

Queensland Clinical Guidelines

Translating evidence into best clinical practice

Maternity and Neonatal **Clinical Guideline**

Establishing breastfeeding

Document title:	Establishing breastfeeding (previously Breastfeeding initiation)
Publication date:	July 2016
Document number:	MN16.19-V3-R21
Document supplement:	The document supplement is integral to and should be read in conjunction with this guideline
Amendments:	Full version history is supplied in the document supplement
Amendment date:	July 2016. Full review of original document published in 2010
Replaces document:	MN10.19-V2-R15
Author:	Queensland Clinical Guidelines
Audience:	Health professionals in Queensland public and private maternity and neonatal services
Review date:	July 2021
Endorsed by:	Queensland Clinical Guidelines Steering Committee Statewide Maternity and Neonatal Clinical Network (Queensland)
Baby Friendly Health Initiative (BFHI)	The Australian College of Midwives has confirmed this clinical guideline meets the standards of BFHI Australia (2009).
Contact:	Email: guidelines@health.qld.gov.au URL: www.health.qld.gov.au/qcg

Disclaimer

This guideline is intended as a guide and provided for information purposes only. The information has been prepared using a multidisciplinary approach with reference to the best information and evidence available at the time of preparation. No assurance is given that the information is entirely complete, current, or accurate in every respect.

The guideline is not a substitute for clinical judgement, knowledge and expertise, or medical advice. Variation from the guideline, taking into account individual circumstances, may be appropriate.

This guideline does not address all elements of standard practice and accepts that individual clinicians are responsible for:

- Providing care within the context of locally available resources, expertise, and scope of practice
- Supporting consumer rights and informed decision making in partnership with healthcare practitioners, including the right to decline intervention or ongoing management
- Advising consumers of their choices in an environment that is culturally appropriate and which enables comfortable and confidential discussion. This includes the use of interpreter services where necessary
- Ensuring informed consent is obtained prior to delivering care
- Meeting all legislative requirements and professional standards
- Applying standard precautions, and additional precautions as necessary, when delivering care
- Documenting all care in accordance with mandatory and local requirements

Queensland Health disclaims, to the maximum extent permitted by law, all responsibility and all liability (including without limitation, liability in negligence) for all expenses, losses, damages and costs incurred for any reason associated with the use of this guideline, including the materials within or referred to throughout this document being in any way inaccurate, out of context, incomplete or unavailable.

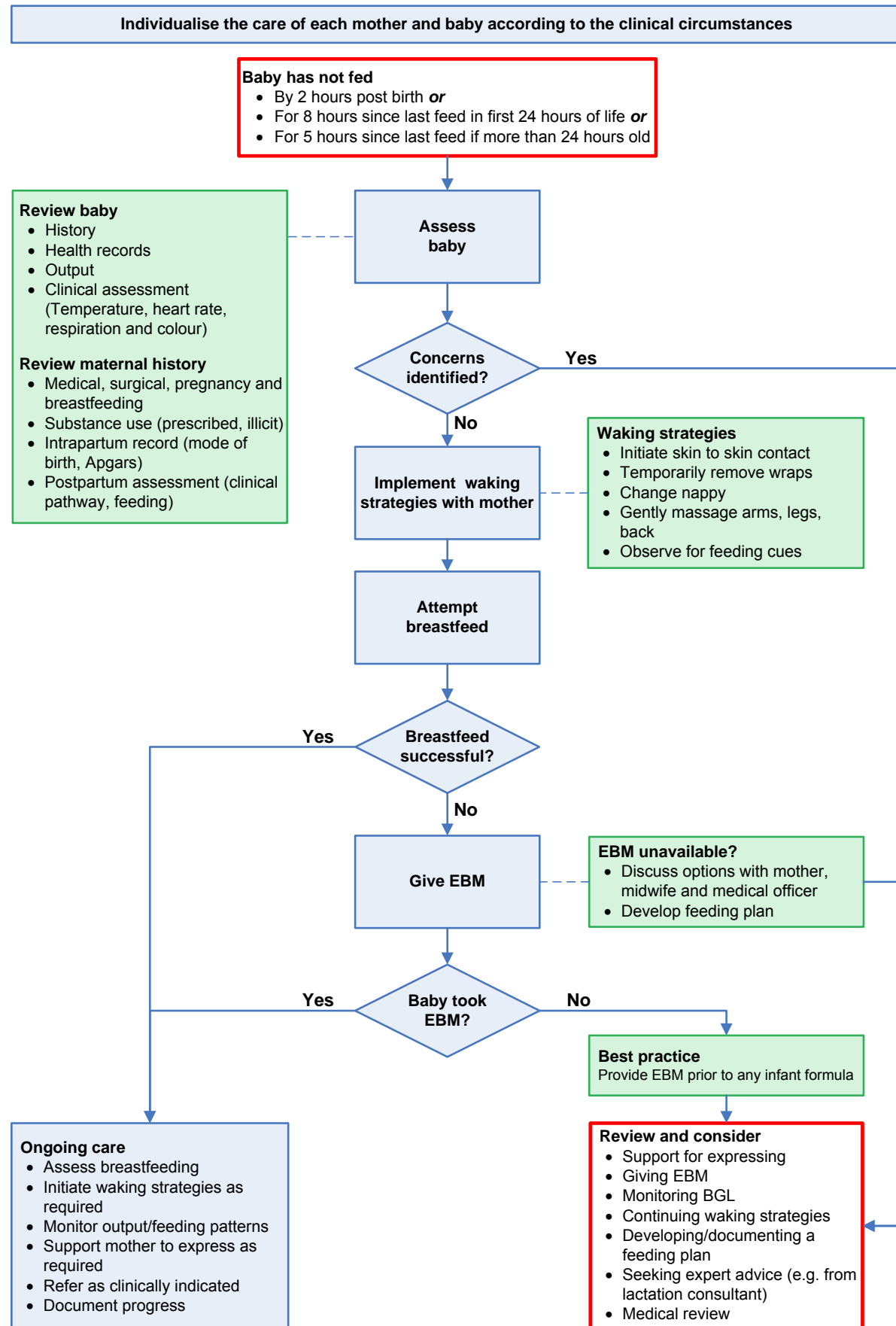
© State of Queensland (Queensland Health) 2016



This work is licensed under Creative Commons Attribution-NonCommercial-NoDerivatives 3.0 Australia. In essence, you are free to copy and communicate the work in its current form for non-commercial purposes, as long as you attribute Queensland Clinical Guidelines, Queensland Health and abide by the licence terms. You may not alter or adapt the work in any way. To view a copy of this licence, visit <http://creativecommons.org/licenses/by-nc-nd/3.0/au/deed.en>

For further information, contact Queensland Clinical Guidelines, RBWH Post Office, Herston Qld 4029, email Guidelines@health.qld.gov.au, phone (07) 3131 6777. For permissions beyond the scope of this licence, contact: Intellectual Property Officer, Queensland Health, GPO Box 48, Brisbane Qld 4001, email ip_officer@health.qld.gov.au, phone (07) 3234 1479.

Flow Chart: Management of the healthy term sleepy baby in the first 24–48 hours



Queensland Clinical Guideline: Establishing breastfeeding. Guideline No: MN16.19-V3-R21

EBM: expressed breast milk; **BGL:** blood glucose level

Abbreviations

BFHI	Baby Friendly Health Initiative
CI	Confidence interval
CS	Caesarean section
EBM	Expressed breast milk
GP	General Practitioner
IBCLC	International Board Certified Lactation Consultant
MER	Milk ejection reflex
NSQHS	National Safety and Quality Health Service
OR	Odds ratio
RR	Relative risk
SIDS	Sudden infant death syndrome
SSC	Skin to skin contact
SUDI	Sudden and unexpected death in infancy
The Code	International code of marketing of breast-milk substitutes
UNICEF	United Nations Children's Emergency Fund
WHO	World Health Organization

Definitions

Complementary feeding	Feedings provided in addition to breastfeeding when breast milk alone is no longer sufficient. This term is used to describe foods or liquids given in addition to breastfeeding after 6 months, a “complement” to breastfeeding needed for adequate nutrition. ¹
Exclusive breastfeeding	The baby receives only breast milk (including milk expressed or from wet nurse or breast milk donor) and no other liquids or solids apart from drops or syrups (vitamins, mineral, medicines). ²
Odds ratio	<p>An odds ratio (OR) is a measure of association between an exposure and an outcome. The OR represents the odds that an outcome will occur given a particular exposure, compared to the odds of the outcome occurring in the absence of that exposure.</p> <p>For the purposes of data interpretation in this guideline, consider breastfeeding as the intervention and not breastfeeding as the control: If the OR is greater than 1, the control is better than the intervention. If the OR is less than 1 the intervention is better than the control. If the OR is equal to 1 there is no difference between the intervention and the control</p> <p>If the 95% confidence interval (CI) contains the value 1.0, this implies there is no difference between the intervention and the control regardless of the OR (e.g. 95% CI; 0.85–1.24). If the 95% CI does not contain the value 1.0, the association is statistically significant at alpha 0.05. (e.g. 95% CI; 0.43–0.62).</p>
Partial breastfeeding	Refers to a situation where the baby is receiving some breastfeeds but is also being given other food or food-based fluids, such as formula milk or weaning foods. ³ Sometimes referred to as mixed feeding.
Rooming-in	The mother and her baby remain together 24 hours a day. ⁴
Skin to skin contact (SSC)	Skin to skin contact (SSC) begins ideally at birth and involves placing the naked baby prone on the mother's bare chest. There should be nothing between them (other than a nappy on the baby, if preferred). A warm blanket or towel placed over both of them will ensure that the baby does not lose heat and that the mother's privacy is maintained. ^{3,5}
SIDS	Sudden infant death syndrome (SIDS) is defined as the sudden and unexpected death of an infant under one year of age, with onset of the lethal episode apparently occurring during sleep that remains unexplained after a thorough investigation including performance of a complete autopsy and review of the circumstances of death and the clinical history. ⁶
SUDI	Sudden, unexpected death of an infant (SUDI) usually occurring during sleep, in which the cause is not immediately obvious. SUDI includes sudden infant death syndrome (SIDS) and fatal sleeping accidents. ⁶
Supplementary feeding	Feedings provided in place of breastfeeding. This may include expressed or banked breast milk and/or breast milk substitutes/formula. Any foods given prior to 6 months, the recommended duration of exclusive breastfeeding, are thus defined as supplementary. ¹

Table of Contents

1	Introduction	6
1.1	The importance of breastfeeding	6
1.2	Breastfeeding cautions	7
1.3	Clinical standards	8
2	Supportive care	9
2.1	Communication	9
2.2	Antenatal care	10
2.3	Skin to skin contact	11
2.4	Feeding according to need	12
2.5	Rooming-in	13
3	Breastfeeding assessment	13
3.1	Positioning and attachment	14
3.2	Milk transfer and production	15
3.3	Breastfeeding effectiveness	16
4	Supplemental feeding	17
4.1	Alternative feeding choices	18
5	Dummy (pacifier) use	18
6	Common concerns	19
7	Continued breastfeeding	19
7.1	Health promotion	20
	References	21
	Appendix A: Principles of the Baby Friendly Health Initiative	23
	Appendix B: Supervision during skin to skin contact	24
	Appendix C: Input/output checklist	25
	Appendix D: Recommendations for common breastfeeding concerns	26
	Acknowledgements	28

List of Tables

Table 1.	Health outcomes associated with breastfeeding	6
Table 2.	Breastfeeding cautions	7
Table 3.	Clinical standards	8
Table 4.	Communication	9
Table 5.	Antenatal care	10
Table 6.	Skin to skin contact	11
Table 7.	Baby feeding patterns	12
Table 8.	Rooming-in	13
Table 9.	Assessment	13
Table 10.	Positioning and attachment	14
Table 11.	Milk transfer and production	15
Table 12.	Monitoring effectiveness	16
Table 13.	Alternative feeding choices	18
Table 14.	Dummy (pacifier) use	18
Table 15.	Initial care for all women with breastfeeding concerns	19
Table 16.	Referral and follow-up	19
Table 17.	Ongoing advice and information	20

1 Introduction

Breastfeeding is the normal way of providing babies with the nutrients required for growth and development.⁷ Numerous studies have demonstrated the health and economic importance of breastfeeding for the mother, her baby and for society in both developed and developing countries.^{2,8}

Emerging evidence suggests breastfeeding has a positive impact on mother-baby relationships. Oxytocin released during breastfeeding promotes maternal feelings and behaviours.⁹ The interdependence between the breastfeeding mother and baby, regular close interaction and skin to skin contact (SSC) encourage mutual responsiveness and emotional attachment.⁵

The National Health and Medical Research Council (NHMRC) recommend exclusive breastfeeding until around six months of age, and continued breastfeeding with the addition of appropriate complementary foods until 12 months of age and beyond, for as long as the mother and child desire.² The World Health Organization (WHO) recommends continued breastfeeding along with appropriate complementary foods up to two years of age or beyond.¹⁰⁻¹²

The time required to establish breastfeeding is variable and influenced by the individual circumstances of both the mother and baby. The scope of this document includes pregnancy until the end of the first week postpartum for the healthy mother and the healthy term baby.

In Queensland in 2014, 94% of all babies discharged from hospital received at least some breast milk with 72% being exclusively breast milk fed at discharge.¹³ While the majority of women in Australia initiate breastfeeding prior to discharge, breastfeeding rates decline to approximately 50–60% at six months. Only a small proportion of women in Australia achieve the recommendation of exclusively breastfeeding to this age and only around 25% of women continue to breastfeed for 12 months.²

1.1 The importance of breastfeeding

Table 1. Health outcomes associated with breastfeeding

	Health outcome associated with breastfeeding	No. Studies	Pooled Effect	95% CI	Interpretation: odds (OR) / risk (RR) of outcome is:
For baby	Performance in intelligence tests ¹⁴	17	3.44 points	2.30–4.58	increased
	Overweight/obesity in later life ¹⁵	113	OR: 0.74	0.70–0.78	reduced
	Type 2 diabetes ¹⁵	11	OR: 0.65	0.49–0.86	reduced
	Malocclusion ¹⁶				
	Ever versus never breastfed	18	OR: 0.34	0.24–0.48	reduced
	Exclusive versus ever breastfed	9	OR: 0.54	0.38–0.77	
	Dental caries ¹⁷				
	If breastfed beyond 12 months	5	OR: 1.99	1.36–2.96	increased
	If breastfed up to 12 months	7	OR: 0.50	0.25–0.99	reduced
	Acute otitis media (until 2 years) ¹⁸				
	If exclusive breastfeeding for first 6 months	5	OR: 0.57	0.44–0.75	reduced
	More versus less breastfeeding	12	OR: 0.65	0.59–0.72	
	Childhood leukaemia ¹⁹				
	Any breastfeeding for 6 months of longer	18	OR: 0.81	0.73–0.89	reduced
	Ever versus never breastfed	15	OR: 0.89	0.84–0.94	
SIDS ²⁰					
Exclusive breastfeeding	8	OR: 0.27	0.24–0.31	reduced	
Any breastfeeding	18	OR: 0.40	0.35–0.44		
Severe respiratory infections ⁸	16	RR: 0.68	0.60–0.77	reduced	
Mortality due to infectious diseases ⁸	9	OR: 0.48	0.38–0.60	reduced	
Protection against diarrhoea morbidity/hospital admission ⁸	15	RR: 0.69	0.58–0.82	reduced	
Maternal	Breast cancer ²¹	98	OR: 0.78	0.74–0.82	reduced
	Ovarian cancer ²¹	41	OR: 0.70	0.64–0.77	reduced
	Type 2 diabetes ²²	6	RR: 0.68	0.57–0.82	reduced
	BMI in postmenopausal women ²³	1	0.22 kg/m ²	0.21–0.22	reduced

CI: Confidence Interval; OR: Odds Ratio; RR Relative Risk, BMI: Body Mass Index. See definitions for explanation of OR

1.2 Breastfeeding cautions

In Australia, there are very few indications for completely avoiding breastfeeding.² Individualise care and seek expert advice as required.

Table 2. Breastfeeding cautions

Aspect	Consideration
Breastfeeding not recommended	<ul style="list-style-type: none"> • Specialised formula required for: <ul style="list-style-type: none"> ○ Galactosaemia ○ Maple syrup urine disease ○ Phenylketonuria (PKU) (some breastfeeding may be possible with careful monitoring)⁴ • Human immunodeficiency virus (HIV) positive⁴
Temporary avoidance or supplementation required ^{1,2}	<ul style="list-style-type: none"> • Examples include (but are not limited to): <ul style="list-style-type: none"> ○ Severe maternal illness (e.g. sepsis) ○ If hepatitis C positive and nipples are bleeding ○ Concerns with the health and wellbeing of the baby¹ • If herpes simplex virus type 1 (HSV-1) on the breast, avoid breastfeeding until all active lesions have resolved • Refer to Section 4: Supplemental feeding
Maternal medication and substance use	<ul style="list-style-type: none"> • Individualise care: <ul style="list-style-type: none"> ○ Refer to a breast milk pharmacopeia for recommendations about specific medications (e.g. LactMed²⁴) ○ Refer to Queensland Clinical Guidelines: <i>Perinatal substance use: neonatal</i>²⁵ and <i>Perinatal substance use: maternal</i>²⁶
Recommendation	<ul style="list-style-type: none"> • Whenever an interruption to breastfeeding is being considered, weigh the benefits of breastfeeding against the risks and discuss with the mother and family⁴ • When a mother decides to continue breastfeeding in situations where a degree of risk is identified, refer for specialist advice and management • Where temporary avoidance of breastfeeding is indicated, support the mother to express breast milk to maintain lactation

1.3 Clinical standards

Table 3. Clinical standards

Aspect	Consideration
Baby Friendly Health Initiative (BFHI)	<ul style="list-style-type: none"> • A joint initiative of the WHO and United Nations Children's Emergency Fund (UNICEF) • The BFHI Ten Steps to Successful Breastfeeding and the WHO International Code of Marketing of Breastmilk Substitutes (The Code) provides a framework for clinical care aimed at protecting, promoting and supporting breastfeeding^{1,27} • In Australia, BFHI is administered by the Australian College of Midwives • Appendix A: Principles of the Baby Friendly Health Initiative <ul style="list-style-type: none"> ○ Shown to have a positive effect on breastfeeding initiation, continuation and exclusivity rates globally^{28,29} ○ The more steps practiced, the higher the duration and exclusivity of breastfeeding^{29,30} • Encourage vigilance to identify framework breaches (e.g. infant formula visible in patient areas) • Restrict infant formula company representative access to facility and staff • Scrutinise institutional research to identify potential implications for breastfeeding
Principles of care	<ul style="list-style-type: none"> • Promote parental responsiveness, empowerment and informed decision making • Respect a woman's decision about how to feed her baby and support her to reach her infant feeding goal <ul style="list-style-type: none"> ○ Partial breastfeeding may be considered a successful breastfeeding outcome for the woman who chooses this option⁴ • If the mother has delayed contact with her baby (due to maternal or newborn reasons), offer additional breastfeeding support³¹ • Develop locally agreed protocols and systems of care that support the: <ul style="list-style-type: none"> ○ Ten steps to successful breastfeeding ○ The Code² ○ Appendix A: Principles of the Baby Friendly Health Initiative ○ Acceptable medical reasons for use of breast milk substitutes⁴ • Include breastfeeding in antenatal and parent education information • Adhere to and monitor compliance with the National Safety and Quality Health Service (NSQHS) standard regarding patient identification to ensure: <ul style="list-style-type: none"> ○ The correct baby is given to the correct mother ○ The correct breast milk is given to the correct baby
Staff support	<ul style="list-style-type: none"> • Support health care providers to access current breastfeeding and lactation management continuing education and training³² • Support staff to continue breastfeeding during their employment³³

2 Supportive care

Multiple factors influence breastfeeding. Develop local processes and systems that protect, promote and support breastfeeding.³⁴

2.1 Communication

Table 4. Communication

Aspect	Considerations
Context	<ul style="list-style-type: none"> • Deciding how to feed her baby is a major decision for a woman, influenced by many different events and experiences³⁵ • A guiding approach is more effective than a directional approach in supporting behaviour change in pregnant women³⁵ • Pregnant women and new mothers³⁶: <ul style="list-style-type: none"> ○ Have increased sensitivity to non-verbal communication approaches ○ May be less receptive to large volumes of information ○ May benefit from peer support networks³⁷
Sharing information	<ul style="list-style-type: none"> • Provide an opportunity to share information³⁵ • Explore what is already known, and offer relevant information and alternatives to support an informed decision³⁵ • Use active listening • Keep non-verbal communication supportive (facial expressions, gestures, body language) • Offer information in ways that support different learning styles: <ul style="list-style-type: none"> ○ Verbal ○ Demonstration and supervised practice ○ Videos ○ Printed fact sheets which are free from commercial influence
Recommendation	<ul style="list-style-type: none"> • Support a woman's feeding decision • Partner with women to help them achieve their feeding goals for their baby • Document the feeding decision in the maternal and neonatal health record

2.2 Antenatal care

Table 5. Antenatal care

Aspect	Consideration
Breastfeeding information	<ul style="list-style-type: none"> • Share breastfeeding information at each antenatal visit^{38,39} <ul style="list-style-type: none"> ○ Offer anticipatory guidance about the first breastfeed (e.g. SSC, early feeding behaviours, how long it may take for baby to feed) ○ Refer to Table 6. Skin to skin contact and Table 7. Baby feeding patterns • Offer anticipatory guidance for managing minor concerns² • Offer information about breastfeeding support in the community <ul style="list-style-type: none"> ○ Peer counselling promotes the initiation and maintenance of breastfeeding³⁷ • Offer information about optimal maternal nutrition and physical activity⁴⁰ • Recommend an iodine supplement 150 micrograms oral daily⁴¹ <ul style="list-style-type: none"> ○ Women with pre-existing thyroid conditions should seek advice from their general practitioner (GP) prior to taking a supplement • Discuss birthing practices that support successful breastfeeding⁴ <ul style="list-style-type: none"> ○ Presence of support person³⁸ ○ Drinking and eating light foods during labour ○ Mobilising and birthing position of choice ○ Impact of intrapartum interventions³⁸ (e.g. medications)
History	<ul style="list-style-type: none"> • Ask about previous breastfeeding experience and duration • Identify risk factors for breastfeeding challenges/concerns³⁸ <ul style="list-style-type: none"> ○ High risk groups (e.g. diabetes⁴², thyroid disorders⁴³, obesity⁴⁴, Aboriginal and Torres Strait Islander women², adolescent/young women², history of abuse or substance use^{45,46}) ○ Breast and nipple variations, surgery or injury (e.g. breast hypoplasia, biopsy, augmentation, reduction, nipple inversion, nipple piercing)³⁹ as disclosed by the woman in response to prompts ○ Current medications ○ Use of tobacco, alcohol or illicit drugs • If history identifies risk factors, consider breast examination (not routinely recommended⁴⁷) as it provides an opportunity to: <ul style="list-style-type: none"> ○ Observe for appropriate breast development, surgical scars, and nipple shape ○ Reassure the woman when her breasts and nipples are normal and highlight expected breast changes ○ Triage for additional support following birth³⁹
Referral	<ul style="list-style-type: none"> • Partner with the woman to develop and document a breastfeeding plan • Offer referral to an International Board Certified Lactation Consultant (IBCLC) or expert breastfeeding support service when: <ul style="list-style-type: none"> ○ Previous concerns with breastfeeding experienced ○ Risk factors for breastfeeding challenges identified³⁸
Antenatal preparation	<ul style="list-style-type: none"> • There is no evidence to support routine nipple preparation during pregnancy³⁹ • There is insufficient evidence about the efficacy and safety of antenatal expressing of colostrum⁴⁸
Not breastfeeding	<ul style="list-style-type: none"> • When a woman makes an informed decision not to breastfeed²⁷: <ul style="list-style-type: none"> ○ Respect her decision ○ Advise her that information on safe and appropriate use of infant formula will be provided ○ Document the decision in health record/pregnancy health record

2.3 Skin to skin contact

Table 6. Skin to skin contact

Aspect	Consideration
Benefits for baby	<ul style="list-style-type: none"> • Breast seeking behaviour⁴⁹ • Less crying⁵ • Socially interactive behaviour with mother⁴⁹ • Physiological stability (temperature, blood glucose level and heart rate)⁵ • Increased pain threshold and decreased cortisol levels⁴⁹ • Earlier initiation of first breastfeed⁵⁰ • More effective breastfeeding⁵⁰
Benefits for mother	<ul style="list-style-type: none"> • Release of oxytocin which causes⁴⁹: <ul style="list-style-type: none"> ○ Reduced blood loss ○ Increase in skin temperature of the breast ○ Reduced anxiety and increased social interaction • Reduced breastfeeding concerns⁵ • Positive effects on breastfeeding duration⁵¹ • Helps to overcome common breastfeeding concerns when used beyond the immediate postpartum period³
Operative birth	<ul style="list-style-type: none"> • Initiation and duration of SSC in the operating theatre after elective caesarean section (CS) is associated with continued breastfeeding at 48 hours⁵² • If regional anaesthesia, offer SSC in theatre and transfer the mother and baby to recovery in SSC; otherwise offer SSC within 10 minutes of arriving in recovery^{27,53} • If general anaesthesia, offer SSC within 10 minutes of the mother being able to respond to her baby²⁷
Clinical surveillance	<ul style="list-style-type: none"> • Tailor supervision requirements as required if there are concerns about the health and wellbeing of the mother or baby during SSC • Follow local protocols for the assessment of risk factors and their impact on supervision requirements during SSC • Routine neonatal observations are indicated during SSC • Refer to Appendix B: Supervision during skin to skin contact
Recommendation	<ul style="list-style-type: none"> • Initiate local systems and processes that enable and support SSC after birth regardless of birth mode and feeding method • Offer and encourage SSC for a minimum of one hour, or longer if first breastfeeding has not been initiated • Where possible, do not interrupt SSC until the first breastfeed is finished²⁷ • Delay procedures such as 'head to toe' checks, weighing, bathing, and administration of vitamin K until after the first breastfeed • If the mother is unavailable but baby is well, SSC with another person (commonly the partner) is an appropriate alternative³ • Document duration of SSC, baby's condition during SSC or reason why SSC was not implemented

2.4 Feeding according to need

Table 7. Baby feeding patterns

Aspect	Consideration
Behaviour states	<ul style="list-style-type: none"> • Six defined baby behavioural states have been recognised⁵⁴: <ul style="list-style-type: none"> ○ Sleep states: <ul style="list-style-type: none"> ▪ Deep sleep, light sleep, drowsy ○ Awake states: <ul style="list-style-type: none"> ▪ Quiet alert; active alert; crying • Understanding behavioural states can assist interpretation of baby's behaviour and facilitate an appropriate response⁵⁵ • Quiet alert state is the ideal time to initiate SSC and breastfeeding^{55,56} • Offering a breastfeed during light sleep/drowsy state is an effective strategy for babies who have a quick transition from deep sleep to active alert or crying⁵⁶
Feeding cues	<ul style="list-style-type: none"> • Early cues: <ul style="list-style-type: none"> ○ Wiggling, moving arms or legs, rooting, licking movements, stirring, mouth opening, turning head, seeking/rooting • Mid cues: <ul style="list-style-type: none"> ○ Fussing, stretching, increased physical movement, hand to mouth, crying intermittently • Late cue: <ul style="list-style-type: none"> ○ Crying ○ Baby may require calming before breastfeeding can be initiated³⁹ • Feeding in response to cues increases breastfeeding initiation, continuation and exclusivity⁵⁷ • Encourage unrestricted breastfeeding in response to baby's early/mid feeding cues²⁷ • Encourage response to baby's cues to determine if one or both breasts are required at an individual feed⁵⁸ • Breastfeeding can be used to comfort and calm baby, as well as to alleviate hunger³⁵ • Advise mother not to interrupt breastfeeding (if breastfeeding is comfortable) until baby indicates satiety by: <ul style="list-style-type: none"> ○ Releasing nipple without further rooting behaviour ○ Discontinuing nutritive suck/swallow patterns ○ Falling asleep^{27,59}
Feeding patterns	<ul style="list-style-type: none"> • Typically babies have a two hour alert period after birth¹ <ul style="list-style-type: none"> ○ Ideal time for mother to initiate breastfeeding^{1,35,55} • A sleepy period may follow <ul style="list-style-type: none"> ○ Increased SSC can encourage more frequent feeding if necessary • This period is often followed by variable sleep-wake cycles, with an additional one or two wakeful periods in the next 10 hours • Commonly babies feed frequently (but not necessarily at regular intervals) in the second 24 hours of life as milk flow increases • Assist the mother to identify cues for feeding and comfort, offer her calming strategies and reassurance where baby's behaviour is normal • Babies establish a pattern of breastfeeding 8–12 times over a 24 hour period during the first week⁵⁷ • Breastfeeding frequency will vary according to baby's needs and the rate of milk transfer² • Babies are settled after most breastfeeds, although many have periods each day when they will not settle and continue to cue for feeding and/or comfort • Length of each feed is highly variable; during the early days/weeks and can take up to an hour <ul style="list-style-type: none"> ○ Timing the feed is discouraged

2.5 Rooming-in

Table 8. Rooming-in

Aspect	Considerations
Rooming-in	<ul style="list-style-type: none"> • Limited evidence exists about the effect of mother-baby separation versus rooming-in and breastfeeding duration⁵ • Keep mother and baby together, whenever possible to facilitate^{32,38}: <ul style="list-style-type: none"> ○ Opportunities for bonding and attachment ○ Recognition and timely response to early/mid feeding cues ○ Familiarisation with baby's behaviour prior to discharge • Rooming-in does not compromise mother's amount or quality of sleep³⁸ • Closeness to a responsive parent reduces the risk of SIDS⁶⁰ • Perform baby examinations and routine tests in the mother's room³⁸ <ul style="list-style-type: none"> ○ If not possible, encourage the mother to be present • On discharge recommend baby sleep in the same room as parents or caregiver for the first six to twelve months of life⁶¹
Safe sleeping	<ul style="list-style-type: none"> • Advise the mother (and family) about recommendations for safe sleeping as outlined in the Queensland Government safe sleeping guidelines^{62,63}

3 Breastfeeding assessment

Table 9. Assessment

Aspect	Consideration
Context	<ul style="list-style-type: none"> • Provides an opportunity to partner with the mother to³⁵: <ul style="list-style-type: none"> ○ Determine learning needs ○ Provide anticipatory guidance ○ Identify effective breastfeeding ○ Identify breastfeeding concerns ○ Facilitate early intervention
Recommendation	<ul style="list-style-type: none"> • Offer help with breastfeeding within the first two hours of birth^{27,32} • Offer help with the next breast feed, within approximately six hours of birth or earlier⁶⁴ • Use a 'hands off' approach where possible and appropriate⁶⁴ • Assess and document breastfeeding effectiveness at least once every 8–12 hours after birth until discharge^{32,38} • Breastfeeding assessment tools can provide objective evidence regarding effectiveness of a particular breastfeed⁶⁵
Preparation	<ul style="list-style-type: none"> • Review health record and baby feeding chart (if used) • Discuss specific health concerns with the mother as they relate to breastfeeding (e.g. birth experience, comfort, tiredness, healing) • Ask the mother about her breastfeeding experience (e.g. expectations, frequency and length of feeds, baby's output) • Assess breast and nipple comfort (e.g. breast fullness, nipple tenderness) • Help the mother find a comfortable breastfeeding position

3.1 Positioning and attachment

Table 10. Positioning and attachment

Aspect	Consideration
Positioning	<ul style="list-style-type: none"> • When the baby is held with his/her ventral surface to the ventral surface of the mother, primitive neonatal reflexes support self attachment or attachment with minimal assistance^{66,67} • Allowing baby time to search for the breast and lead the feeding is more likely to result in effective attachment • Mother adopts a position of comfort and uses her arm to provide positional stability for her baby⁶⁸ • If sitting, encourage the mother to recline with back supported to reduce shoulder tension and enable her body to support her baby⁶⁸ • Baby is held close to the mother's body with head, neck, and back aligned to provide stability and easy access to the breast • Baby's cheek or mouth has contact with the mother's breast to enable the baby to search for the nipple • The mother may find it helpful to support and/or shape her breast to aid attachment
Attachment	<ul style="list-style-type: none"> • Baby's mouth is open wide against the breast with nipple and surrounding breast in the open mouth • Deep jaw movements are observed • Cheeks are not sucked in • Mother is comfortable • Baby looks comfortable, relaxed and is not wriggling, tense, frowning or grimacing • Milk transfer is evident <ul style="list-style-type: none"> ○ Refer to Table 11. Milk transfer and production • Following feed; nipples may appear slightly elongated but not flattened, white or ridged²
<i>If attachment not effective</i>	<ul style="list-style-type: none"> • Advise mother to detach baby by gently inserting her finger into the corner of baby's mouth to break the vacuum^{39,69} • Use positioning principles to enable baby to reattach

3.2 Milk transfer and production

Table 11. Milk transfer and production

Aspect	Consideration
Milk transfer	<ul style="list-style-type: none"> • Milk ejection reflex (MER) influences amount of milk baby consumes regardless of the length of the breastfeed⁷⁰ <ul style="list-style-type: none"> ○ MER may take two to three minutes to occur in the first few days after birth³⁹ • Multiple milk ejections are common during a breastfeed however the mother may not sense it or may only sense the initial MER • Woman may sense or notice MER by⁷⁰: <ul style="list-style-type: none"> ○ Becoming thirsty ○ Breast sensations (e.g. pins and needles, pressure, milk leakage) ○ Uterine contractions 'afterbirth pains' in the immediate postpartum period • A noticeable change in baby's sucking/swallowing pattern is the most consistent sign of milk transfer⁶⁴ (although may be difficult to detect initially) <ul style="list-style-type: none"> ○ When baby begins swallowing—slow, deep, one suck per second (nutritive) sucking with few pauses ○ Swallowing can be seen/heard—normally subtle, with a quiet "cuh" sound ○ With a new milk ejection, swallowing may become slightly louder and more frequent ○ As feed progresses, pausing occurs more frequently and lasts longer • Once breasts begin to fill, softening of breast/s is evident after a feed⁶⁴
Milk production	<ul style="list-style-type: none"> • Birth to 72 hours; baby takes increasing amounts of colostrum <ul style="list-style-type: none"> ○ Refer to Appendix C: Input/output checklist • Days two to four (46 to 96 hours) after birth; milk production increases³⁹ • Often experienced by a feeling of breast fullness between 40 and 72 hours after birth although not always sensed by the mother³⁹ • If breast overfull, encourage the mother to feed baby or express milk • Volume increases during first two weeks to about 600 mL per day

3.3 Breastfeeding effectiveness

The adequacy of breastfeeding can be assessed by observing baby's behaviour, feeding patterns and output and by monitoring baby's weight and overall growth using growth reference charts.²

Table 12. Monitoring effectiveness

Aspect	Consideration
Behaviour	<ul style="list-style-type: none"> • Maternal and clinician knowledge of what is normal in relation to baby behaviour and feeding patterns will assist monitoring of breastfeeding effectiveness • Refer to Section 2.5 Feeding according to need
Output	<ul style="list-style-type: none"> • Changes in stooling is the most reliable sign of milk intake⁷¹ • A relationship exists between stool frequency, transition to yellow colour; and adequate breast milk intake⁷¹ • Expect: <ul style="list-style-type: none"> ○ Change in stool from meconium to transitional during first 24–48 hours after birth² ○ At least three to four stools per day by day 5–7 ○ Yellow stools by day seven • Urine output/frequency of wet nappies⁶⁹ <ul style="list-style-type: none"> ○ Failure to pass urine in the first 24 hours of life is cause for concern ○ Increases to three or more wet nappies by third day after birth • Refer to Appendix C: Input/output checklist
Weight	<ul style="list-style-type: none"> • Most babies who breastfeed adequately, lose less than seven percent of their birth weight¹ • Maximum normal weight loss is 10% at day five • Most babies regain birth weight by day 10⁷¹ • Identify babies outside of these parameters and target for support and early follow-up <ul style="list-style-type: none"> ○ Refer to Queensland Clinical Guideline: <i>Routine newborn assessment</i>⁷³ • If the mother has large volumes of peripartum intravenous (IV) fluids, her baby is more likely to have greater urine output and weight loss in the first three days⁷² • Refer to Appendix C: Input/output checklist
Indications for investigation/ medical review	<ul style="list-style-type: none"> • Abnormal stooling patterns and urine output • Concerns about general appearance and/or observations (e.g. skin colour, state of alertness, activity, muscle tone, temperature) <ul style="list-style-type: none"> ○ Refer to Queensland Clinical Guideline: <i>Routine newborn assessment</i>⁷³ • Newborn hypoglycaemia related to ineffective feeding <ul style="list-style-type: none"> ○ Refer to Queensland Clinical Guideline: <i>Newborn hypoglycaemia</i>⁷⁴ • Physiological jaundice—frequently exacerbated by inadequate milk intake <ul style="list-style-type: none"> ○ Refer to Queensland Clinical Guideline: <i>Neonatal jaundice</i>⁷⁵ • Unsettled behaviour (e.g. frequent crying after feeds), followed by lethargy⁶⁹ • Signs of dehydration include⁵⁶: <ul style="list-style-type: none"> ○ No urine in more than eight hours after the first 24 hours, urates after 96 hours, scant concentrated urine, prolonged duration of meconium stools, dry skin and mucous membranes with poor turgor, weak cry, lethargy, depressed fontanelles (late and ominous sign) • Other problems that raise concern

4 Supplemental feeding

Supplemental feeding may be indicated because of concerns with the health and wellbeing of either the mother or her baby, or both.¹ Maternal expressed breast milk (EBM) is the feed of choice.⁷⁶

Table 13. Supplemental feeding

Aspect	Consideration
Volume	<ul style="list-style-type: none"> • When appropriate assess breastfeeding prior to initiating supplemental feedings¹ • Give sufficient volume to maintain hydration and nutrition <ul style="list-style-type: none"> ○ In the first two days after birth, offer no more than 10–15mL per feed to a healthy term baby⁷⁷
Expressing breast milk	<ul style="list-style-type: none"> • Offer instruction and information on how to hand express¹ • Reassure and advise women that expressing may yield little colostrum at first <ul style="list-style-type: none"> ○ Refer to Appendix C: Input/output checklist • Demonstration is ideally with a cloth or knitted breast model and a ‘hands off’ approach^{12,27} • Hand expressing is useful to: <ul style="list-style-type: none"> ○ Express on to nipple to encourage feeding cues ○ Soften the breast if overfull (uncomfortable) ○ Provide supplement if breastfeeding ineffective • Frequency and duration will depend on individual clinical reason for expressing <ul style="list-style-type: none"> ○ Refer to Appendix D: Recommendations for common breastfeeding concerns Refer to Section 1.2 Breastfeeding cautions
Methods of expressing	<ul style="list-style-type: none"> • Hand: most efficient method of obtaining colostrum⁶⁴ • Pump: follow local procedures on use and care of equipment • Combining hand and pump is associated with higher milk yield than pump alone once milk is flowing⁷⁸
Labelling and storage of EBM	<ul style="list-style-type: none"> • To minimise errors related to EBM administration (e.g. wrong baby, wrong EBM) adhere to the NSQHS standard on patient identification and procedure matching (Standard 5)⁷⁹ • Develop local protocols for: <ul style="list-style-type: none"> ○ Labelling EBM (full name, date of birth and hospital record number, date and time breast milk expressed) ○ Checking and signing for EBM by two staff members prior to administration • Recommend breast milk storage as outlined in <i>Child Health Information: Your guide to the first 12 months</i>⁸⁰

4.1 Alternative feeding choices

Table 13. Alternative feeding choices

Aspect	Consideration
Reversing decision to breastfeed	<ul style="list-style-type: none"> To support the mother who considers stopping breastfeeding^{2,27}: <ul style="list-style-type: none"> Explore reasons Inform of difficulties associated with re-establishing breastfeeding Offer additional support Respect decision
Infant formula	<ul style="list-style-type: none"> Routine use, in healthy breastfed babies is not recommended² Follow local protocols when supplementation with infant formula is indicated/desired (e.g. maternal consent form, access to infant formula preparation areas, one-to-one education)²⁷
Milk banks	<ul style="list-style-type: none"> Donor milk banks collect, screen, pasteurise and distribute breast milk to babies whose mothers are unable to supply enough breast milk Eligibility criteria for donating and accessing donor milk apply
Sharing breastmilk	<ul style="list-style-type: none"> Discuss the risks and benefits of peer breast milk sharing networks with the mother and her family on a case by case basis^{81,82}
Alternative feeding methods	<ul style="list-style-type: none"> There is little evidence about the safety or efficacy of most alternative feeding methods and their effect on breastfeeding^{1,39} (i.e. cup feeding; dropper, syringe or spoon; finger feeding; supplemental feeder; bottles and teats) When selecting an alternative feeding method, consider¹: <ul style="list-style-type: none"> Maternal preference Cost and availability Ease of use and cleaning Whether adequate milk volume can be fed in 20–30 minutes Whether short or long-term use is anticipated Follow local protocols about use and care of equipment Develop/follow local education and training requirements to ensure clinician competency

5 Dummy (pacifier) use

Table 14. Dummy (pacifier) use

Aspect	Consideration
Context	<ul style="list-style-type: none"> Use before four weeks is associated with reduced duration of breastfeeding and may contribute to breastfeeding difficulty² Probable association between dummies during sleep and a decrease in the risk of SIDS⁸³ Effective in reducing procedural pain when used alone or in conjunction with other non-pharmacological interventions⁸⁴
Recommendation	<ul style="list-style-type: none"> Inform parents of the advantages and disadvantages associated with dummy use Recommend delaying dummy introduction until breastfeeding is established⁸⁵ Once breastfeeding is established, a dummy may be offered when placing baby on back to sleep^{2,32} Document in the health record a mother's informed decision to use a dummy²⁷

6 Common concerns

Most concerns are temporary and can be managed without discontinuing breastfeeding.²
Individualise care according to needs and preferences.

Table 15. Initial care for all women with breastfeeding concerns

Aspect	Consideration
Initial care for all women with concerns	<ul style="list-style-type: none"> • Review clinical history • Assess a breastfeed <ul style="list-style-type: none"> ○ Apply supportive care practices, including SSC ○ Refer to Section 2. Supportive care and Table 8. Rooming-in • Develop a plan in collaboration with the mother • Feed the baby according to need <ul style="list-style-type: none"> ○ Refer to Section 4. Supplemental feeding ○ Refer to Appendix C: Input/output checklist • Encourage initiation and maintenance of milk supply • As a guide, encourage women to: <ul style="list-style-type: none"> ○ Commence expressing within six hours of birth (preferably within first hour) and express at least eight times in 24 hours, including once at night if baby is not breastfeeding at all^{35,86} ○ Express soon after each breastfeeding attempt if baby is not receiving enough milk during a breastfeed¹
Specific concerns	<ul style="list-style-type: none"> • Refer to an appropriately qualified health professional (e.g. IBCLC, medical officer) as required • Refer to Appendix D: Recommendations for common breastfeeding concerns

7 Continued breastfeeding

Table 16. Referral and follow-up

Aspect	Consideration
Suggested breastfeeding discharge criteria	<ul style="list-style-type: none"> • In addition to usual readiness for discharge criteria for both the mother and baby, the mother is able to independently⁷⁷: <ul style="list-style-type: none"> ○ Position baby at her breast without significant pain ○ Identify when her baby is swallowing milk ○ Identify normal feeding patterns (8–12 times a day with some babies needing to breastfeed more frequently) ○ Identify age-appropriate elimination patterns (at least six urinations per day and three to four yellow stools per day by the end of the first week) ○ Hand express breast milk ○ Identify indications for accessing a healthcare professional ○ Access breastfeeding advice/information
Concerns	<ul style="list-style-type: none"> • Identify potential/existing breastfeeding concerns or knowledge deficits prior to discharge from service <ul style="list-style-type: none"> ○ Develop specific care plans/recommendations with the mother ○ Identify local opportunities for access to ongoing breastfeeding support (e.g. IBCLC, child health nurse, community support groups)
Routine follow-up	<ul style="list-style-type: none"> • Recommend all routine follow-up assessments including follow-up with a GP <ul style="list-style-type: none"> ○ Refer to Queensland Clinical Guideline: <i>Routine newborn assessment</i>⁷³ • Recommend a formal breastfeeding evaluation as part of a postpartum check with a qualified health care professional⁷⁷ including: <ul style="list-style-type: none"> ○ Baby weight check ○ Assessment of neonatal jaundice ○ Review of age appropriate elimination • Offer scheduled and ongoing home visits³⁷ • Offer information about Child Health Services

7.1 Health promotion

Table 17. Ongoing advice and information

Aspect	Considerations
Support	<ul style="list-style-type: none"> • Fathers/partners, other family members and friends play an important role in supporting the breastfeeding mother⁸⁷: <ul style="list-style-type: none"> ○ Offer support and education to partners on the importance of breastfeeding and include them in breastfeeding education classes, pregnancy and postpartum care • Peer support counsellors and professionals have a positive impact on breastfeeding outcomes³⁷ • Face-to-face support is more likely to be effective
Breastfeeding advice and information	<ul style="list-style-type: none"> • Offer and support access to breastfeeding education/resources⁷⁷ • Discuss and offer information about: <ul style="list-style-type: none"> ○ Breastfeeding away from home ○ Maximising breastmilk if infant formula has been introduced ○ Continuing to breastfeed upon return to work ○ Contraception ○ Normal changes over time ○ Appropriate nutrition for babies ○ Smoking and alcohol consumption • Encourage review of baby by a health care professional at five to seven days of age <ul style="list-style-type: none"> ○ Refer to Queensland Clinical Guideline: <i>Routine newborn assessment</i>⁷³
Nutrition and physical activity	<ul style="list-style-type: none"> • Provide advice about nutrition as per the Australian dietary guidelines⁴⁰ • Recommend a maternal iodine supplement of 150 micrograms oral daily <ul style="list-style-type: none"> ○ Supplementation is usually required as it is difficult to achieve through diet alone⁴¹ ○ Women with pre-existing thyroid conditions should seek advice from their GP prior to taking a supplement • Encourage physical activity as per Australian Government recommendations and guidelines⁸⁸ • Exercise does not negatively affect breastfeeding²

References

1. Academy of Breastfeeding Medicine. ABM Clinical Protocol #3: Hospital guidelines for the use of supplementary feedings in the healthy term breastfed neonate, (Revision 2009). *Breastfeeding Medicine* 2009;4(3):175-82.
2. National Health and Medical Research Council. Infant Feeding Guidelines [Internet] 2012 [cited 2016 March 30]. Available from: <https://www.nhmrc.gov.au/>.
3. UNICEF United Kingdom. Baby Friendly Initiative. How to implement baby friendly standards: a guide for maternity settings. [Internet] 2011 [cited 2016 March 21]. Available from: <http://www.unicef.org.uk/BabyFriendly/>.
4. World Health Organization. Acceptable medical reasons for use of breast-milk substitutes [Internet] 2009 [cited 2016 March 09]. Available from: www.who.int/nutrition/publications/infantfeeding/.
5. Moore E, Anderson G, Bergman N, Dowswell T. Early skin-to-skin contact for mothers and their healthy newborn infants. *Cochrane Database of Systematic Reviews*. [Internet]. 2012 [cited 2016 February 16]; Issue 5. Art. No.: CD003519 DOI: 10.1002/14651858.CD003519.pub3.
6. Queensland Department of Health. Safe infant sleeping, co-sleeping and bed-sharing. Document Number #QH-GDL-362:2013 [Internet] 2013 [cited 2016 February 18]. Available from: <https://www.health.qld.gov.au/>.
7. World Health Organization. Health topics: Breastfeeding. [Internet] 2016 [updated 2016; cited 2016 March 09]; Available from: <http://www.who.int/topics/breastfeeding/en/>.
8. Victora CG, Bahl R, Barros AJD, Franca GVA, Horton S, Kravevec J, et al. Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect. *Lancet* 2016;387:475-90.
9. UNICEF United Kingdom. Baby Friendly Initiative. Health benefits of breastfeeding [Internet] 2013 [cited 2016 March 09]. Available from: <http://www.unicef.org.uk/BabyFriendly/>.
10. World Health Organization. Up to what age can a baby stay well nourished by just being breastfed? [Internet] 2015 [cited 2016 March 3]. Available from: www.who.int/nutrition/publications/infantfeeding/.
11. Kramer M, R. K. Optimal duration of exclusive breastfeeding. *Cochrane Database of Systematic Reviews*. [Internet]. 2012 [cited 2016 February 16]; Issue 8. Art. No.: CD003517 DOI: 10.1002/14651858.CD003517.pub2.
12. World Health Organization. Report of the expert consultation on the optimal duration of exclusive breastfeeding [Internet] 2002 [cited 2016 March 09]. Available from: <http://apps.who.int/>.
13. Queensland Government. Extract from the perinatal data collection. Brisbane Queensland: Health Statistics Unit, Queensland Health; March 2016.
14. Horta BL, Loret de Mola C, Victora CG. Breastfeeding and intelligence: a systematic review and meta-analysis. *Acta Paediatrica* 2015;104:14-9.
15. Horta BL, Loret de Mola C, Victora CG. Long-term consequences of breastfeeding on cholesterol, obesity, systolic blood pressure and type 2 diabetes: a systematic review and meta-analysis. *Acta Paediatrica* 2015;104:30-7.
16. Peres KG, Cascaes AM, Nascimento GG, Victora CG. Effect of breastfeeding on malocclusions: a systematic review and meta-analysis. *Acta Paediatrica* 2015;104:54-61.
17. Tham R, Bowatte G, Dharmage SC, Tan DJ, Lau MXZ, Dai X, et al. Breastfeeding and the risk of dental caries: a systematic review and meta-analysis. *Acta Paediatrica* 2015;104:62-84.
18. Bowatte G, Tham R, Allen KJ, Tan DJ, Lau MXZ, Dai X, et al. Breastfeeding and childhood acute otitis media: a systematic review and meta-analysis. *Acta Paediatrica* 2015;104:85-95.
19. Amitay EL, Keinan-Boker L. Breastfeeding and childhood leukemia incidence: a meta-analysis and systematic review. *JAMA Pediatr* 2015;169(6):e151025.
20. Hauck FR, Thompson JM, Tanabe KO, Moon RY, Vennemann MM. Breastfeeding and reduced risk of sudden infant death syndrome: a meta-analysis. *Pediatrics* 2011;128(1):103-10.
21. Chowdhury R, Sinha B, Sankar MJ, Taneja S, Bhandari N, Rollins N, et al. Breastfeeding and maternal health outcomes: a systematic review and meta-analysis. *Acta Paediatrica* 2015;104:96-113.
22. Aune D, Norat T, Romundstad P, Vatten LJ. Breastfeeding and the maternal risk of type 2 diabetes: a systematic review and dose-response meta-analysis of cohort studies. *Nutr Metab Cardiovasc Dis* 2014;24(2):107-15.
23. Bobrow KL, Quigley MA, Green J, Reeves GK, Beral V. Persistent effects of women's parity and breastfeeding patterns on their body mass index: results from the Million Women Study. *Int J Obes (Lond)* 2013;37(5):712-7.
24. United States National Library of Medicine. LactMed: Toxnet Database. 2016.
25. Queensland Clinical Guidelines. Perinatal substance use: neonatal MN16.38-V1-R21 [Internet] 2016 [cited 2016 February 26]. Available from: www.health.qld.gov.au/qcg/.
26. Queensland Clinical Guidelines. Perinatal substance use: maternal MN16.37-V1-R21 [Internet] 2016 [cited 2016 April 30]. Available from: www.health.qld.gov.au/qcg/.
27. Australian College of Midwives. The global criteria for baby friendly hospitals in Australia: standards for implementation of the ten steps to successful breastfeeding (booklet 1). 2009.
28. Cleminson J, Oddie S, Renfrew MJ, McGuire W. Being baby friendly: evidence-based breastfeeding support. *Arch Dis Child Fetal Neonatal Ed* 2015;100(2):F173-8.
29. DiGirolamo AM, Grummer-Strawn LM, Fein SB. Effect of maternity-care practices on breastfeeding. *Pediatrics* 2008;122 Suppl 2:S43-9.
30. Brodrigg W, Kruske S, Miller YD. Baby-friendly hospital accreditation, in-hospital care practices, and breastfeeding. *Pediatrics* 2013;131(4):685-92.
31. National Institute for Health and Care Excellence (NICE). Infant feeding and maternal nutrition in postnatal care (pathways) [Internet] 2015 [cited 2016 March 09]. Available from: <http://pathways.nice.org.uk/>.
32. American Academy of Pediatrics Section on Breastfeeding. Breastfeeding and the use of human milk. *Pediatrics* 2012;129(2):827-41.
33. Queensland Government. Breastfeeding and work [Internet] 2010 [cited 2016 March 09]. Available from: <http://www.psc.qld.gov.au/>.
34. Australian Government Department of Health. Australian national breastfeeding strategy 2010-2015 [Internet] 2009 [cited 2016 February 18]. Available from: <http://www.health.gov.au/>.
35. UNICEF United Kingdom. Baby Friendly Initiative. Assessment of breastmilk expression [Intranet] 2013 [cited 2016 February 16]. Available from: <http://www.unicef.org.uk/BabyFriendly/>.
36. Rollnick S, Miller R. Motivational interviewing in health care: Helping patients change behavior. New York: The Guilford Press; 2008.
37. Renfrew M, McCormick F, Wade A, Quinn B, Dowswell T. Support for healthy breastfeeding mothers with healthy term babies. *Cochrane Database of Systematic Reviews*. [Internet]. 2012 [cited 2016 February 16]; Issue 5. Art. No.: CD001141 DOI: 10.1002/14651858.CD001141.pub4.
38. Holmes AV, McLeod AY, Bunik M. ABM Clinical Protocol #5: Peripartum breastfeeding management for the healthy mother and infant at term, Revision 2013. *Breastfeeding Medicine* 2013;8(6):469-73.
39. Lawrence R, Lawrence R. Breastfeeding: A guide for the medical profession. 8th ed. United States: Elsevier; 2016.
40. National Health and Medical Research Council. Australian dietary guidelines [Internet] 2013 [cited 2016 February 18]. Available from: <https://www.nhmrc.gov.au/>.
41. National Health and Medical Research Council. Iodine supplementation for pregnant and breastfeeding women. Canberra 2010.
42. Much D, Beyerlein A, Rossbauer M, Hummel S, Ziegler AG. Beneficial effects of breastfeeding in women with gestational diabetes mellitus. *Mol Metab* 2014;3(3):284-92.
43. Speller E, Brodrigg W. Breastfeeding and thyroid disease: a literature review. *Breastfeed Rev* 2012;20(2):41-7.
44. Bever Babendure J, Reifsnider E, Mendias E, Moramarco MW, Davila YR. Reduced breastfeeding rates among obese mothers: a review of contributing factors, clinical considerations and future directions. *Int Breastfeed J* 2015;10:21.
45. Coles J, Anderson A, Loxton D. Breastfeeding Duration after Childhood Sexual Abuse: An Australian Cohort Study. *J Hum Lact* 2015.
46. Keeling J. Exploring women's experiences of domestic violence: injury, impact and infant feeding. *British Journal of Midwifery* 2012;20(21):843-8.
47. Australian Government Department of Health. Clinical practice guidelines: Antenatal care - module I [Internet]: Australian Government; 2012 [cited 2016 March 09]. Available from: <http://www.health.gov.au/>.
48. East C, Dolan W, Forster D. Antenatal breast milk expression by women with diabetes for improving infant outcomes. *Cochrane Database of Systematic Reviews*. [Internet]. 2014 [cited 2016 February 18]; Issue 7. Art. No.: CD010408. DOI: 10.1002/14651858.CD010408.pub2.
49. Uvnäs Moberg K. Oxytocin effects in mothers and infants during breastfeeding. *Infant* 2013;9(6):201-6.

50. Aghdas K, Talat K, Sepideh B. Effect of immediate and continuous mother-infant skin-to-skin contact on breastfeeding self-efficacy of primiparous women: a randomised control trial. *Women Birth* 2014;27(1):37-40.
51. Bigelow AE, Power M, Gillis DE, Maclellan-Peters J, Alex M, McDonald C. Breastfeeding, skin-to-skin contact, and mother-infant interactions over infants' first three months. *Infant Ment Health J* 2014;35(1):51-62.
52. Gregson S, Meadows J, Teakle P, Blacker J. Skin-to-skin contact after elective caesarean section: investigating the effect on breastfeeding rates. *British Journal of Midwifery* 2016;24(1):18-25.
53. Stevens J, Schmied V, Burns E, Dahlen H. Immediate or early skin-to-skin contact after a caesarean section: a review of the literature. *Matern Child Nutr* 2014;10(4):456-73.
54. Brazelton TB, Nugent JK. *The neonatal behavioral assessment scale*. Cambridge: Mac Keith; 1995.
55. Mattson S, Smith J. *Core curriculum for maternal-newborn nursing*. 5th ed. Missouri: Elsevier; 2015.
56. Cadwell K, Turner-Maffei C, O'Connor B, Cadwell Blair A, Arnold L, Blair E. *Maternal and infant assessment for breastfeeding and human lactation: A guide for the practitioner*. 2nd ed. Canada: Jones and Barlett Learning; 2006.
57. Feldman-Winter L. Evidence-based interventions to support breastfeeding. *Pediatr Clin North Am* 2013;60(1):169-87.
58. Kent J, Mitoulas L, Cregan M, Ramsay D, Doherty D, Hartmann P. Volume and frequency of breastfeedings and fat content of breast milk throughout the day. *Pediatrics* 2006;117:e387-e95.
59. Wellstart International. Wellstart lactation management self-study modules 3rd edition [Internet] 2009 [cited 2016 April 6]. Available from: www.wellstart.org.
60. McKenna JJ, McDade T. Why babies should never sleep alone: a review of the co-sleeping controversy in relation to SIDS, bedsharing and breast feeding. *Paediatr Respir Rev* 2005;6(2):134-52.
61. SIDS and kids safe sleeping. Breastfeeding and the risk of sudden unexpected death in infancy [Internet] 2015 [cited 2016 February 16]. Available from: <http://www.sidsandkids.org>.
62. Queensland Government. Safe infant sleeping, co-sleeping and bed sharing. Document number: QH-GDL-362:2013 [Internet] 2013 [cited 2016 Feb 18]. Available from: <https://www.health.qld.gov.au/qhpolicy/docs/gdl/gh-gdl-362.pdf>.
63. Queensland Health. Safe infant care to reduce the risk of sudden unexpected deaths in infancy policy statement and guidelines [Internet] 2008 [cited 2016 Feb 18]. Available from: <http://www.health.qld.gov.au>.
64. Inch S. Infant feeding. In: Marshall J, Raynor M, editors. *Myles' textbook for midwives*. 16th ed. Philadelphia: Churchill Livingstone Elsevier; 2014.
65. Altuntas N, Turkyilmaz C, Yildiz H, Kulali F, Hirfanoglu I, Onal E, et al. Validity and reliability of the infant breastfeeding assessment tool, the mother baby assessment tool, and the LATCH scoring system. *Breastfeed Med* 2014;9(4):191-5.
66. Colson SD, Meek JH, Hawdon JM. Optimal positions for the release of primitive neonatal reflexes stimulating breastfeeding. *Early Hum Dev* 2008;84(7):441-9.
67. Righard L, Alade MO. Effect of delivery room routines on success of first breast-feed. *Lancet* 1990;336(8723):1105-7.
68. Amir LH. Managing common breastfeeding problems in the community. *BMJ* 2014;348:g2954.
69. Permezel M, Walker S, Kyrianiou K. *Beischer & Mackay's obstetrics, gynaecology and the newborn*. 4th ed: Elsevier; 2015.
70. Ramsay DT, Kent JC, Owens RA, Hartmann PE. Ultrasound imaging of milk ejection in the breast of lactating women. *Pediatrics* 2004;113(2):361-7.
71. Shrago LC, Reifsnider E, Insel K. The neonatal bowel output study: indicators of adequate breast milk intake in neonates. *Pediatr Nurs* 2006;32(3):195-201.
72. Noel-Weiss J, Woodend AK, Peterson WE, Gibb W, Groll DL. An observational study of associations among maternal fluids during parturition, neonatal output, and breastfed newborn weight loss. *International Breastfeeding Journal* 2011;6:9.
73. Queensland Clinical Guidelines. Routine newborn assessment MN14.4.V4.R19 [Internet] 2015 [cited 2016 February 26]. Available from: www.health.qld.gov.au/qcg.
74. Queensland Clinical Guidelines. Newborn hypoglycaemia MN13.8-V5-R18 [Internet] 2015 [cited 2016 February 26]. Available from: www.health.qld.gov.au/qcg.
75. Queensland Clinical Guidelines. Neonatal jaundice MN12.7-V4-R17 [Internet] 2012 [cited 2016 February 26]. Available from: www.health.qld.gov.au/qcg.
76. World Health Organization, UNICEF. Global strategy for infant and young child feeding [Internet] 2003 [cited 2016 March 09]. Available from: <http://www.who.int/nutrition/publications/infantfeeding>.
77. Academy of Breastfeeding Medicine. ABM Clinical Protocol #7: Model breastfeeding policy (Revision 2010). *Breastfeeding Medicine* 2010;5(4):173-7.
78. Morton J, Hall JY, Wong RJ, Thairu L, Benitz WE, Rhine WD. Combining hand techniques with electric pumping increases milk production in mothers of preterm infants. *J Perinatol* 2009;29(11):757-64.
79. Australian Commission on Safety and Quality in Health Care. National Safety and Quality Health Service Standards [Internet] 2012 [cited 2016 March 09]. Available from: <http://www.safetyandquality.gov.au>.
80. Queensland Government. Child health information: your guide to the first 12 months [Internet] 2015 [cited 2016 March 09]. Available from: <https://www.childrens.health.qld.gov.au>.
81. Thorley V. Mothers' experiences of sharing breastfeeding or breastmilk co-feeding in Australia 1978-2008. *Breastfeed Rev* 2009;17(1):9-18.
82. Forster DA, Johns HM, McLachlan HL, Moorhead AM, McEgan KM, Amir LH. Feeding infants directly at the breast during the postpartum hospital stay is associated with increased breastfeeding at 6 months postpartum: a prospective cohort study. *BMJ Open* 2015;5(5):e007512.
83. Hauck FR, Omojokun OO, Siadaty MS. Do pacifiers reduce the risk of sudden infant death syndrome? A meta-analysis. *Pediatrics* 2005;116(5):e716-23.
84. Yilmaz F, Arkan D. The effects of various interventions to newborns on pain and duration of crying. *J Clin Nurs* 2011;20(7-8):1008-17.
85. Kair LR, Kenron D, Etheredge K, Jaffe AC, Phillipi CA. Pacifier restriction and exclusive breastfeeding. *Pediatrics* 2013;131(4):e1101-7.
86. Marshall J, Raynor M, editors. *Myles Textbook for Midwives*. 16th ed: Churchill Livingstone; 2014.
87. Academy of Breastfeeding Medicine. Position statement on breastfeeding [Internet] 2015 [cited 2016 June 30]. Available from: <http://www.bfmed.org/>.
88. Australian Government Department of Health. Australia's physical activity and sedentary behaviour guidelines [Internet] 2016 [cited 2016 May 12]. Available from: <http://www.health.gov.au/internet/main/publishing.nsf/Content/health-pubhlth-strateg-phys-act-guidelines>.

Appendix A: Principles of the Baby Friendly Health Initiative

BFHI 10 steps to successful breastfeeding

Every facility providing maternity services and care for newborn infants should:	
Step 1	<ul style="list-style-type: none"> Have a written breastfeeding policy that is routinely communicated to all health care staff
Step 2	<ul style="list-style-type: none"> Train all health care staff in skills necessary to implement this policy
Step 3	<ul style="list-style-type: none"> Inform all pregnant women about the benefits and management of breastfeeding
Step 4	<ul style="list-style-type: none"> Place babies in skin-to-skin contact with their mothers immediately following birth for at least an hour and encourage mothers to recognise when their babies are ready to breastfeed, offering help if needed
Step 5	<ul style="list-style-type: none"> Show mothers how to breastfeed, and how to maintain lactation even if they are separated from their infants
Step 6	<ul style="list-style-type: none"> Give newborn infants no food or drink other than breast milk, unless medically indicated
Step 7	<ul style="list-style-type: none"> Practise rooming-in (allow mothers and infants to remain together), 24 hours a day
Step 8	<ul style="list-style-type: none"> Encourage breastfeeding on demand
Step 9	<ul style="list-style-type: none"> Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants
Step 10	<ul style="list-style-type: none"> Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic

Source: WHO/UNICEF. The Baby Friendly Hospital Initiative: revised, updated and expanded for integrated care. Geneva: WHO, 2008

Summary of WHO International Code of Marketing of Breastmilk Substitutes and subsequent World Health Assembly resolutions

Aspect	Recommendation
Advertising	<ul style="list-style-type: none"> No advertising or promotion of breastmilk substitutes, including infant formula and complementary foods and beverages as well as bottles, teat
Samples	<ul style="list-style-type: none"> No free samples to mothers, their families or health care workers
Health care facilities	<ul style="list-style-type: none"> No promotion of products to the public No company nurses to have access to and/or advise women No gifts or personal samples to health workers (e.g. diaries, pens, food or meals) No free or low-cost supplies to be given
Information	<ul style="list-style-type: none"> No words or pictures idealising artificial feeding, including pictures of infants on the labels of products Information to health workers should be scientific and factual
Labels	<ul style="list-style-type: none"> All information on artificial infant feeding, including labels, should explain benefits of breastfeeding, and costs and hazards associated with artificial feeding
Products	<ul style="list-style-type: none"> Unsuitable products, such as sweetened condensed milk, should not be promoted for babies. All products should be of high quality and take account of the climatic and storage conditions of the country in which they are to be used

Source: International Code of Marketing of Breast-milk Substitutes. WHO 1981

Appendix B: Supervision during skin to skin contact

Aspect	Considerations
Recommendation	<ul style="list-style-type: none"> • Vigilance is a fundamental part of care in the first few hours after birth • Where they exist, follow local protocols for supervision during skin to skin contact • Assess the circumstances of each mother and baby individually • Indirect supervision by health professionals requires frequent visual observations of the baby • Direct supervision of skin to skin contact by a partner or relative may be appropriate at the discretion of the health care provider • Perform observations throughout the period of skin to skin contact and interrupt skin to skin contact if the health of either the mother or the baby gives rise to concern • Position mother and baby to ensure baby: <ul style="list-style-type: none"> ○ Has face visible ○ Cannot fall on to the floor ○ Cannot become trapped in bedding or by the mother's body ○ Has head supported so airway does not become obstructed • Discourage women from holding baby when receiving analgesia which causes drowsiness or alters state of awareness (e.g. nitrous oxide) • Consider safety if pain not well controlled as the mother is unlikely to be able to hold her baby comfortably or safely
Risk factors during skin to skin contact	<ul style="list-style-type: none"> • If risk factors are identified, provide documented direct supervision during skin to skin contact • A <u>non-exhaustive list</u> of factors which may raise safety issues for unsupervised skin to skin contact include: <ul style="list-style-type: none"> ○ Intrapartum <ul style="list-style-type: none"> ▪ Extended labour ▪ Maternal fatigue ▪ Emergency caesarean section ▪ Assisted delivery ○ Pain ○ Medications <ul style="list-style-type: none"> ▪ Narcotics administered in last five hours ▪ Sedation administered in last four hours ○ Current illicit substance use ○ Alcohol intoxication ○ Underlying health conditions for mother and/or baby <ul style="list-style-type: none"> ▪ Obesity ▪ Mental health concerns ○ Any other identified risk

Appendix C: Input/output checklist

Age (hours)	Breast milk intake	Number of breastfeed	Number of wet nappies	Stooling	Stool colour	Stool consistency	Baby weight
0–24	0–5 mL colostrum at first feed 2–10 mL per feed Average of 7 ml per feed 7–123 mL of colostrum in first 24 hours	First 8 hours: 1 or more Second 8 hours: 2 or more Third 8 hours: 2 or more	1 or more	1–2	black	tarry/sticky	Loses 7% average 10% maximum
24–48	5–15 mL per feed Increasing volumes	8–12	2 or more	1–2 1–2	greenish/black then brownish 'transitional'	softening	
48–72	15–30 mL per feed Increasing volumes	8–12	3 or more	3–4	greenish/yellow	soft	
72–96	30–60 mL per feed 395–800 mL per day	8–12	4 or more	4 large or 10 small	yellow/seedy	soft/liquid	
End of first week	395–800 mL per day Increasing volumes 440–1220 mL per day by one month	8–12	6 or more	4 large or 10 small	yellow/seedy	soft/liquid	Weight loss plateaus then starts to regain weight

- Between 4–6 days of age, babies start to regain weight and by two weeks will have returned to birth weight
- Most babies have returned to birth weight by 10 days of age
- Average weekly weight gain of 150 to 200 grams to three months of age
- Babies usually double their birth weight by six months of age, and triple their birth weight by 12 months of age
- Weight gain or loss is only one aspect of wellbeing—assess every mother and baby on an individual basis
- Urates may be present before secretory activation when milk flow increases—urates not expected after 96 hours of age
- Number of bowel motions of breastfed babies tends to decrease between six weeks and three months of age

References: Academy of Breastfeeding Medicine. ABM Clinical Protocol #3: Hospital guidelines for the use of supplementary feedings in the healthy term breastfed neonate, revised 2009. Breastfeeding Medicine. 2009; 4(3):175-182.; Inch S. Infant feeding. In: Marshall J, Raynor M, editors. Myles' Textbook for Midwives. sixteenth ed. Philadelphia: Churchill Livingstone Elsevier; 2014.; Kent J, Mitoulas L, Cregan M, Ramsay D, Doherty D, Hartmann P. Volume and frequency of breastfeedings and fat content of breast milk throughout the day. Pediatrics. 2006; 117:e387-e395.; Lawrence R, Lawrence R. Breastfeeding: A Guide for the Medical Profession. 8 ed. United States: Elsevier; 2016.; Mattson S, Smith J. Core Curriculum for Maternal-Newborn Nursing. Fifth ed. Missouri: Elsevier; 2015.; National Health and Medical Research Council. Infant Feeding Guidelines. Canberra. 2012 [cited 2016 February 26]. Available from: <https://www.nhmrc.gov.au>.; Permezal M, Walker S, Kyprianou K. Beischer & Mackay's Obstetrics, Gynaecology and the Newborn. 4th ed: Elsevier; 2015. Queensland Clinical Guidelines: Routine newborn assessment 2014

Appendix D: Recommendations for common breastfeeding concerns

<ul style="list-style-type: none"> Consider specific recommendations listed below in addition to the universal recommendations and supportive care strategies outlined in the guideline Refer to appropriately qualified health professional (e.g. IBCLC, medical officer, child health nurse) if concerns persist and/or interventions require monitoring after discharge from the service 		
Concern	Signs/Consideration	Recommendations
Sleepy baby not exhibiting feeding cues	<ul style="list-style-type: none"> Prolonged periods of not feeding require investigation Exclude causes such as effects of maternal analgesia during labour and birth, effects of the birth process and illness 	<ul style="list-style-type: none"> Reassure mother this is usually temporary Refer to Flow Chart: Sleepy baby Refer to Queensland Clinical Guideline: <i>Neonatal jaundice</i>
Alert baby who is exhibiting feeding cues but unable to attach	<ul style="list-style-type: none"> Reason may not be apparent Can be distressing for both the mother and her baby as baby may back arch, cry when approaching the breast and push away 	<ul style="list-style-type: none"> Only persist with offering breast whilst baby is calm Skin to skin contact may help baby self-regulate to a calm state Holding/pushing head or forcing to breast is counterproductive, distressing and associated with persistent arching by baby (arching reflex)
	<ul style="list-style-type: none"> Woman related reasons include: <ul style="list-style-type: none"> Inverted or flat nipples, areola engorgement/oedema When nipple is flat or inverted, or areola engorged, it obliterates nipple and makes grasping nipple/areola difficult or impossible for baby Reverse pressure softening (RPS) uses gentle positive pressure to soften areola and surrounding tissue by temporarily moving swelling slightly backward and upward into the breast 	<ul style="list-style-type: none"> Gently compress and massage areola to soften and make nipple more prominent Encourage reverse pressure softening or hand expressing before attempting breastfeeding Hand expressing colostrum on to the nipple may encourage baby to attach Shape breast/compress areola to make it easier for baby to grasp Nipple shields may be indicated once milk is flowing well if other attempts have failed <ul style="list-style-type: none"> Ongoing surveillance encouraged to monitor milk transfer
	<ul style="list-style-type: none"> Baby related reasons include: <ul style="list-style-type: none"> Birth trauma Ankyloglossia (tongue-tie) 	<ul style="list-style-type: none"> Expert lactation support and advice on attachment and breastfeeding technique may be beneficial and sufficient Suspected tongue-tie requires: <ul style="list-style-type: none"> Prompt assessment to determine whether interfering with feeding Referral for review if affecting breastfeeding
Delay in secretory activation or poor milk transfer	<ul style="list-style-type: none"> Common cause of poor milk transfer is sub-optimal attachment Possible causes of delay in secretory activation include: <ul style="list-style-type: none"> Postpartum haemorrhage, diabetes, obesity Possible causes of low milk production at stage of initiation include, breast surgery, hypoplastic breasts, chronic disease or medical conditions 	<ul style="list-style-type: none"> Refer to relevant sections within the guideline Delay in secretory activation in first 72 hours warrants investigation Review history and birth events for possible cause A baby with suspected dehydration requires medical assessment Triage for early post discharge surveillance

Concern	Signs/Consideration	Recommendations
Nipple pain and trauma	<ul style="list-style-type: none"> • Nipple discomfort in the first few days is common • Commonly cited reason for ceasing breastfeeding • Sub-optimal positioning is the most common cause • Other causes include tongue-tie, flat or retracted nipples, poor skin health (e.g. eczema, bacterial, thrush, herpes), nipple vasospasm • Regardless of treatment used, most women report a reduction in nipple pain to mild levels approximately 7–10 days' after birth • Sore nipples occurring beyond the first weeks of breastfeeding may be caused by: <ul style="list-style-type: none"> ○ Infections such as staphylococcus aureus and candida ○ Vasospasm 	<ul style="list-style-type: none"> • Reassure if nipples tender but no sign of compression after a feed • Review and optimise positioning and attachment • Soften areola sufficiently to enable baby to grasp adequately • Review nipple care <ul style="list-style-type: none"> ○ Avoid soaps and synthetic bras ○ Change breast pads frequently ○ Expose breasts to air briefly after breastfeeding ○ Wash daily ○ Allow expressed breast milk to dry on the nipple after breastfeed • Limited evidence exists about the effectiveness of treatment for nipple pain and/or trauma • Refer if pain/trauma persists beyond first week or infection suspected
Breast engorgement	<ul style="list-style-type: none"> • Physiologic breast fullness when 'milk comes in' is normal • Engorgement: "swelling and distension of the breasts usually during early days of initiation of lactation, caused by vascular dilatation as well as arrival of the early milk" • More frequent breastfeeding (or expressing, if baby is not feeding at the breast) in first 48 hours is associated with less engorgement • Symptoms occur most commonly between days 3–5 • In the presence of oedema reverse pressure softening shown to improve attachment 	<ul style="list-style-type: none"> • Best management is prevention • Reduce engorgement so baby can breastfeed effectively <ul style="list-style-type: none"> ○ Encourage reverse pressure softening before attempting breastfeeding or hand expressing • Manage discomfort <ul style="list-style-type: none"> ○ Paracetamol and Ibuprofen are safe options for breastfeeding women in appropriate doses ○ Cold packs may provide comfort • Provide anticipatory guidance regarding possibility of engorgement to women prior to hospital discharge
Blocked duct or mastitis	<ul style="list-style-type: none"> • Blocked duct presents as a tender lump in otherwise well women • Mastitis may or may not involve bacterial infection • Staphylococcus aureus is most common pathogen in milk of women with mastitis • Clinical presentation: <ul style="list-style-type: none"> ○ Tender, hot, swollen, wedge-shaped area of breast, temperature of 38.5 °C or greater, chills, flu-like aching, systemic illness • Common during first six weeks • Predisposing factors are those which result in milk stasis (e.g. nipple damage, infrequent feeding and poor attachment) • A continuum exists from blocked duct or engorgement to mastitis to breast abscess 	<ul style="list-style-type: none"> • Improve milk removal <ul style="list-style-type: none"> ○ Increase feed frequency, optimise positioning and gently massage during feed from the blocked and/or tender area toward the nipple, express after feed if required ○ Apply heat (shower, warm cloth, heat pack) to facilitate milk ejection reflex • Supportive/comfort measures <ul style="list-style-type: none"> ○ Rest, adequate fluids and nutrition, analgesia and cold packs • Antibiotics indicated if symptoms not improving within 12–24 hours or if acutely ill

References: Academy of Breastfeeding Medicine Clinical Protocols #4, #7, #20.; Cotterman K. Reverse Pressure Softening: A Simple Tool to Prepare Areola for Easier Latching During Engorgement J Hum Lact. 20(2):227-237. 2004.; Dennis CL, Jackson K, Watson J. Interventions for treating painful nipples among breastfeeding women. Cochrane Database of Systematic Reviews 2014, Issue 12, Cadwell K, Turner-Maffei C, O'Connor B, Cadwell Blair A, Arnold L, Blair E. Maternal and Infant Assessment for Breastfeeding and Human Lactation: A Guide for the Practitioner. 2nd ed. Canada: Jones and Barlett Learning; 2006.; National Health and Medical Research Council. Infant Feeding Guidelines. Canberra. 201.; Vieira F, Bachion M, Delalibera D, Mota C, Munari D. A Systematic Review of the Interventions for Nipple Trauma in Breastfeeding Mothers. Journal of Nursing Scholarship, 2013; 45:2, 116–125.

Acknowledgements

Queensland Clinical Guidelines gratefully acknowledge the contribution of Queensland clinicians and other stakeholders who participated throughout the guideline development process particularly:

Working Party Clinical Leads

Associate Professor Wendy Brodribb, Discipline of General Practice, University of Queensland
Ms Margaret Wendt, Clinical Midwife/Lactation Consultant, Logan Hospital

QCG Program Officers

Jeanette Tyler, Clinical Nurse Consultant
Jacinta Lee, Manager

Working Party Members

Ms Lyn Ahearn, BFHI Coordinator Breastfeeding Support, Gold Coast University Hospital
Mrs Seija Argyros, Neonatal Nurse Practitioner, Royal Brisbane and Women's Hospital
Ms Rukhsana Aziz, Clinical Midwifery Consultant, Ipswich Hospital
Mrs Sarah Biddlecombe, Child Health Nurse, Sunshine Coast Hospital and Health Service
Dr Meg Cairns, General Practitioner Liaison Officer, Royal Brisbane and Women's Hospital
Dr Ruth Cantrill, Lactation Consultant, Women and Birthing, Redland Hospital
Ms Tanya Capper, Lecturer in Midwifery, School of Nursing, Central Queensland University
Mrs Jackie Chaplin, Nurse Educator, Ipswich Hospital
Mrs Kelly Cooper, Registered Midwife, Maternity Unit, Caboolture Hospital
Ms Anita Cowlshaw, Senior Project Officer, Child and Youth Community Health Services
Mrs Lynette Cramb, Child Health Nurse, Health Contact Centre, Department of Health
Mrs Judith Cunningham, Clinical Nurse/Lactation Consultant, Lactation Service, Lady Cilento Children's Hospital
Ms Andrea Densley, Nurse Unit Manager Child Health, Health Contact Centre, Department of Health
Dr Pamela Douglas, General Practitioner, Lactation Consultant, The Possums Clinic, Brisbane
Mrs Alison Fels, Midwife/Lactation Consultant Maternity, Dalby Health Service
Ms Julie Germain, BFHI Coordinator, Mater Health Services, South Brisbane,
Mrs Melinda Gibson Lactation Consultant, Maternity Unit, The Townsville Hospital
Ms Karen Grace, Lactation Consultant, Neonatal Unit, The Townsville Hospital and Health Service
Ms Leah Hardiman, President, Maternity Choices Australia
Ms Naomi Hull, President, Queensland Branch, Australian Breastfeeding Association
Mrs Jennifer James, Clinical Midwifery Consultant/Lactation Consultant, Toowoomba Hospital
Ms Cathy Krause, Clinical Nurse/Midwife, Special Care Nursery, St Vincent's Hospital
Ms Janelle Laws, Nurse Educator, Royal Brisbane and Women's Hospital
Dr Bruce Maybloom, General Practitioner, Baywest General Practice
Mrs Camilla McCauley, Clinical Nurse Consultant, Child and Youth Community Health Service, Children's Health Queensland
Mrs Mary Mulcahy, Midwife/Lactation Consultant, Maternity Unit, Cairns Hospital
Dr Rachael Nugent, Registrar, Department of Obstetrics and Gynaecology, The Townsville Hospital
Mrs Suzanne Oram, Clinical Nurse/Lactation Consultant, Lactation Service, Lady Cilento Children's Hospital
Ms Kristina Palmer-Field, Clinical Nurse/Lactation Consultant, Royal Brisbane and Women's Hospital
Mrs Nicole Payne, Registered Nurse/Midwife, Maternity Outpatients, Royal Brisbane and Women's Hospital
Mrs Sandra Penman, Midwife, Gold Coast University Hospital
Mrs Sharon Pragnell, Registered Nurse/Midwife/Lactation Consultant, Royal Brisbane and Women's Hospital
Mrs Anne Rashleigh, Midwifery Clinical Facilitator, Women and Birthing Unit, Redland Hospital
Dr Jane Reeves, Obstetrician and Gynaecologist, Sunshine Coast
Mrs Melody Rose, Lactation Consultant, Women's and Children's Services, Ipswich Hospital
Ms Debbie Schafer, Midwife/Lactation Consultant, Maternity, Cairns Hospital
Mrs Rhonda Taylor, Clinical Midwifery Consultant, Maternity Services, The Townsville Hospital
Mrs Allison Stephens, Midwife/Lactation Consultant, Maternity, Bundaberg and Nambour Hospitals
Ms Nicole Summers, Lactation Consultant, Neonatal Unit, The Townsville Hospital
Mrs Madonna Trehane, Child Health Nurse, Child and Youth Community Health Service, Children's Health Queensland
Dr Karolyn Vaughan, Regional Director, International Board of Lactation Consultant Examiners, Asia Pacific and Africa
Dr Lesley Williams, Researcher, Children's Nutrition Research Centre, Child Health Research Centre

Queensland Clinical Guidelines Team

Associate Professor Rebecca Kimble, Director
Ms Jacinta Lee, Manager
Ms Jeanette Tyler, Clinical Nurse Consultant
Ms Lyndel Gray, Clinical Nurse Consultant
Ms Stephanie Sutherns, Clinical Nurse Consultant
Dr Brent Knack, Program Officer
QCG Steering Committee

Funding:

This clinical guideline was funded by Health Improvement Unit, Queensland Health.