

Queensland Clinical Guidelines

Translating evidence into best clinical practice

Maternity and Neonatal **Clinical Guideline**

Establishing breastfeeding

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Cultural acknowledgement

We acknowledge the Traditional Custodians of the land on which we work and pay our respect to the Aboriginal and Torres Strait Islander Elders past, present and emerging.

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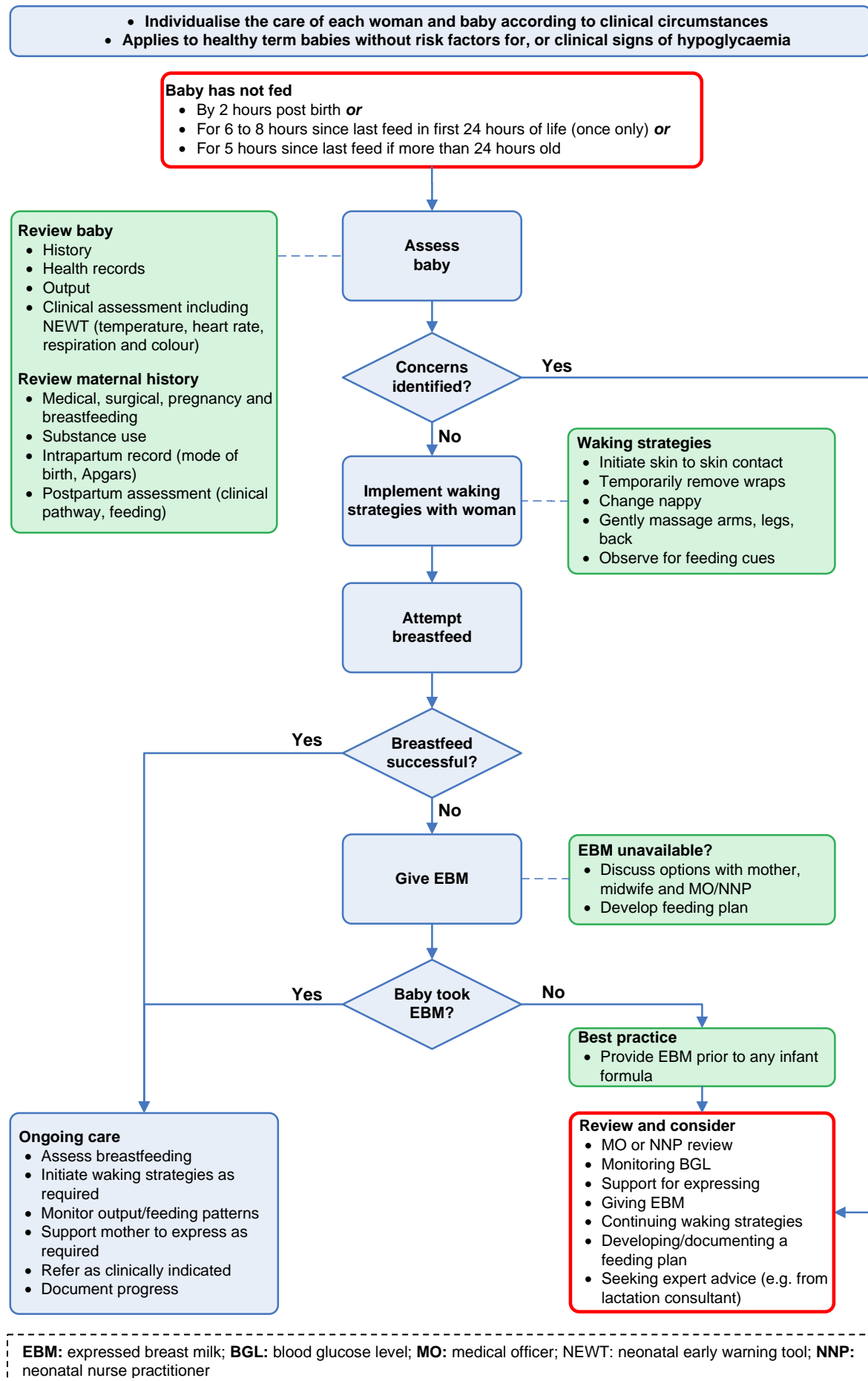
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Flowchart: Management of the healthy term baby in the first 24–48 hours



Flowchart: F21.19-1-V4-R26

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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 Fund
WHO	World Health Organization

Definitions

Complementary feeding	Solid or semisolid foods provided to an infant in addition to breastfeeding when breast milk alone is no longer sufficient to meet nutritional needs. ¹
Exclusive breastfeeding	Feeding only breast milk (at the breast or own mothers' expressed breast milk), no food or water except vitamins, minerals and medications. ¹
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. Sometimes referred to as mixed feeding.
Rooming-in	The woman and baby remain together 24 hours a day.
Skin to skin contact (SSC)	Immediate skin to skin contact (SSC) is the placing of the naked baby prone on the woman's bare chest at birth. ² SSC begins ideally at birth and involves placing the naked baby prone on the woman's bare chest. There should be nothing between them (except 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 woman's privacy is maintained.
SIDS	Sudden infant death syndrome (SIDS) is the sudden and unexpected death of an infant under one year of age with an onset of the fatal 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. ³
SUDI	A classification used to describe the sudden death of an infant, usually during sleep, with no immediately obvious cause at time of death. Includes deaths later attributed (after investigation) to sudden infant death syndrome (SIDS), fatal sleep accidents and deaths that remain undetermined. ⁴
Supplementary feeding	Additional fluids provided to a breastfed infant before 6 months (recommended duration of exclusive breastfeeding). These fluids may include donor human milk, infant formula or other breast milk substitutes. ¹

1 Introduction

Breastfeeding is the normal way of providing babies with the nutrients required for growth and development.⁵ Numerous studies have demonstrated the health, environmental and economic importance of breastfeeding for the woman, baby and society in both developed and developing countries.⁶⁻⁹

Emerging evidence suggests breastfeeding has a positive impact on mother-baby relationships. Oxytocin released during breastfeeding promotes maternal feelings and behaviours.¹⁰ The interdependence between the breastfeeding woman and baby, regular close interaction and skin to skin contact (SSC) encourage mutual responsiveness and emotional attachment.²

Exclusive breastfeeding until around six months of age, and continued breastfeeding with the addition of complementary foods until at least 12 months of age is recommended.⁶ The time required to establish breastfeeding is variable and influenced by the individual circumstances of both the woman and baby. The scope of this document includes pregnancy until the end of the first week postpartum for the healthy woman and the healthy term baby.

In Queensland in 2019, 95% of all babies discharged from hospital received at least some breast milk, with 70% exclusively breast milk fed at discharge.¹¹ While the majority of women in Australia initiate breastfeeding prior to discharge, only 15% of babies are exclusively breastfed to around five months.¹² Only around 25% of women continue to breastfeed for 12 months.⁶

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 ¹³	17	3.44 points	2.30–4.58	increased
	Overweight/obesity in later life ¹⁴	113	OR: 0.74	0.70–0.78	reduced
	Type 2 diabetes ¹⁴	11	OR: 0.65	0.49–0.86	reduced
	Malocclusion ¹⁵				
	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 ¹⁶				
	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) ¹⁷				
	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 ¹⁸				
	Any breastfeeding for 6 months or longer	18	OR: 0.81	0.73–0.89	reduced
	Ever versus never breastfed	15	OR: 0.89	0.84–0.94	
Maternal	SIDS ¹⁹				
	Exclusive breastfeeding	8	OR: 0.27	0.24–0.31	reduced
	Any breastfeeding	18	OR: 0.40	0.35–0.44	
	Severe respiratory infections ⁷	16	RR: 0.68	0.60–0.77	reduced
	Mortality due to infectious diseases ⁷	9	OR: 0.48	0.38–0.60	reduced
	Protection against diarrhoea morbidity/hospital admission ⁷	15	RR: 0.69	0.58–0.82	reduced
	Breast cancer ²⁰	98	OR: 0.78	0.74–0.82	reduced
	Ovarian cancer ²⁰	41	OR: 0.70	0.64–0.77	reduced
	Type 2 diabetes ²¹	6	RR: 0.68	0.57–0.82	reduced
	BMI in postmenopausal women ²²	1	0.22 kg/m ²	0.21–0.22	reduced

Odds ratio (OR) approximates risk ratio (RR) when the outcome is rare (less than 10%). OR increasingly overestimates RR as outcomes exceed 10%

1.2 Clinical standards

Table 2. 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 Fund (UNICEF) • In Australia, BFHI is administered by the Australian College of Midwives²³ • The BFHI Ten Steps to Successful Breastfeeding and the WHO International Code of Marketing of Breastmilk Substitutes (the Code) provide a framework for clinical care aimed at protecting, promoting and supporting breastfeeding²³ • BFHI is shown to have a positive effect on breastfeeding initiation, continuation and exclusivity rates globally^{24,25} <ul style="list-style-type: none"> ◦ The more steps practised, the higher the duration and exclusivity of breastfeeding^{25,26} • 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 feeding decision and offer support to reach infant feeding goal <ul style="list-style-type: none"> ◦ Partial breastfeeding may be considered a successful breastfeeding outcome for the woman who chooses this option²⁷ • If the woman has delayed contact with their baby (due to maternal or newborn reasons), offer additional breastfeeding support • Develop locally agreed protocols and systems of care that support: <ul style="list-style-type: none"> ◦ BFHI Ten steps to successful breastfeeding ◦ The Code²⁸ ◦ Acceptable medical reasons for use of breast milk substitutes²⁷ • 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 ensure²⁹: <ul style="list-style-type: none"> ◦ The correct baby is given to the correct woman ◦ The correct breast milk is given to the correct baby ◦ The correct infant is receiving a breast milk substitute, when required • Develop local processes and systems that protect, promote and support breastfeeding⁹
Priority populations	<ul style="list-style-type: none"> • Populations that have the highest risk of not meeting optimal breastfeeding recommendations in comparison with the general population include ⁹: <ul style="list-style-type: none"> ◦ Aboriginal and/or Torres Strait Islander people ◦ Culturally and linguistically diverse (including migrants, refugees and asylum seekers) ◦ Low socio-economic background or low education level ◦ Women aged under 25 years ◦ Daily smokers ◦ Women experiencing obesity ◦ Caesarean birth or obstetric or birth complications • Offer additional and tailored breastfeeding support ⁹
Staff training	<ul style="list-style-type: none"> • Support health care providers to access ongoing breastfeeding education and training^{23,30,31}
Standard care	<ul style="list-style-type: none"> • Refer to Queensland Clinical Guideline: <i>Standard care</i>³² • If woman declines recommended care, refer to Queensland Health <i>Partnering with the woman who declines recommended maternity care</i> guideline³³

2 Supportive care

2.1 Antenatal care

Table 3. Antenatal care

Aspect	Consideration
Breastfeeding information	<ul style="list-style-type: none"> Share breastfeeding information at each antenatal visit^{34,35} <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 5. Skin to skin contact and Table 6. Baby feeding patterns Offer anticipatory guidance for managing minor concerns⁶ Offer information about breastfeeding support in the community including breastfeeding helplines, child health services and private International board certified lactation consultants (IBCLCs) Recommend a maternal iodine supplement of 150 micrograms oral daily^{6,36} <ul style="list-style-type: none"> If woman has pre-existing thyroid condition, seek advice from general practitioner (GP) before taking supplement Discuss birthing practices that support successful breastfeeding²⁷ <ul style="list-style-type: none"> Presence of support person Drinking and eating light foods during labour Mobilising and birthing position of choice Impact of intrapartum interventions³⁷ (e.g. medications)
History	<ul style="list-style-type: none"> Ask about previous breastfeeding experience and duration Identify risk factors for breastfeeding challenges/concerns³⁷ <ul style="list-style-type: none"> High risk groups (e.g. diabetes³⁸, thyroid disorders³⁹, obesity⁴⁰, Aboriginal and/or Torres Strait Islander women⁶, adolescent/young women²⁶, history of abuse, substance use^{41,42}) Breast and nipple variations, surgery or injury (e.g. breast hypoplasia, biopsy, augmentation, reduction, nipple inversion, nipple piercing)³⁵ as disclosed by the woman in response to prompts Current medications Use of tobacco, alcohol or other substances Infectious diseases requiring additional precautions, or where breastfeeding may be contraindicated Family history of inborn errors of metabolism If history identifies risk factors, consider breast examination (not routinely recommended⁴³) 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 breasts and nipples are normal, and highlight expected breast changes Triage for additional support following birth³⁵
Referral	<ul style="list-style-type: none"> Partner with the woman to develop and document a breastfeeding plan Offer referral to an IBCLC or expert breastfeeding support service if: <ul style="list-style-type: none"> Previous concerns with breastfeeding experienced Risk factors for breastfeeding challenges identified³⁷ Woman request
Antenatal preparation	<ul style="list-style-type: none"> There is no evidence to support routine nipple preparation during pregnancy³⁵ If woman has gestational diabetes mellitus or diabetes in pregnancy, offer information about antenatal expression of breastmilk⁴⁴ <ul style="list-style-type: none"> Refer to Queensland Clinical Guideline: <i>Gestational diabetes mellitus</i>⁴⁵ Clinical considerations apply before recommending antenatal expression of breastmilk There is insufficient evidence about the efficacy and safety of antenatal expressing of colostrum for the general population of pregnant women⁴⁶
Not breastfeeding	<ul style="list-style-type: none"> When a woman makes an informed decision not to breastfeed: <ul style="list-style-type: none"> Respect their decision Advise that information on safe and appropriate use of infant formula will be provided

2.2 Communication

Table 4. Communication

Aspect	Considerations
Context	<ul style="list-style-type: none"> Deciding how to feed baby is a major decision influenced by many different events and experiences⁴⁷ A guiding approach is more effective than a directional approach in supporting behaviours that may optimise breastfeeding success⁴⁷ Pregnant women and new mothers³⁴: <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 networks⁴⁸
Sharing information	<ul style="list-style-type: none"> Provide an opportunity to share information⁴⁷ Explore what is already known, and offer relevant information and alternatives to support informed decisions²⁸ 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 (kinaesthetic) Videos Printed fact sheets that are free from commercial influence, in culturally and linguistically accessible formats
Communication tips⁴⁹	<ul style="list-style-type: none"> Do <ul style="list-style-type: none"> Use language that is supportive, reassuring, affirming, encouraging and includes positive reinforcement (e.g. "you are doing a great job") Provide open and honest support Promote women's autonomy and facilitate choice <ul style="list-style-type: none"> Offer support in a way that suggestions can be accepted or rejected For example, "there are no hard and fast rules" and "you could try this or you could try that" Normalise breastfeeding challenges and reassure women that challenges are common and can be experienced by anyone Reassure women that breastfeeding can be challenging in the early days, but that breastfeeding generally gets easier with the development of skills and confidence Provide advice that is tailored to the woman and baby Don't <ul style="list-style-type: none"> Be prescriptive or authoritative Provide mechanistic advice or rote responses Minimise women's feelings or challenges Undermine a woman's belief in their own capacity to breastfeed Induce any feelings of shame or guilt Attribute fault of blame on baby or woman for breastfeeding difficulties
Recommendation	<ul style="list-style-type: none"> Support a woman's feeding decision <ul style="list-style-type: none"> Include partner/support persons where appropriate and desired by the woman Provide information about accessing breastfeeding education, and peer support networks Partner with women to help them achieve their feeding goals for their baby Document the feeding decision in the maternal and neonatal health record Maintain awareness of cultural differences and respect cultural diversity Refer to Queensland Clinical Guideline: <i>Standard care</i>³²

2.3 Skin to skin contact

Table 5. Skin to skin contact

Aspect	Consideration
Benefits for baby	<ul style="list-style-type: none"> • Healthy, term babies display innate behaviours immediately following birth when placed in SSC with woman² • Encourages breast seeking behaviour⁵⁰ • Less crying² • Socially interactive behaviour with woman^{2,50} • Physiological stability (temperature, blood glucose level and heart rate)² • Increased pain threshold and decreased cortisol levels⁵⁰ • Earlier initiation of first breastfeed⁵¹⁻⁵³ • More effective breastfeeding^{2,52} • Overall longer duration of breastfeeding² • Encourages more frequent breastfeeding¹
Benefits for woman	<ul style="list-style-type: none"> • Release of oxytocin which causes⁵⁰: <ul style="list-style-type: none"> ◦ Reduced blood loss ◦ Increase in skin temperature of the breast ◦ Reduced anxiety and increased social interaction • Reduced breastfeeding concerns² • Positive effects on breastfeeding duration⁵⁴ • Helps to overcome common breastfeeding concerns when used beyond the immediate postpartum period⁶ • Lower maternal stress levels² • Shorter third stage and reduced bleeding²
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 hours⁵⁵ • If regional anaesthesia, offer SSC in operating theatre and transfer the woman and baby to recovery in SSC; otherwise offer SSC within 10 minutes of arriving in recovery area^{23,56} • If general anaesthesia, offer SSC within 10 minutes of the woman being able to respond to their baby²³ • Offer SSC following instrumental births in both birth suite and operating theatre environments
Clinical surveillance	<ul style="list-style-type: none"> • If there are concerns about the health and wellbeing of the woman or baby during SSC, tailor supervision requirements as required • Follow local protocols for the assessment of risk factors and supervision requirements during SSC • Routine neonatal observations are indicated during SSC <ul style="list-style-type: none"> ◦ Follow local protocol (e.g. Neonatal early warning tool) • Refer to Appendix B: Supervision during skin to skin contact
Recommendation	<ul style="list-style-type: none"> • Facilitate SSC regardless of type of birth and intended method of feeding • 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 finished • Delay procedures for the baby until after the first breastfeed such as²³: <ul style="list-style-type: none"> ◦ 'head to toe' checks, ◦ weighing, ◦ bathing and ◦ administration of vitamin K • If the woman is unavailable but baby is well, SSC with another person (commonly the partner) is an appropriate alternative²³ • Document duration of SSC, baby's condition during SSC or reason why SSC was not implemented

2.4 Feeding according to need

Table 6. Baby feeding patterns

Aspect	Consideration
Behaviour states	<ul style="list-style-type: none"> Six defined baby behavioural states have been recognised⁵⁷: <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 response⁵⁸ Quiet alert state is the ideal time to initiate SSC and breastfeeding^{58,59} 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 crying⁵⁹
Feeding cues	<ul style="list-style-type: none"> Feeding in response to cues increases breastfeeding initiation, continuation and exclusivity⁶⁰ Encourage unrestricted breastfeeding in response to baby's early/mid feeding cues²³ Assist the woman to identify cues for feeding and comfort, offer her calming strategies and reassurance^{23,61} Encourage response to baby's cues to determine if one or both breasts are required at an individual feed⁶² Breastfeeding can be used to comfort and calm baby, as well as to alleviate hunger⁴⁷ Advise woman 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 asleep⁶³
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 woman to initiate breastfeeding^{1,58} 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 Babies establish a pattern of breastfeeding 8–12 times over a 24 hour period during the first week⁶⁰ Breastfeeding frequency will vary according to baby's needs and the rate of milk transfer⁶ 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 Observe for signs of nutritive sucking

2.5 Rooming-in

Table 7. Rooming-in

Aspect	Considerations
Rooming-in	<ul style="list-style-type: none"> Limited evidence exists about the effect of woman-baby separation versus rooming-in and breastfeeding duration^{64,65} Keep woman and baby together whenever possible to facilitate^{30,37}: <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 woman's amount or quality of sleep^{1,37} <ul style="list-style-type: none"> Evaluate maternal extreme fatigue for safety of woman and baby¹ Closeness to a responsive parent reduces the risk of SIDS^{66,67} Perform baby examinations and routine tests in the woman's room³⁷ <ul style="list-style-type: none"> If not possible, encourage the woman to be present
Recommendation	<ul style="list-style-type: none"> Facilitate rooming-in wherever possible Advise the woman (and family) about recommendations for safe sleeping as outlined in the Queensland Government safe sleeping guidelines⁶⁸ On discharge recommend baby sleep in the same room as parents or caregiver for the first six to twelve months of life⁶⁹

3 Breastfeeding assessment

Table 8. Assessment

Aspect	Consideration
Context	<ul style="list-style-type: none"> Provides an opportunity to partner with the woman to: <ul style="list-style-type: none"> Determine learning needs Provide anticipatory guidance Identify effective breastfeeding Identify breastfeeding concerns Facilitate early intervention
Preparation	<ul style="list-style-type: none"> Review health record and baby feeding chart Discuss specific health concerns with the woman as they relate to breastfeeding (e.g. birth experience, comfort, tiredness, healing) Ask the woman about their breastfeeding experience (e.g. expectations, frequency and length of feeds, baby's output) Assess breast and nipple comfort (e.g. breast fullness, nipple tenderness) Encourage the woman find a comfortable breastfeeding position
Recommendation	<ul style="list-style-type: none"> Offer help with breastfeeding within the first two hours of birth^{23,30} If first breastfeed is successful and pleasant, it is a key marker for continued breastfeeding⁹ <ul style="list-style-type: none"> If women feel awkward and incompetent in the first two days, they are more likely to cease breastfeeding early⁹ Ensure maternal pain is recognised and managed appropriately if required Offer help with the next breast feed, within approximately six hours of birth or earlier Use a 'hands off' approach where possible and appropriate²³ Assess breastfeeding effectiveness at least once per shift (every 8 hours) and as indicated after birth until discharge^{30,37} Breastfeeding assessment tools can provide objective evidence regarding effectiveness of a particular breastfeed⁷⁰

3.1 Positioning and attachment

Table 9. Positioning and attachment

Aspect	Consideration
Positioning	<ul style="list-style-type: none"> • When the baby is held chest to chest with the woman, primitive neonatal reflexes support self attachment or attachment with minimal assistance⁷¹ • Woman adopts a position of comfort⁷² and uses her arm to provide positional stability for her baby⁷³ • If sitting, encourage the woman to recline with back supported to reduce shoulder tension and enable her body to support baby⁷³ • Baby is held close to the woman's body with head, neck, and back aligned to provide stability and easy access to the breast^{72,74} <ul style="list-style-type: none"> ◦ Align the baby's face with the breast, and avoid grasping the baby by the anatomical structures of the head, neck and mid shoulders⁷⁵ <ul style="list-style-type: none"> ▪ Restriction of the cranio-cervical spine can interfere with the stabilising function of the nuchal ligament, and limit the baby's innate feeding reflexes and capacity to locate the nipple and breast
Attachment	<ul style="list-style-type: none"> • Breastfeeding is an innate and instinctual behaviour for babies, however they often need help to find the breast⁷¹ • Signs of good attachment: <ul style="list-style-type: none"> ◦ Baby takes a good amount of the breast including the nipple and much of the areola into the mouth^{72,74} ◦ Deep jaw movements are observed⁷⁶ ◦ Cheeks are not sucked in and there is a good seal applied to the breast by the baby⁷⁷ ◦ Woman is comfortable⁷⁶ <ul style="list-style-type: none"> ▪ It is common for women to feel some initial nipple discomfort in the early weeks that settles as milk begins to flow ◦ 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 10. Milk transfer and production ◦ After feeding, nipples may appear slightly elongated but not flattened, white or ridged⁶ • Encourage woman to bring baby to breast rather than moving the breast to the baby⁷²
If attachment not effective	<ul style="list-style-type: none"> • Advise woman to insert their finger into the corner of the baby's mouth to break the seal and facilitate detachment⁷⁶ • Use positioning principles to enable baby to reattach

3.2 Milk transfer and production

Table 10. 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 breastfeed⁷⁸ <ul style="list-style-type: none"> ◦ MER may take two to three minutes to occur in the first few days after birth³⁵ • Multiple milk ejections are common during a breastfeed however the woman may not sense it or may only sense the initial MER • Woman may sense or notice MER by⁷⁸: <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 transfer (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 ◦ Frequency of suck-swallow patterns will depend on the rate of milk flow⁶ ◦ Swallowing can be seen/heard—normally subtle ◦ 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 feed • If concerns identified regarding inadequate milk transfer, refer for further assessment and support (e.g. IBCLC)
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 increases³⁵ • Often experienced by a feeling of breast fullness between 40 and 72 hours after birth although not always sensed by the woman³⁵ • The first week of breastfeeding is important for establishing an adequate milk supply⁷⁹ <ul style="list-style-type: none"> ◦ Volume increases rapidly during first week to between 400 and 850 mL per day^{79,80} ◦ Milk production on day 6 is significantly associated with milk production at week 6 ◦ The milk storage capacity of breasts varies significantly between women⁶ ◦ The milk storage capacity of a woman's breasts can vary significantly between the left and right breast

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.⁶

Table 11. 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 intake⁸¹ A relationship exists between stool frequency, transition to yellow colour; and adequate breast milk intake⁸¹ Expect: <ul style="list-style-type: none"> Change in stool from meconium to transitional during first 24–48 hours after birth⁶ Yellow stools by day 3–4⁶ At least three to four stools per day by day 5–7 Urine output/frequency of wet nappies⁸² <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"> Breastfed, term babies commonly lose 7–8% of birth weight by day three⁸³ Maximum normal weight loss is 10% at day five Most babies regain birth weight by day 10 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 Large volumes of intravenous (IV) fluids before birth may artificially elevate birthweight and increase the baby's urine output and weight loss⁸³⁻⁸⁵ <ul style="list-style-type: none"> This may impact expected patterns of weight loss and regain during the early days of life⁸³ 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> Newborn hypoglycaemia related to ineffective feeding <ul style="list-style-type: none"> Refer to Queensland Clinical Guideline: <i>Newborn hypoglycaemia</i> Physiological jaundice—frequently exacerbated by inadequate milk intake <ul style="list-style-type: none"> Refer to Queensland Clinical Guideline: <i>Neonatal jaundice</i> Unsettled behaviour (e.g. frequent crying after feeds), followed by lethargy Signs of dehydration include: <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) Any other problems that raise concern

4 Supplementary feeding

Supplementary feeding may be indicated because of concerns with the health and wellbeing of either the woman or baby, or both.

4.1 Decision making and supplementary feeding

Table 12. Decision making

Aspect	Consideration
Prevention	<ul style="list-style-type: none"> The following factors aid in preventing the need for supplementation¹: <ul style="list-style-type: none"> Antenatal education and in-hospital support Women and health care providers being aware of the risks of unnecessary supplementation SSC Staff equipped to assist with breastfeeding Rooming-in If woman-baby separation or suboptimal milk supply, encouragement and instruction with expressing breast milk Address early indicators of potential need for supplementation¹ <ul style="list-style-type: none"> Formally assess breastfeeding position, latch and milk transfer prior to provision of supplementary feeding Common clinical scenarios where evaluation and management of breastfeeding is necessary, but supplementation is not necessarily indicated include¹: <ul style="list-style-type: none"> Baby who is fussy at night or constantly feeding for several hours Tired or sleeping woman Sleepy baby
Potential indications	<ul style="list-style-type: none"> Potential neonatal indications¹ <ul style="list-style-type: none"> Hypoglycaemia unresponsive to appropriate frequent breastfeeding and use of glucose gel <ul style="list-style-type: none"> Refer to Queensland Clinical Guideline: <i>Hypoglycaemia—newborn</i> Signs and symptoms indicating inadequate milk intake including: <ul style="list-style-type: none"> Clinical or laboratory evidence of dehydration Weight loss of greater than or 8–10% at day 5 (120 hours) or later Delayed bowel movements Hyperbilirubinaemia <ul style="list-style-type: none"> Refer to Queensland Clinical Guideline: <i>Neonatal jaundice</i>⁸⁶ Potential maternal indications¹ <ul style="list-style-type: none"> Delayed secretory activation Primary glandular insufficiency Breast pathology or previous breast surgery resulting in inadequate milk production Separation from baby Substances not compatible with breastfeeding <ul style="list-style-type: none"> Refer to Queensland Clinical Guidelines: <i>Perinatal substance use: maternal and neonatal</i>^{87,88} Intolerable pain during feeding not relieved by appropriate interventions
Determining requirement for supplementation	<ul style="list-style-type: none"> Determine requirement for supplementation on a case by case basis Inform parents of potential risks and benefits of supplementation, and respect their decision regarding supplementation

4.2 Supplementary feeding

Table 13. Supplementary feeding

Aspect	Consideration
Choice of supplement¹	<ul style="list-style-type: none"> Expressed breast milk (EBM) from baby's mother is first choice <ul style="list-style-type: none"> Refer to Table 14. Expressing breastmilk Pasteurised donor human milk is preferable to other supplements where safe and available <ul style="list-style-type: none"> Access criteria may apply Appropriate standard newborn infant formula Supplementation with glucose water is not recommended <ul style="list-style-type: none"> Does not provide sufficient nutrition Does not reduce serum bilirubin May cause hyponatraemia
Goals of supplementation¹	<ul style="list-style-type: none"> Feed the baby whilst optimising maternal milk supply, and determining cause of low milk supply, inadequate milk transfer or poor feeding Perform supplementation in a way that preserves breastfeeding <ul style="list-style-type: none"> Limit volume of supplement to requirements for newborn physiology Stimulate the breast with hand expression or pumping (refer to 4.3 Expressing breastmilk) Continue to provide opportunity for baby to practise feeding at the breast
Volume¹	<ul style="list-style-type: none"> When appropriate, assess breastfeeding prior to initiating supplemental feedings Give sufficient volume to maintain hydration and nutrition In the first two days after birth, offer no more than 10–15mL per feed to a healthy term baby
Method of feeding¹	<ul style="list-style-type: none"> An optimal supplementary feeding method has not been identified²³ <ul style="list-style-type: none"> May vary from one infant to another No method is without potential risk and benefit There is little evidence about the safety or efficacy of most alternative feeding methods and their effect on breastfeeding (i.e. cup feeding, dropper, syringe or spoon, finger feeding, supplemental feeder, bottles and teats) When selecting an alternative feeding method, consider: <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
Recommendation	<ul style="list-style-type: none"> Prevent need for supplementation wherever possible Follow local protocols about use and care of equipment Support women with preferred supplementation feeding method Develop/follow local education and training requirements to ensure clinician competency Develop and follow local protocols for administration and documentation of supplement <ul style="list-style-type: none"> Refer to Queensland Clinical Guideline: <i>Standard care</i>³²

4.3 Expressing breastmilk

Table 14. Expressing breastmilk

Aspect	Consideration
Instruction	<ul style="list-style-type: none"> • Offer all women instruction and information on how to hand express⁶¹ • Reassure and advise 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 • 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
Methods of expressing	<ul style="list-style-type: none"> • Hand: most efficient method of obtaining colostrum • Pump: follow local procedures on use and care of equipment
Labelling and storage of EBM	<ul style="list-style-type: none"> • To minimise errors related to EBM, 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>⁸⁹ • Refer to Queensland Clinical Guideline: <i>Standard care</i>³²

4.4 Alternative feeding choices

Table 15. Alternative feeding choices

Aspect	Consideration
Reversing decision to breastfeed	<ul style="list-style-type: none"> To support the woman who considers stopping breastfeeding⁶: <ul style="list-style-type: none"> Explore reasons Inform of difficulties associated with re-establishing breastfeeding if decision is changed at a later date Offer additional support including referral to IBCLC Respect decision
Infant formula	<ul style="list-style-type: none"> Routine use in healthy breastfed babies is not recommended⁶ 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)
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 woman and family on a case by case basis^{90,91}

5 Dummy (pacifier) use

Table 16. Dummy (pacifier) use

Aspect	Consideration
Context	<ul style="list-style-type: none"> Use before four weeks of age is associated with reduced duration of breastfeeding and may contribute to breastfeeding difficulty⁶ Probable association between dummies during sleep and a decrease in the risk of SIDS⁹² Effective in reducing procedural pain when used alone or in conjunction with other non-pharmacological interventions⁹³
Recommendation	<ul style="list-style-type: none"> Inform parents of the possible advantages and disadvantages associated with dummy use with emphasis on effect on sucking Recommend <ul style="list-style-type: none"> Delaying dummy introduction until breastfeeding is established, usually after the first 4 to 6 weeks^{6,94,95} Once breastfeeding is established, a dummy may be offered when placing baby on back to sleep^{6,30}

6 Common concerns

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

Table 17. Initial care for all women with breastfeeding concerns

Aspect	Consideration
Initial care for women with concerns	<ul style="list-style-type: none"> • Review clinical history • Assess a breastfeed • Apply supportive care practices, including SSC (refer to Section 2 Supportive care) • Develop a plan in collaboration with the woman • Feed the baby according to need <ul style="list-style-type: none"> ◦ Refer to Section 4 Supplementary feeding ◦ Refer to Appendix C: Input/output checklist • Encourage initiation and maintenance of milk supply • If baby is unable to initiate breastfeeding or is separated from the mother, support the woman to express her breasts²³: <ul style="list-style-type: none"> ◦ As soon as possible after birth, but at least within two hours of birth ◦ At least eight times in 24 hours
Specific concerns	<ul style="list-style-type: none"> • Refer to an appropriately qualified health professional (e.g. IBCLC, medical officer, neonatal nurse practitioner) as required • Refer to Appendix D: Recommendations for common breastfeeding concerns

7 Continued breastfeeding

Table 18. 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 woman and baby, the woman can independently: <ul style="list-style-type: none"> ◦ Position baby at breast without significant pain ◦ Identify when 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 3–4 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, support and 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 woman ◦ 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>⁹⁶ • Recommend a formal breastfeeding evaluation as part of a postpartum check with a qualified health care professional including: <ul style="list-style-type: none"> ◦ Baby weight check ◦ Assessment of neonatal jaundice ◦ Review of age appropriate elimination • Offer scheduled and ongoing home visits • Offer information about Child Health Services, community breastfeeding organisations and peer support services

7.1 Health promotion

Table 19. 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 woman^{61,97}: <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 outcomes⁴⁸ Face-to-face support is more likely to be effective⁴⁸
Breastfeeding advice and information	<ul style="list-style-type: none"> Offer and support access to breastfeeding education/resources⁶¹ 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, alcohol and other substance use⁶ <ul style="list-style-type: none"> Refer to Queensland Clinical Guidelines: <i>Perinatal substance use: maternal and neonatal</i>^{67,88} 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 guidelines⁹⁸ Recommend a maternal iodine supplement of 150 micrograms oral daily^{6,36} <ul style="list-style-type: none"> Supplementation is usually required as it is difficult to achieve through diet alone If woman has pre-existing thyroid condition, advise to seek GP advice before taking supplement Encourage physical activity as per Australian Government recommendations and guidelines⁹⁹ Exercise does not negatively affect breastfeeding

8 Breastfeeding cautions

In Australia, there are very few indications for completely avoiding breastfeeding.⁶ Individualise care and seek expert advice as required.

Table 20. Breastfeeding cautions

Aspect	Consideration
Breastfeeding not recommended	<ul style="list-style-type: none"> Specialised formula required for: <ul style="list-style-type: none"> Galactosaemia^{6,27,61} <ul style="list-style-type: none"> Galactose-free formula required Maple syrup urine disease^{27,61} <ul style="list-style-type: none"> Formula free of leucine, isoleucine and valine required Phenylketonuria (PKU)^{6,61} <ul style="list-style-type: none"> Phenylalanine-free formula required Some breastfeeding may be possible with careful monitoring Human immunodeficiency virus (HIV) positive mother^{6,27,61}
Temporary avoidance or supplementation required	<ul style="list-style-type: none"> Examples include, but are not limited to: <ul style="list-style-type: none"> Severe maternal illness when woman is unable to care for baby (e.g. sepsis)⁶ If hepatitis C positive and nipples are bleeding¹⁰⁰ If herpes simplex virus type 1 (HSV-1) on the breast⁶¹, avoid breastfeeding until all active lesions have resolved⁶ Recently acquired syphilis <ul style="list-style-type: none"> Mother-baby contact and breastfeeding can begin after 24 hours of therapy, provided there are no lesions around the breasts or nipples⁶ Refer to Section 4: Supplementary 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. LactMed¹⁰¹, Hale's Medication and Mothers' Milk¹⁰²) Temporary or permanent cessation of breastfeeding may be advised during treatment with some medications such as chemotherapy⁶¹ Refer to Queensland Clinical Guidelines: <i>Perinatal substance use: neonatal and maternal</i>^{87,88}
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 woman and family²⁷ When a woman 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 woman to express breast milk to maintain lactation

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Appendix A: Principles of the Baby Friendly Health Initiative

BFHI 10 steps to successful breastfeeding

Critical management procedures	
Step 1a	<ul style="list-style-type: none"> Have a written infant feeding policy that is routinely communicated to staff and parents
Step 1b	<ul style="list-style-type: none"> Comply fully with the <i>International Code of marketing of breast-milk substitutes</i> and relevant World Health Assembly resolutions
Step 1c	<ul style="list-style-type: none"> Establish ongoing monitoring and data-management systems
Step 2	<ul style="list-style-type: none"> Ensure that staff have sufficient knowledge, competence and skills to support breastfeeding
Key clinical practices	
Step 3	<ul style="list-style-type: none"> Discuss the importance and management of breastfeeding with pregnant women and their families
Step 4	<ul style="list-style-type: none"> Facilitate immediate and uninterrupted skin-to-skin contact and support mothers to recognise when their babies are ready to breastfeed, offering help if needed
Step 5	<ul style="list-style-type: none"> Support mothers to initiate and maintain breastfeeding and manage common difficulties
Step 6	<ul style="list-style-type: none"> Do not provide breastfed newborns any food or fluids other than breast milk, unless medically indicated
Step 7	<ul style="list-style-type: none"> Enable mothers and their infants to remain together and practise rooming-in 24 hours a day
Step 8	<ul style="list-style-type: none"> Support mothers to recognise and respond to their infants' cues for feeding
Step 9	<ul style="list-style-type: none"> Counsel mothers on the use and risks of feeding bottles, teats and pacifiers
Step 10	<ul style="list-style-type: none"> Coordinate discharge so that parents and their infants have timely access to ongoing support and care

Source: BFHI Australia. Maternity Facility Handbook. [Internet]. 2020 [cited 2021 Feb 25]. Available from: <https://bfhi.org.au> .

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, teats
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 formula
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: World Health Organization. International code of marketing of breast-milk substitutes. [Internet]. 1981 [cited 2021 Feb 25]. Available from: <https://www.who.int> .

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 woman 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 woman or the baby gives rise to concern • Position woman 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 woman's body ○ Has head supported so airway does not become obstructed • Discourage the woman from holding baby when receiving analgesia which causes drowsiness or alters state of awareness • Consider safety if pain not well controlled as the woman is unlikely to be able to hold 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 non-exhaustive list 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 birth ○ Pain ○ Medications <ul style="list-style-type: none"> ▪ Narcotics administered in last five hours ▪ Sedation administered in last four hours ○ Current substance use ○ Alcohol intoxication ○ Underlying health conditions for woman 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 (average of 7 mL) per feed 7–123 mL of colostrum total 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
<ul style="list-style-type: none"> 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 woman 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: Supplementary feedings in the healthy term breastfed neonate, Revised 2017. Breastfeeding Medicine 2017;12(4):188-98.; 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 breastfeeding 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>.; Permezel M, Walker S, Kyprianou K. Beischer & Mackay's Obstetrics, Gynaecology and the Newborn. 4th ed: Elsevier; 2015. Queensland Clinical Guidelines: Routine newborn assessment 2014 Available from <http://www.health.qld.gov.au/gcg>

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 woman this is usually temporary Refer to Flowchart: Management of the healthy term baby in the first 24–48 hours Refer to Queensland Clinical Guideline: <i>Neonatal jaundice</i>⁸⁶
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 woman 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 If affecting breastfeeding, referral for thorough functional assessment of suspected ankyloglossia by an experienced health professional
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 Allow expressed breast milk to dry on the nipple after breastfeed Limited evidence exists about the effectiveness of treatment for nipple pain resulting from nipple trauma Refer if pain/trauma persists beyond first week or infection suspected Educate regarding importance of handwashing and good hygiene when touching or handling nipples
Breast engorgement	<ul style="list-style-type: none"> Engorgement: swelling and distension of the breasts resulting from secretory activation (lactogenesis II) Presents as bilateral breast pain, firmness and swelling Onset most commonly between days 3 and 5 postpartum but may be as late as 9–10 days postpartum More frequent breastfeeding (or expressing, if baby is not feeding at the breast) in first 48 hours is associated with less engorgement 	<ul style="list-style-type: none"> Provide guidance regarding possibility of engorgement prior to discharge Promote physiological breastfeeding (feeding in response to baby's cues) Focus treatment on alleviating inflammation and discomfort through use of cool packs and anti-inflammatory medication <ul style="list-style-type: none"> If there are no individual contraindications, paracetamol and ibuprofen are safe options most breastfeeding women in appropriate doses Reverse pressure softening of the areola, and manual pump or hand expression to move small volumes of milk may aid attachment and facilitate physiological milk transfer
Mastitis spectrum	<ul style="list-style-type: none"> Encompasses a spectrum and progression of conditions resulting from breast inflammation: Clinical presentation varies according to severity and progression of inflammation <ul style="list-style-type: none"> Symptoms range from localised inflammation (redness, swelling and tenderness) to systemic signs and symptoms (fevers, chills and tachycardia) May or may not progress to bacterial infection <ul style="list-style-type: none"> Common organisms include Staphylococcus and Streptococcus Many mastitis symptoms resolve with physiological breastfeeding, conservative care and support 	<ul style="list-style-type: none"> Maintain physiological breastfeeding (feeding in response to baby's cues) or physiological pumping if baby is not feeding at the breast Advise mother to <ul style="list-style-type: none"> Avoid increased expressing or use of breast pump Avoid nipple shield use where possible Wear appropriately fitting supportive bra Avoid deep massage of the breast Focus treatment on alleviating inflammation and discomfort through use of cool packs and anti-inflammatory medication <ul style="list-style-type: none"> If there are no individual contraindications, paracetamol and ibuprofen are safe options most breastfeeding women in appropriate doses If symptoms not improving within 12–24 hours or if acutely ill, seek expert advice

References: Australian Breastfeeding Association. 'Smoothing the bumps': A health professional's guide to ABA's updated information on engorgement, localised breast inflammation and mastitis. [Internet]. 2023 [cited 2023 May 19]. Available from: <https://abaprofessional.asn.au>. Australian Dental Association. Ankyloglossia and oral frenula consensus statement. [Internet]. 2020 [cited 2021 Apr 22]. Available from: <https://www.ada.org.au/>. 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. [Internet]. 2014, Issue 12. Art No.: CD007366. Available from: DOI:10.1002/14651858.CD007366.pub2. 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. 2012. Mitchell KB, Johnson HM, Rodriguez JM, Eglash A, Scherzinger C, Zakarija-Grkovic I, et al. Academy of Breastfeeding Medicine Clinical Protocol #36: The Mastitis Spectrum, Revised 2022. Breastfeed Med 2022;17(5):360-76. 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.

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