthly and including six-monthly reinforcement of oral health anticipatory guidance and assessment of oral health status. All primary health care professionals, child health professionals and Well Child/Tamariki Ora providers should check that children are enrolled with an oral health provider and have been seen for their first assessment. Children who have not been seen should be re-referred for enrolment and examination.</td>
</tr>
<tr>
<td>2–4 years</td>
<td>Oral health services primarily provided by dental therapists, Well Child/Tamariki Ora providers, All primary health care professionals, All child health professionals</td>
<td>Review point for as many children as possible with a community oral health service. All children, regardless of assessed risk of dental caries should receive an oral examination, caries risk assessment, appropriate preventive advice and care and, if necessary, treatment services and the visit should occur between 4 and 4½ years of age. Children assessed in the lowest caries risk group of the service’s population group should be provided with preventive advice and information about access to services should oral health needs arise but may be placed for further assessment and review in 24 months at the age of 4–4½ years.</td>
</tr>
<tr>
<td>4–4½ years</td>
<td>Oral health services primarily provided by dental therapists, Well Child/Tamariki Ora providers, All primary health care professionals, All child health professionals</td>
<td>All children, regardless of assessed risk of dental caries should receive an oral examination, caries risk assessment, appropriate preventive advice and care and, if necessary, treatment services and the visit should occur between 4 and 4½ years of age. Children assessed in the lowest caries risk group of the service’s population group should be provided with preventive advice and information about access to services should oral health needs arise but may be placed for further assessment and review in 12 months at the age of five years.</td>
</tr>
<tr>
<td>5 years</td>
<td>Oral health services primarily provided by dental therapists, Well Child/Tamariki Ora providers, All primary health care professionals, All child health professionals</td>
<td>Review point for as many children as possible with a community oral health service and entry point for any children not identified as preschoolers. This visit is an important assessment point for the outcome of preschool oral health and the dmft, and the percent of caries free rates for each region are collected and collated nationally.</td>
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</tbody>
</table>

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**Early Childhood Oral Health Toolkit**

17
### Key health system points (continued)

<table>
<thead>
<tr>
<th>0–12 months</th>
<th>9–12 months</th>
<th>12–24 months</th>
<th>2–2½ years</th>
<th>2–4 years</th>
<th>4–4½ years</th>
<th>5 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary health care providers have multiple contacts for preventive, health promotion and acute health issues. They should also have access to the enrolment and caries risk assessment forms and, for children aged from nine months, should be checking whether these forms have been completed. Uncompleted forms should be filled out and sent to the local DHB oral health service. DHB oral health services should be set up to receive the forms, review them for caries risk assessment and establish systems to contact and see for assessment and preventive care programmes and where necessary treatment children in the highest risk 20%. Oral health services should have well-developed feedback links with Well Child/Tamariki Ora providers and primary health care providers to provide feedback on children who have been enrolled but cannot be contacted and should overview monitoring of the success of enrolment and contact systems.</td>
<td>Children examined by oral health services because they have been identified as having high caries risk from the enrolment and caries risk assessment forms should be examined, and the oral health professional should confirm whether the assessment of a high caries risk is appropriate. If the child is assessed as being in the highest caries risk group of the service’s population group, they should continue on the oral health service’s high caries risk programme, including receiving six-monthly professionally applied topical fluoride and six-monthly reinforcement of oral health anticipatory guidance and assessment of oral health status. Oral health services should provide ongoing training to Well Child/Tamariki Ora, primary health care professionals and child health professionals to improve the focus on oral health enrolment and caries risk assessment by children before 12 months of age and the identification of at-risk children through risk assessment and Lift the Lip clinical assessment.</td>
<td>Children assessed in the highest caries risk group of the service’s population group should continue or start the oral health service’s high caries risk programme, including receiving six-monthly professionally applied topical fluoride and six-monthly reinforcement of oral health anticipatory guidance and assessment of oral health status. Additional caries preventive benefit can be added by organising community-based fluoride toothpaste tooth brushing programmes through early childhood programmes. These programmes need to consider family/whānau involvement to create a supportive environment for oral health behaviours.</td>
<td>Children assessed in the highest caries risk group of the service’s population group should continue on the oral health service’s high caries risk programme, including receiving six-monthly professionally applied topical fluoride and six-monthly reinforcement of oral health anticipatory guidance and assessment of oral health status.</td>
<td>Children assessed in the highest caries risk group of the service’s population group should continue on the oral health service’s high caries risk programme, including receiving six-monthly professionally applied topical fluoride and six-monthly reinforcement of oral health anticipatory guidance and assessment of oral health status.</td>
<td>Children assessed in the highest caries risk group of the service’s population group should continue on the oral health service’s high caries risk programme, including receiving six-monthly professionally applied topical fluoride and six-monthly reinforcement of oral health anticipatory guidance and assessment of oral health status.</td>
<td>The B4 School Check should be used to check once again that the child has been enrolled with and seen by an oral health provider. A Lift the Lip examination by a non-oral health professional can be used to identify dental caries. Children not enrolled with an oral health provider, children who have not yet been seen or children identified with dental caries should be referred to an oral health provider.</td>
</tr>
<tr>
<td>Key oral health advice</td>
<td>0–12 months</td>
<td>9–12 months</td>
<td>12–24 months</td>
<td>2–2½ years</td>
<td>2–4 years</td>
<td>4–4½ years</td>
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<td>Advice recommended. Refer to Food and Nutrition Guidelines for Healthy Infants and Toddlers (Aged 0–2 years) (Ministry of Health 2007) for detailed nutrition advice. Children are at risk of developing dental caries from eruption of the first tooth at approximately six months of age. Bottle feeding: do not put a baby or infant to bed with a bottle. At first tooth eruption, commence cleaning the teeth with a small soft toothbrush and a smear of fluoride toothpaste. Tooth cleaning should occur twice a day. Children with any sign of chalky white, yellow, brown or black discolouration to the teeth or with teeth that appear to be broken or to have holes should be referred immediately to an oral health provider. Good parental, particularly maternal, oral health is an important influencing factor on child oral health.</td>
<td>As for 0–12 months plus all children should have an oral health service enrolment and caries risk assessment form completed at the nine-month check in the renewed Well Child/Tamariki Ora framework.</td>
<td>Refer to Food and Nutrition Guidelines for Healthy Infants and Toddlers (Aged 0–2 years) (Ministry of Health 2007) for detailed nutrition advice. Avoid putting toddlers to sleep with a bottle. If the child will not settle without a bottle, do not use anything in the bottle except plain water. Teeth should be cleaned twice daily with a small soft toothbrush and a smear of fluoride toothpaste. Tooth brushing should be undertaken with an adult assisting the child to ensure all teeth are brushed. Children seen by oral health services at this age because they have been assessed as being at high caries risk should be placed on a professionally applied topical fluoride programme. This programme should provide 6-monthly reapplication of the professionally applied fluoride and reinforcement of oral health anticipatory guidance and assessment or oral health status. Necessary treatment should be provided or arranged.</td>
<td>As for 12–24 months plus children should attend their first oral health examination with an oral health professional, unless they had earlier been identified as being at high caries risk and commenced in the oral health programme.</td>
<td>Teeth should be cleaned twice daily with a small soft toothbrush and a smear of fluoride toothpaste. Tooth brushing should be undertaken with an adult assisting the child to ensure all teeth are brushed. Consumption of foods and drinks high in sugars, including natural fruit juices, cordials and soft drinks, should be avoided between meals. Water or plain milk are the preferred drinks for between-meal consumption. Cheese is a good high-energy food for toddlers, is not dental caries promoting and may be protective against dental caries.</td>
<td>As for 2–4 years.</td>
<td>As for 2–4 years.</td>
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<tr>
<td>0–12 months</td>
<td>9–12 months</td>
<td>12–24 months</td>
<td>2–2½ years</td>
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<tr>
<td>Key oral health advice (continued)</td>
<td>Use of fluoride varnish applied six-monthly by an oral health professional is the recommended professional topical fluoride programme.</td>
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Appendix 2

Table 2: An example comparison of resource allocation in assessment and preventive visits for children managed under this targeted programme versus a visit regime applied from the Business Case Guidelines for Investment in Child and Adolescent Oral Health Services (Ministry of Health 2006a)

<table>
<thead>
<tr>
<th></th>
<th>Birth (12 months)</th>
<th>1 year (24 months)</th>
<th>18 months*</th>
<th>2 years (36 months)*</th>
<th>3 years (48 months)*</th>
<th>4 years (60 months)</th>
<th>54 months*</th>
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Total assessment and preventive visits for the targeted programme = 410