

National Guidance for the Assessment, Diagnosis and Surgical Treatment of Tongue-tie in Breastfeeding Neonates

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Background

Tongue-tie, or ankyloglossia, is a congenital condition where the lingual frenulum is abnormally short or tight and movement of the tongue is restricted (Hazelbaker 2010). It can cause reduced tongue mobility which can contribute to a range of function difficulties in breastfeeding, swallowing, articulation and lead to orthodontic problems; and contribute to mechanical difficulties related to oral clearance (Francis et al 2015). In recent years there has been considerable discussion among clinicians regarding assessment, diagnosis and treatment of tongue-tie, and the impact tongue-tie has on breastfeeding.

The protection, promotion and support of breastfeeding has been identified as fundamental to achieving optimal health in Aotearoa New Zealand (National Breastfeeding Advisory Committee of New Zealand 2009). Breastfeeding is important for the physical health of mothers and infants (World Health Organization 2003) and there is strong evidence to show that breastfeeding and appropriate infant feeding contribute to the social and emotional wellbeing of infants, mothers and families (Martinelli et al 2015). There is also mounting evidence of the significant impact of starting breastfeeding early, preferably within the first hour after birth, on reducing overall neonatal mortality and morbidity (Rollins et al 2016).

The Ministry of Health recommends that infants are breastfed exclusively for around the first six months of life and continue to be breastfed, along with the introduction of appropriate complementary foods, up to one year of age or beyond (Ministry of Health 2008). Continued breastfeeding beyond six months, accompanied by nutritionally adequate, safe and appropriate foods, also helps ensure good nutritional status and protects against illnesses (Victora et al 2016). Breast milk has been referred to as 'personalised medicine' and children who are breastfed for longer periods have lower infectious morbidity and mortality, fewer dental malocclusions, and higher intelligence than do those who are breastfed for shorter periods, or not breastfed at all (Victora et al 2016). Growing evidence also suggests that breastfeeding might protect against overweight and diabetes later in life (Victora et al 2016).

The protection, promotion and support of breastfeeding remain important global and domestic priorities for infant and maternal health.

Purpose

This guideline provides the health sector with clear, concise and consistent guidance to identify, assess, diagnose and treat tongue-tie in Aotearoa New Zealand.

Using this guideline enables the following:

- agreed tools for identification, assessment and diagnosis to support consistent understanding and communication between clinicians;
- evidence informed information for women and their whānau to support informed consent;
- agreed educational and training requirements and ongoing professional development for clinicians providing surgical treatment;
- agreed referral pathways in each district health board (DHB) region to support equitable access and a publicly funded service for women and their babies;
- agreed follow-up processes and breastfeeding support services, including the availability of breastfeeding support in the community.

Scope

The guideline applies only to the management of a simple or anterior tongue-tie. Posterior, labial or other complex tongue-ties should be referred to a specialist in accordance with the *Guidelines for Consultation with Obstetric and Related Medical Services (Referral Guidelines)* (Ministry of Health 2012), Code 8013: Sustained feeding difficulties in a newborn not related to gestational age or Code 8003: Congenital anomalies.

This guideline outlines the management of tongue-tie in a breastfeeding neonate (in their first six weeks of life). The neonatal period is of paramount importance due to the potential impacts that a problematic tongue-tie can have on establishing breastfeeding.

This guideline is for:

- registered midwives
- lactation consultants
- registered nurses, including Well Child / Tamariki Ora nurses
- registered medical practitioners
- registered dentists and dental specialists.

Frenotomy to improve breastfeeding should only be performed by a registered health professional trained in conducting frenotomy (see Appendix 1), with processes for clinical audit and follow up in place.

Guidance

DHBs should have a referral pathway (see Appendix 3) that ensures equitable access to a publicly funded frenotomy service for breastfeeding women and their newborn babies.

1. Identification

- 1.1 A tongue-tie is identified through observation of an abnormally restrictive frenulum. Information should be shared with the parents when a tongue-tie is identified and reassurance provided that frenotomy is not always necessary for breastfeeding to be successful.
- 1.2 When a tongue-tie is suspected or identified, referral should be made to a clinician who is experienced in the examination of the newborn and the assessment of tongue-tie using an agreed assessment tool (see 2.4), as per local referral pathways.
- 1.3 To determine if a frenotomy would be of benefit there should be a full assessment of breastfeeding, including observation of a complete breastfeed, to identify breastfeeding dyad problems.
- 1.4 Intensive lactation support should be offered prior to considering frenotomy. This can be provided by a lactation consultant, midwife or nurse and may include:
 - help with positioning and latching on
 - maintaining milk production
 - treating sore or damaged nipples.
- 1.5 Because frenotomy is not always required (with an estimated 40 to 75 percent of infants with a visibly restricted frenulum able to breastfeed successfully without surgical intervention), skilled intensive breastfeeding support remains an integral part of managing breastfeeding difficulties.

2. Assessment and diagnosis

- 2.1 Assessing a potential tongue-tie includes observing latch and positioning and examining the appearance and function of the tongue. Assessing maternal breast anatomy is advisable as this may impact on the baby's ability to latch. Assessing a breastfeed should also include a discussion with the mother on the sensation or pain experienced during the breastfeed.
- 2.2 Assessment and diagnosis can be done by a registered midwife, lactation consultant, general practitioner, paediatrician or other suitably qualified health professional. Breastfeeding support should be provided by an International Board-Certified Lactation Consultant (IBCLC).

- 2.3 For babies less than 48 hours of age, a feeding review by a midwife or lactation consultant is recommended. Referral to a paediatrician may be necessary to exclude underlying medical conditions.
- 2.4 Examination must be guided by an assessment tool such as the Bristol Tongue-tie Assessment Tool (BTAT), or the Hazelbaker Assessment Tool for Lingual Frenulum Function (HATLFF) and findings documented appropriately.
- 2.5 There is no evidence to suggest that any one tool is superior to others overall. Consistent use of a tool among health professionals working together is paramount.
- 2.6 Prior to frenotomy, obtain written informed consent from the parents. Informed consent includes an explanation of the condition, the treatment and options available, expected risks, side effects and benefits.
- 2.7 Document whether the baby has had intramuscular or oral Vitamin K administered at birth. Delay frenotomy by at least 12 hours after the baby has received intramuscular Vitamin K, or 24 hours after the baby has received the first oral dose of Vitamin K. If the parents choose for their baby not to receive Vitamin K, continued breastfeeding support is advised instead of frenotomy.
- 2.8 Some researchers have stated that if frenotomy is required, it should be done as soon as practicable to enable the continuation of breastfeeding. An interval of at least 24 hours is reasonable so parents can read through the information provided, make an informed decision, and allows time for their questions to be answered. Individually assess each mother and baby dyad, balancing the need for continued breastfeeding and the time taken to make an informed decision.

3. Procedure

- 3.1 Frenotomy can only be done by a registered health professional using laser or blunt-ended scissors, in an appropriate setting with the necessary resuscitation equipment available in case of rare but serious side effects. The baby's head is stabilised, and the lingual frenulum is divided. There should be little, or no blood loss and breastfeeding may be resumed immediately.
- 3.2 In babies younger than eight weeks' old, frenotomy is usually performed without anaesthesia although local anaesthetic, breast milk or sucrose may be used. General anaesthesia is usually required after the early months of life.
- 3.3 A midwife or lactation consultant should observe a breastfeed as soon as possible following the procedure, with arrangements made for follow up breastfeeding support and assessment (eg, a community lactation clinic). This will be dependent on local service provision.
- 3.4 All assessments for tongue-tie and the decision to undertake frenotomy (or not) should be fully documented in the baby's clinical record and Well Child book, with a summary letter sent to the baby's health care professionals.

4. Efficacy

- 4.1 The majority of papers report significant improvements in 80 to 90 percent of breastfeeding dyads following frenotomy. Improvements were related to better infant feeding and a decrease in maternal pain, increased rates of exclusive and partial breastfeeding, and improvements in measurements of infant reflux and mothers' breastfeeding self-confidence.
- 4.2 There are conflicting opinions among health professionals and some state that it is difficult to be certain whether any perceived improvement in breastfeeding is due to division of the tongue-tie.
- 4.3 It is important that all referrals for breastfeeding issues related to tongue-tie are documented and collated. Data must be collected to determine the efficacy of the service, the short- and long-term improvement of undertaking (or not) a frenotomy and the impact on breastfeeding, speech and dental health in New Zealand, as well as to provide evidence of efficacy.

5. Safety

- 5.1 While surgical management is generally safe, with low complication rates, it can result in rare, but serious harmful consequences. These include possible haemorrhage, infection, ulcers, pain, oral aversion and damage to the tongue and surrounding area.
- 5.2 In hepatitis C positive women breastfeeding is not contraindicated unless the mother has cracked, bleeding nipples. Following frenotomy, advise mothers to postpone breastfeeding or give expressed breast milk until the frenotomy wound has healed.
- 5.3 In hepatitis B positive women breastfeeding is not contraindicated following frenotomy as long as the baby has received hepatitis B immunoglobulin and a hepatitis B vaccine.
- 5.4 An over emphasis on tongue-tie as the cause of breastfeeding issues may lead to a delay in diagnosing an underlying medical condition.

6. Comments

- 6.1 Breastfeeding is a complex interaction between the mother and baby and many factors can affect the ability to breastfeed. Skilled lactation support is integral to managing breastfeeding difficulties and is essential before and after frenotomy.
- 6.2 While surgical treatment of tongue-tie may also be relevant for bottle-fed babies, it is not included in the scope, or in the evidence review, for this guidance.
- 6.3 The scope of this guideline does not include surgical treatment of problematic tongue-tie in infants over six weeks of age. For breastfeeding infants, the recommendation remains that breastfeeding support is provided by a lactation

consultant, and referral is expedited to an appropriately qualified health professional with the necessary education and training, equipment for sedation and resuscitation of infants and children.

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Appendix 1

Education, training and maintenance of competency for health professionals conducting frenotomy

Each DHB must have a written guideline for assessing, treating and managing tongue-tie, including the educational and ongoing competency requirements for midwives, medical practitioners and dental surgeons to perform frenotomy. It is recommended that education and training requirements include:

- anatomy and physiology
- assessment of the mother and the baby: breastfeeding assessment and tongue-tie assessment
- discussion of treatment options and informed consent
- frenotomy technique and aftercare
- DHB documentation and audit processes
- attending a DHB-approved workshop or study day on the assessment, management and treatment of tongue-tie
- attending DHB or other approved breastfeeding study days.

The DHB guideline should outline clinical practice requirements for health professionals, with details of ongoing education and professional development and documentation and audit requirements. Regular updates on neonatal and paediatric resuscitation are recommended for all practitioners performing frenotomy.

This guideline also applies to health professionals not directly employed by a DHB. They must also follow the recommendations for additional educational, competency and resuscitation requirements.

All health professionals are required to document the care and treatment provided as per their professional or regulatory standards and for audit requirements.

Registered midwives, medical practitioners and dentists and dental specialists

The Midwifery Council of New Zealand has a statement on the midwifery scope of practice with regard to assessment and diagnosis of tongue-tie (Midwifery Council of New Zealand 2016) as does the New Zealand College of Midwives (New Zealand College of Midwives 2019). The New Zealand Dental Association has a position statement regarding ankyloglossia for New Zealand-registered dentists (New Zealand Dental Association 2018).

Medical practitioners are guided by their relevant medical college or professional body with regard to the practice of frenotomy.

Registered nurses

It is not within the nursing scope to perform frenotomy. However, a registered nurse who has undergone an approved breastfeeding education programme covering clinical assessment of breastfeeding and the baby for tongue-tie and lip function can examine, assess, refer and provide breastfeeding support. The DHB guideline should outline the process for this and ongoing education and clinical practice.

Appendix 2

Evidence summary

1. There is no consensus as to the efficacy of surgical division of the lingual frenulum (frenotomy).
2. There is little consensus on the optimal timing of division of the lingual frenulum.
3. There are no major safety concerns and some evidence of post-procedural improvements in breastfeeding dyads.
4. More evidence is required exploring the effect of frenotomy on successful long-term breastfeeding.
5. More evidence is required on the long-term effects of tongue-tie, and/or frenotomy and longer-term outcomes related to oral health and speech disorders. An audit of current frenotomy procedure and outcomes, (including short- and longer-term measures), along with long-term follow up, is required in Aotearoa New Zealand.

Literature reviewed for this evidence summary is appended below as a bibliography.

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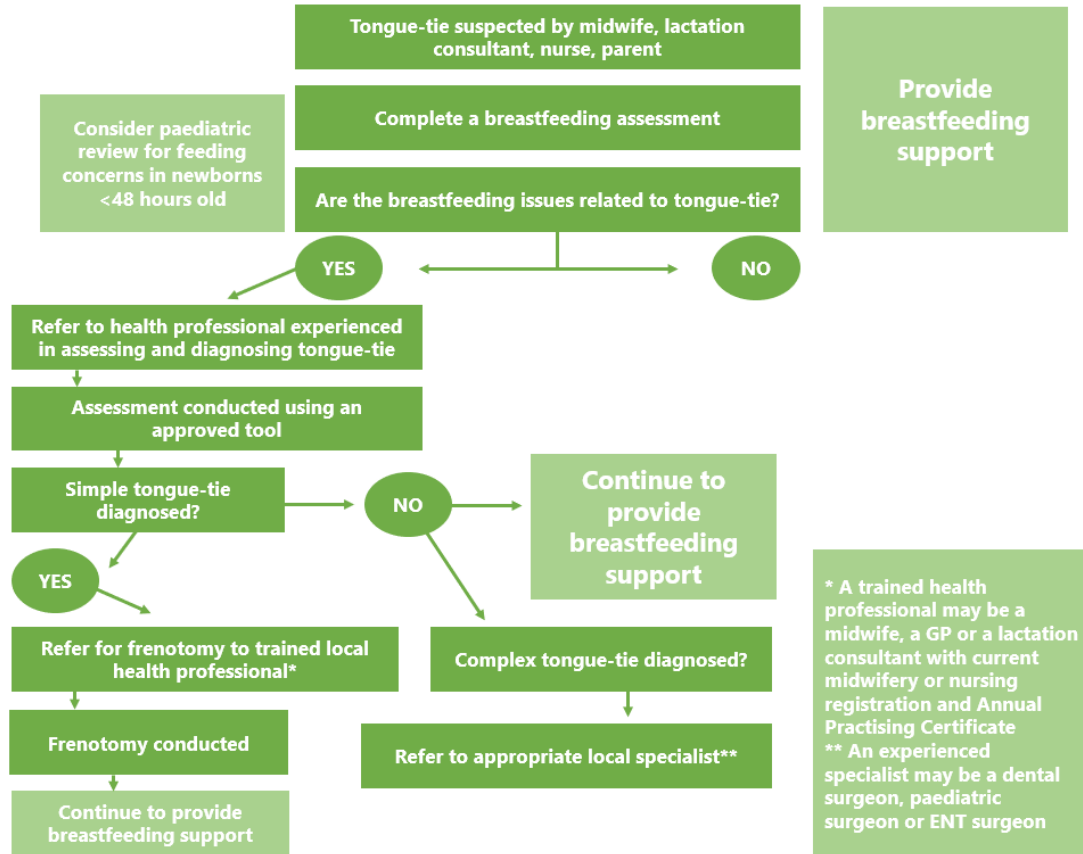
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Appendix 3

Example DHB Referral Pathway



Appendix 4

Expert Advisory Group Members

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