Queensland Clinical Guidelines
Translating evidence into best clinical practice

Establishing breastfeeding
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- 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

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

*Individualise the care of each mother and baby according to the clinical circumstances*

**Baby has not fed**
- By 2 hours post birth or
- For 8 hours since last feed in first 24 hours of life or
- For 5 hours since last feed if more than 24 hours old

**Assess baby**

**Concerns identified?**

**Yes**

**Waking strategies**
- Initiate skin to skin contact
- Temporarily remove wraps
- Change nappy
- Gently massage arms, legs, back
- Observe for feeding cues

**Implement waking strategies with mother**

**No**

**Attempt breastfeed**

**Breastfeed successful?**

**Yes**

**Give EBM**

**Baby took EBM?**

**Yes**

**Best practice**
- Provide EBM prior to any infant formula

**No**

**EBM unavailable?**
- Discuss options with mother, midwife and medical officer
- Develop feeding plan

**Ongoing care**
- Assess breastfeeding
- Initiate waking strategies as required
- Monitor output/feeding patterns
- Support mother to express as required
- Refer as clinically indicated
- Document progress

**Review baby**
- History
- Health records
- Output
- Clinical assessment (Temperature, heart rate, respiration and colour)

**Review maternal history**
- Medical, surgical, pregnancy and breastfeeding
- Substance use (prescribed, illicit)
- Intrapartum record (mode of birth, Apgars)
- Postpartum assessment (clinical pathway, feeding)

EBM: expressed breast milk. BGL: blood glucose level.
Abbreviations

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

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, minerals, medicines).2

**Odds ratio**
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.

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.
- 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).

**Partial breastfeeding**
Refers to a situation where the baby is receiving some breastfeeding 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
1 Introduction

Breastfeeding is the normal way of providing babies with the nutrients required for growth and development. 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. Emerging evidence suggests breastfeeding has a positive impact on mother-baby relationships. Oxytocin released during breastfeeding promotes maternal feelings and behaviours. The interdependence between the breastfeeding mother and baby, regular close interaction and skin to skin contact (SSC) encourage mutual responsiveness and emotional attachment.

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. The World Health Organization (WHO) recommends continued breastfeeding along with appropriate complementary foods up to two years of age or beyond.

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. 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.

1.1 The importance of breastfeeding

Table 1. Health outcomes associated with breastfeeding

<table>
<thead>
<tr>
<th>Health outcome associated with breastfeeding</th>
<th>No. Studies</th>
<th>Pooled Effect</th>
<th>95% CI</th>
<th>Interpretation: odds (OR) / risk (RR) of outcome is:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance in intelligence tests(^{14})</td>
<td>17</td>
<td>3.44 points</td>
<td>2.30–4.58</td>
<td>increased</td>
</tr>
<tr>
<td>Overweight/obesity in later life(^{15})</td>
<td>113</td>
<td>OR: 0.74</td>
<td>0.70–0.78</td>
<td>reduced</td>
</tr>
<tr>
<td>Type 2 diabetes(^{15})</td>
<td>11</td>
<td>OR: 0.65</td>
<td>0.49–0.86</td>
<td>reduced</td>
</tr>
<tr>
<td>Malocclusion(^{16})</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ever versus never breastfed</td>
<td>18</td>
<td>OR: 0.34</td>
<td>0.24–0.48</td>
<td>reduced</td>
</tr>
<tr>
<td>Exclusive versus ever breastfed</td>
<td>9</td>
<td>OR: 0.54</td>
<td>0.38–0.77</td>
<td>reduced</td>
</tr>
<tr>
<td>Dental caries(^{17})</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If breastfed beyond 12 months</td>
<td>5</td>
<td>OR: 1.99</td>
<td>1.36–2.96</td>
<td>increased</td>
</tr>
<tr>
<td>If breastfed up to 12 months</td>
<td>7</td>
<td>OR: 0.50</td>
<td>0.25–0.99</td>
<td>reduced</td>
</tr>
<tr>
<td>Acute otitis media (until 2 years)(^{18})</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If exclusive breastfeeding for first 6 months</td>
<td>5</td>
<td>OR: 0.57</td>
<td>0.44–0.75</td>
<td>reduced</td>
</tr>
<tr>
<td>More versus less breastfeeding</td>
<td>12</td>
<td>OR: 0.85</td>
<td>0.59–0.72</td>
<td>reduced</td>
</tr>
<tr>
<td>Childhood leukaemia(^{19})</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any breastfeeding for 6 months of longer</td>
<td>18</td>
<td>OR: 0.81</td>
<td>0.73–0.89</td>
<td>reduced</td>
</tr>
<tr>
<td>Ever versus never breastfed</td>
<td>15</td>
<td>OR: 0.89</td>
<td>0.84–0.94</td>
<td>reduced</td>
</tr>
<tr>
<td>SIDS(^{20})</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exclusive breastfeeding</td>
<td>8</td>
<td>OR: 0.27</td>
<td>0.24–0.31</td>
<td>reduced</td>
</tr>
<tr>
<td>Any breastfeeding</td>
<td>18</td>
<td>OR: 0.40</td>
<td>0.35–0.44</td>
<td>reduced</td>
</tr>
<tr>
<td>Severe respiratory infections(^{8})</td>
<td>16</td>
<td>RR: 0.68</td>
<td>0.60–0.77</td>
<td>reduced</td>
</tr>
<tr>
<td>Mortality due to infectious diseases(^{8})</td>
<td>9</td>
<td>OR: 0.48</td>
<td>0.38–0.60</td>
<td>reduced</td>
</tr>
<tr>
<td>Protection against diarrhoea morbidity/hospital admission(^{8})</td>
<td>15</td>
<td>RR: 0.69</td>
<td>0.58–0.82</td>
<td>reduced</td>
</tr>
<tr>
<td>Breast cancer(^{21})</td>
<td>98</td>
<td>OR: 0.78</td>
<td>0.74–0.82</td>
<td>reduced</td>
</tr>
<tr>
<td>Ovarian cancer(^{21})</td>
<td>41</td>
<td>OR: 0.70</td>
<td>0.64–0.77</td>
<td>reduced</td>
</tr>
<tr>
<td>Type 2 diabetes(^{22})</td>
<td>6</td>
<td>RR: 0.68</td>
<td>0.57–0.82</td>
<td>reduced</td>
</tr>
<tr>
<td>BMI in postmenopausal women(^{23})</td>
<td>1</td>
<td>0.22 kg/m(^2)</td>
<td>0.21–0.22</td>
<td>reduced</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Consideration</th>
</tr>
</thead>
</table>
| Breastfeeding not recommended               | • Specialised formula required for:  
  o Galactosaemia  
  o Maple syrup urine disease  
  o Phenylketonuria (PKU) (some breastfeeding may be possible with careful monitoring)\(^4\)  
  • Human immunodeficiency virus (HIV) positive\(^4\) |
| Temporary avoidance or supplementation required\(^1,2\) | • Examples include (but are not limited to):  
  o Severe maternal illness (e.g. sepsis)  
  o If hepatitis C positive and nipples are bleeding  
  o Concerns with the health and wellbeing of the baby\(^1\)  
  • 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        | • Individualise care:  
  o Refer to a breast milk pharmacopeia for recommendations about specific medications (e.g. LactMed\(^24\))  
  o Refer to Queensland Clinical Guidelines: Perinatal substance use: neonatal\(^25\) and Perinatal substance use: maternal\(^26\) |
| Recommendation                               | • Whenever an interruption to breastfeeding is being considered, weigh the benefits of breastfeeding against the risks and discuss with the mother and family\(^4\)  
  • 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 |

\(^1\)Bullen et al. (2020)  
\(^2\)Australian Institute of Health and Welfare (2019)  
\(^3\)Royal College of Obstetricians and Gynaecologists (2020)  
\(^4\)Queensland Health (2020)  
\(^5\)American Academy of Pediatrics (2019)  
\(^6\)Queensland Health (2020)
### 1.3 Clinical standards

Table 3. Clinical standards

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Consideration</th>
</tr>
</thead>
</table>
| **Baby Friendly Health Initiative (BFHI)** | - 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 breastfeeding¹,²⁷  
- In Australia, BFHI is administered by the Australian College of Midwives  
- Appendix A: Principles of the Baby Friendly Health Initiative  
  - Shown to have a positive effect on breastfeeding initiation, continuation and exclusivity rates globally²⁸,²⁹  
  - The more steps practiced, the higher the duration and exclusivity of breastfeeding³⁰  
- 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**          | - 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  
  - 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:  
  - Ten steps to successful breastfeeding  
  - The Code⁵  
  - 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:  
  - The correct baby is given to the correct mother  
  - The correct breast milk is given to the correct baby  |
| **Staff support**               | - Support health care providers to access current breastfeeding and lactation management continuing education and training⁴²  
- 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

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Considerations</th>
</tr>
</thead>
</table>
| Context                     | • 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:  
  o Have increased sensitivity to non-verbal communication approaches  
  o May be less receptive to large volumes of information  
  o May benefit from peer support networks37 |
| Sharing information         | • 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:  
  o Verbal  
  o Demonstration and supervised practice  
  o Videos  
  o Printed fact sheets which are free from commercial influence |
| Recommendation              | • 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

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Consideration</th>
</tr>
</thead>
</table>
| **Breastfeeding information** | - Share breastfeeding information at each antenatal visit\cite{38,39}  
  - 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 concerns\cite{2}  
  - Offer information about breastfeeding support in the community  
  - Peer counselling promotes the initiation and maintenance of breastfeeding\cite{37}  
  - Offer information about optimal maternal nutrition and physical activity\cite{40}  
  - Recommend an iodine supplement 150 micrograms oral daily\cite{41}  
  - 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 breastfeeding\cite{4}  
  - Presence of support person\cite{38}  
  - Drinking and eating light foods during labour  
  - Mobilising and birthing position of choice  
  - Impact of intrapartum interventions\cite{38} (e.g. medications) |
| **History** | - Ask about previous breastfeeding experience and duration  
  - Identify risk factors for breastfeeding challenges/concerns\cite{38}  
  - High risk groups (e.g. diabetes\cite{42}, thyroid disorders\cite{43}, obesity\cite{44}, Aboriginal and Torres Strait Islander women\cite{2}, adolescent/young women\cite{2}, history of abuse or substance use\cite{45,46})  
  - Breast and nipple variations, surgery or injury (e.g. breast hypoplasia, biopsy, augmentation, reduction, nipple inversion, nipple piercing)\cite{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 recommended\cite{47}) as it provides an opportunity to:  
  - 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 birth\cite{39} |
| **Referral** | - 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:  
  - Previous concerns with breastfeeding experienced  
  - Risk factors for breastfeeding challenges identified\cite{38} |
| **Antenatal preparation** | - There is no evidence to support routine nipple preparation during pregnancy\cite{39}  
  - There is insufficient evidence about the efficacy and safety of antenatal expressing of colostrum\cite{48} |
| **Not breastfeeding** | - When a woman makes an informed decision not to breastfeed\cite{27}:  
  - 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

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Consideration</th>
</tr>
</thead>
</table>
| **Benefits for baby** | • Breast seeking behaviour\(^{49}\)  
• Less crying\(^{5}\)  
• Socially interactive behaviour with mother\(^{49}\)  
• Physiological stability (temperature, blood glucose level and heart rate)\(^{5}\)  
• Increased pain threshold and decreased cortisol levels\(^{49}\)  
• Earlier initiation of first breastfeed\(^{50}\)  
• More effective breastfeeding\(^{50}\)  |
| **Benefits for mother** | • Release of oxytocin which causes\(^{49}\):  
  o Reduced blood loss  
  o Increase in skin temperature of the breast  
  o Reduced anxiety and increased social interaction  
• Reduced breastfeeding concerns\(^{5}\)  
• Positive effects on breastfeeding duration\(^{51}\)  
• Helps to overcome common breastfeeding concerns when used beyond the immediate postpartum period\(^{3}\)  |
| **Operative birth** | • Initiation and duration of SSC in the operating theatre after elective caesarean section (CS) is associated with continued breastfeeding at 48 hours\(^{52}\)  
• 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 baby\(^{27}\)  |
| **Clinical surveillance** | • Tailor supervision requirements as required if there are concerns about the health and well-being 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** | • 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\(^{27}\)  
• 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 alternative\(^{3}\)  
• 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

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Consideration</th>
</tr>
</thead>
</table>
| Behaviour states        | • Six defined baby behavioural states have been recognised\(^{54}\):  
  o Sleep states:  
    ▪ Deep sleep, light sleep, drowsy  
  o Awake states:  
    ▪ Quiet alert; active alert; crying  
  • Understanding behavioural states can assist interpretation of baby’s behaviour and facilitate an appropriate response\(^{55}\)  
  • 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 crying\(^{56}\)                                                                                                                                                                                                                                                                                                                                 |}
|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Feeding cues            | • Early cues:  
  o Wiggling, moving arms or legs, rooting, licking movements, stirring, mouth opening, turning head, seeking/rooting  
  • Mid cues:  
  o Fussing, stretching, increased physical movement, hand to mouth, crying intermittently  
  • Late cue:  
  o Crying  
  o Baby may require calming before breastfeeding can be initiated\(^{39}\)  
  • Feeding in response to cues increases breastfeeding initiation, continuation and exclusivity\(^{57}\)  
  • Encourage unrestricted breastfeeding in response to baby’s early/mid feeding cues\(^{27}\)  
  • Encourage response to baby’s cues to determine if one or both breasts are required at an individual feed\(^{58}\)  
  • Breastfeeding can be used to comfort and calm baby, as well as to alleviate hunger\(^{35}\)  
  • Advise mother not to interrupt breastfeeding (if breastfeeding is comfortable) until baby indicates satiety by:  
    o Releasing nipple without further rooting behaviour  
    o Discontinuing nutritive suck/swallow patterns  
    o Falling asleep\(^{27,59}\)                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Feeding patterns        | • Typically babies have a two hour alert period after birth\(^{1}\)  
  o Ideal time for mother to initiate breastfeeding\(^{1,35,55}\)  
  • A sleepy period may follow  
  o 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 week\(^{57}\)  
  • Breastfeeding frequency will vary according to baby’s needs and the rate of milk transfer\(^2\)  
  • 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  
  o Timing the feed is discouraged  

---

Refer to online version, destroy printed copies after use
### 2.5 Rooming-in

Table 8. Rooming-in

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Considerations</th>
</tr>
</thead>
</table>
| Rooming-in  | - Limited evidence exists about the effect of mother-baby separation versus rooming-in and breastfeeding duration<sup>5</sup>  
- Keep mother and baby together, whenever possible to facilitate<sup>32,38</sup>:  
  - 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 sleep<sup>38</sup>  
- Closeness to a responsive parent reduces the risk of SIDS<sup>60</sup>  
- Perform baby examinations and routine tests in the mother’s room<sup>38</sup>  
  - 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 life<sup>61</sup> |
| Safe sleeping | - Advise the mother (and family) about recommendations for safe sleeping as outlined in the Queensland Government safe sleeping guidelines<sup>62,63</sup> |
### 3.1 Positioning and attachment

**Table 10. Positioning and attachment**

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Consideration</th>
</tr>
</thead>
</table>
| **Positioning** | • 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 baby\(^68\)  
• If sitting, encourage the mother to recline with back supported to reduce shoulder tension and enable her body to support her baby\(^68\)  
• 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**  | • 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  
  o Refer to Table 11. Milk transfer and production  
• Following feed; nipples may appear slightly elongated but not flattened, white or ridged\(^2\) |
| **If attachment not effective** | • 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

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Consideration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Milk transfer</strong></td>
<td>• Milk ejection reflex (MER) influences amount of milk baby consumes regardless of the length of the breastfeed(^70)</td>
</tr>
<tr>
<td></td>
<td>◦ MER may take two to three minutes to occur in the first few days after birth(^39)</td>
</tr>
<tr>
<td></td>
<td>◦ Multiple milk ejections are common during a breastfeed however the mother may not sense it or may only sense the initial MER</td>
</tr>
<tr>
<td></td>
<td>◦ Woman may sense or notice MER by(^70):</td>
</tr>
<tr>
<td></td>
<td>◦ Becoming thirsty</td>
</tr>
<tr>
<td></td>
<td>◦ Breast sensations (e.g. pins and needles, pressure, milk leakage)</td>
</tr>
<tr>
<td></td>
<td>◦ Uterine contractions ‘afterbirth pains’ in the immediate postpartum period</td>
</tr>
<tr>
<td></td>
<td>◦ A noticeable change in baby’s sucking/swallowing pattern is the most consistent sign of milk transfer(^64) (although may be difficult to detect initially)</td>
</tr>
<tr>
<td></td>
<td>◦ When baby begins swallowing—slow, deep, one suck per second (nutritive) sucking with few pauses</td>
</tr>
<tr>
<td></td>
<td>◦ Swallowing can be seen/heard—normally subtle, with a quiet “cuh” sound</td>
</tr>
<tr>
<td></td>
<td>◦ With a new milk ejection, swallowing may become slightly louder and more frequent</td>
</tr>
<tr>
<td></td>
<td>◦ As feed progresses, pausing occurs more frequently and lasts longer</td>
</tr>
<tr>
<td></td>
<td>◦ Once breasts begin to fill, softening of breast/s is evident after a feed(^64)</td>
</tr>
<tr>
<td><strong>Milk production</strong></td>
<td>• Birth to 72 hours; baby takes increasing amounts of colostrum</td>
</tr>
<tr>
<td></td>
<td>◦ Refer to Appendix C: Input/output checklist</td>
</tr>
<tr>
<td></td>
<td>• Days two to four (46 to 96 hours) after birth; milk production increases(^39)</td>
</tr>
<tr>
<td></td>
<td>• Often experienced by a feeling of breast fullness between 40 and 72 hours after birth although not always sensed by the mother(^39)</td>
</tr>
<tr>
<td></td>
<td>• If breast overfull, encourage the mother to feed baby or express milk</td>
</tr>
<tr>
<td></td>
<td>• Volume increases during first two weeks to about 600 mL per day</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Consideration</th>
</tr>
</thead>
</table>
| Behaviour                     | • 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                        | • 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:  
    o Change in stool from meconium to transitional during first 24–48 hours after birth2  
    o At least three to four stools per day by day 5–7  
    o Yellow stools by day seven  
  • Urine output/frequency of wet nappies69  
    o Failure to pass urine in the first 24 hours of life is cause for concern  
    o Increases to three or more wet nappies by third day after birth  
  • Refer to Appendix C: Input/output checklist                                                                                                                                   |
| Weight                        | • 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  
    o Refer to Queensland Clinical Guideline: Routine newborn assessment73  
  • 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 | • Abnormal stooling patterns and urine output  
  • Concerns about general appearance and/or observations (e.g. skin colour, state of alertness, activity, muscle tone, temperature)  
    o Refer to Queensland Clinical Guideline: Routine newborn assessment73  
  • Newborn hypoglycaemia related to ineffective feeding  
    o Refer to Queensland Clinical Guideline: Newborn hypoglycaemia74  
  • Physiological jaundice—frequently exacerbated by inadequate milk intake  
    o Refer to Queensland Clinical Guideline: Neonatal jaundice75  
  • Unsettled behaviour (e.g. frequent crying after feeds), followed by lethargy69  
  • Signs of dehydration include56:  
    o 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. Maternal expressed breast milk (EBM) is the feed of choice.

Table 13. Supplemental feeding

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Consideration</th>
</tr>
</thead>
</table>
| Volume                    | • When appropriate assess breastfeeding prior to initiating supplemental feedings. • Give sufficient volume to maintain hydration and nutrition  
  o In the first two days after birth, offer no more than 10–15mL per feed to a healthy term baby.                                                                                                                                                                                                                           |
| Expressing breast milk    | • Offer instruction and information on how to hand express. • Reassure and advise women that expressing may yield little colostrum at first  
  o Refer to Appendix C: Input/output checklist  
  o Demonstration is ideally with a cloth or knitted breast model and a ‘hands off’ approach.  
  o Hand expressing is useful to:  
    o Express on to nipple to encourage feeding cues  
    o Soften the breast if overfull (uncomfortable)  
    o Provide supplement if breastfeeding ineffective  
  o Frequency and duration will depend on individual clinical reason for expressing  
  o Refer to Appendix D: Recommendations for common breastfeeding concerns Refer to Section 1.2 Breastfeeding cautions.                                                                                                                                                                        |
| Methods of expressing     | • Hand: most efficient method of obtaining colostrum. • Pump: follow local procedures on use and care of equipment  
  o Combining hand and pump is associated with higher milk yield than pump alone once milk is flowing.                                                                                                                                                                                                                       |
| Labelling and storage of EBM | • 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).  
  o Develop local protocols for:  
    o Labelling EBM (full name, date of birth and hospital record number, date and time breast milk expressed)  
    o Checking and signing for EBM by two staff members prior to administration  
  o Recommend breast milk storage as outlined in Child Health Information: Your guide to the first 12 months.                                                                                                                                                                      |
4.1 Alternative feeding choices

Table 13. Alternative feeding choices

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Consideration</th>
</tr>
</thead>
</table>
| Reversing decision to breastfeed | • To support the mother who considers stopping breastfeeding\(^2,27\):  
\hspace{1cm} o Explore reasons  
\hspace{1cm} o Inform of difficulties associated with re-establishing breastfeeding  
\hspace{1cm} o Offer additional support  
\hspace{1cm} o Respect decision |
| Infant formula                | • Routine use, in healthy breastfed babies is not recommended\(^2\)  
\hspace{1cm} • 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                    | • Donor milk banks collect, screen, pasteurise and distribute breast milk to babies whose mothers are unable to supply enough breast milk  
\hspace{1cm} • Eligibility criteria for donating and accessing donor milk apply |
| Sharing breastmilk            | • 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   | • 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)  
\hspace{1cm} • When selecting an alternative feeding method, consider\(^1\):  
\hspace{1cm} \hspace{1cm} o Maternal preference  
\hspace{1cm} \hspace{1cm} o Cost and availability  
\hspace{1cm} \hspace{1cm} o Ease of use and cleaning  
\hspace{1cm} \hspace{1cm} o Whether adequate milk volume can be fed in 20–30 minutes  
\hspace{1cm} \hspace{1cm} o Whether short or long-term use is anticipated  
\hspace{1cm} • Follow local protocols about use and care of equipment  
\hspace{1cm} • Develop/follow local education and training requirements to ensure clinician competency |

5 Dummy (pacifier) use

Table 14. Dummy (pacifier) use

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Consideration</th>
</tr>
</thead>
</table>
| Context   | • Use before four weeks is associated with reduced duration of breastfeeding and may contribute to breastfeeding difficulty\(^2\)  
\hspace{1cm} • Probable association between dummies during sleep and a decrease in the risk of SIDS\(^83\)  
\hspace{1cm} • Effective in reducing procedural pain when used alone or in conjunction with other non-pharmacological interventions\(^84\) |
| Recommendation | • Inform parents of the advantages and disadvantages associated with dummy use  
\hspace{1cm} • Recommend delaying dummy introduction until breastfeeding is established\(^85\)  
\hspace{1cm} • Once breastfeeding is established, a dummy may be offered when placing baby on back to sleep\(^2,32\)  
\hspace{1cm} • Document in the health record a mother’s informed decision to use a dummy\(^27\) |
6 Common concerns

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

Table 15. Initial care for all women with breastfeeding concerns

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Consideration</th>
</tr>
</thead>
</table>
| Initial care for all women with concerns | • Review clinical history  
• Assess a breastfeed  
  o Apply supportive care practices, including SSC  
  o 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  
  o Refer to Section 4. Supplemental feeding  
  o Refer to Appendix C: Input/output checklist  
• Encourage initiation and maintenance of milk supply  
• As a guide, encourage women to:  
  o 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  
  o Express soon after each breastfeeding attempt if baby is not receiving enough milk during a breastfeeding attempt |
| Specific concerns | • 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

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Consideration</th>
</tr>
</thead>
</table>
| Suggested breastfeeding discharge criteria | • In addition to usual readiness for discharge criteria for both the mother and baby, the mother is able to independently:  
  o Position baby at her breast without significant pain  
  o Identify when her baby is swallowing milk  
  o Identify normal feeding patterns (8–12 times a day with some babies needing to breastfeed more frequently)  
  o 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)  
  o Hand express breast milk  
  o Identify indications for accessing a healthcare professional  
  o Access breastfeeding advice/information |
| Concerns | • Identify potential/existing breastfeeding concerns or knowledge deficits prior to discharge from service  
  o Develop specific care plans/recommendations with the mother  
  o Identify local opportunities for accessing breastfeeding support (e.g. IBCLC, child health nurse, community support groups) |
| Routine follow-up | • Recommend all routine follow-up assessments including follow-up with a GP  
  o Refer to Queensland Clinical Guideline: Routine newborn assessment  
• Recommend a formal breastfeeding evaluation as part of a postpartum check with a qualified health care professional including:  
  o Baby weight check  
  o Assessment of neonatal jaundice  
  o Review of age appropriate elimination  
• Offer scheduled and ongoing home visits  
• Offer information about Child Health Services |
### 7.1 Health promotion

Table 17. Ongoing advice and information

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Considerations</th>
</tr>
</thead>
</table>
| **Support** | - Fathers/partners, other family members and friends play an important role in supporting the breastfeeding mother\(^{37}\):
  - 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 outcomes\(^{37}\)
  - Face-to-face support is more likely to be effective
| **Breastfeeding advice and information** | - Offer and support access to breastfeeding education/resources\(^{77}\)
  - Discuss and offer information about:
    - 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
    - Refer to Queensland Clinical Guideline: *Routine newborn assessment*\(^{73}\)
| **Nutrition and physical activity** | - Provide advice about nutrition as per the Australian dietary guidelines\(^{40}\)
  - Recommend a maternal iodine supplement of 150 micrograms oral daily
    - Supplementation is usually required as it is difficult to achieve through diet alone\(^{41}\)
    - 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 guidelines\(^{88}\)
  - Exercise does not negatively affect breastfeeding\(^{2}\)
References


Appendix A: Principles of the Baby Friendly Health Initiative

BFHI 10 steps to successful breastfeeding

<table>
<thead>
<tr>
<th>Step</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>Have a written breastfeeding policy that is routinely communicated to all health care staff</td>
</tr>
<tr>
<td>Step 2</td>
<td>Train all health care staff in skills necessary to implement this policy</td>
</tr>
<tr>
<td>Step 3</td>
<td>Inform all pregnant women about the benefits and management of breastfeeding</td>
</tr>
<tr>
<td>Step 4</td>
<td>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</td>
</tr>
<tr>
<td>Step 5</td>
<td>Show mothers how to breastfeed, and how to maintain lactation even if they are separated from their infants</td>
</tr>
<tr>
<td>Step 6</td>
<td>Give newborn infants no food or drink other than breast milk, unless medically indicated</td>
</tr>
<tr>
<td>Step 7</td>
<td>Practise rooming-in (allow mothers and infants to remain together), 24 hours a day</td>
</tr>
<tr>
<td>Step 8</td>
<td>Encourage breastfeeding on demand</td>
</tr>
<tr>
<td>Step 9</td>
<td>Give no artificial teats or pacifiers (also called dummies or soothers) to breastfeeding infants</td>
</tr>
<tr>
<td>Step 10</td>
<td>Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic</td>
</tr>
</tbody>
</table>


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

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising</td>
<td>No advertising or promotion of breastmilk substitutes, including infant formula and complementary foods and beverages as well as bottles, teat</td>
</tr>
<tr>
<td>Samples</td>
<td>No free samples to mothers, their families or health care workers</td>
</tr>
<tr>
<td>Health care facilities</td>
<td>No promotion of products to the public</td>
</tr>
<tr>
<td></td>
<td>No company nurses to have access to and/or advise women</td>
</tr>
<tr>
<td></td>
<td>No gifts or personal samples to health workers (e.g. diaries, pens, food or meals)</td>
</tr>
<tr>
<td></td>
<td>No free or low-cost supplies to be given</td>
</tr>
<tr>
<td>Information</td>
<td>No words or pictures idealising artificial feeding, including pictures of infants on the labels of products</td>
</tr>
<tr>
<td></td>
<td>Information to health workers should be scientific and factual</td>
</tr>
<tr>
<td>Labels</td>
<td>All information on artificial infant feeding, including labels, should explain benefits of breastfeeding, and costs and hazards associated with artificial feeding</td>
</tr>
<tr>
<td>Products</td>
<td>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</td>
</tr>
</tbody>
</table>

### Appendix B: Supervision during skin to skin contact

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Vigilance is a fundamental part of care in the first few hours after birth</td>
</tr>
<tr>
<td></td>
<td>• Where they exist, follow local protocols for supervision during skin to skin contact</td>
</tr>
<tr>
<td></td>
<td>• Assess the circumstances of each mother and baby individually</td>
</tr>
<tr>
<td></td>
<td>• Indirect supervision by health professionals requires frequent visual observations of the baby</td>
</tr>
<tr>
<td></td>
<td>• Direct supervision of skin to skin contact by a partner or relative may be appropriate at the discretion of the health care provider</td>
</tr>
<tr>
<td></td>
<td>• 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</td>
</tr>
<tr>
<td></td>
<td>• Position mother and baby to ensure baby:</td>
</tr>
<tr>
<td></td>
<td>o Has face visible</td>
</tr>
<tr>
<td></td>
<td>o Cannot fall on to the floor</td>
</tr>
<tr>
<td></td>
<td>o Cannot become trapped in bedding or by the mother’s body</td>
</tr>
<tr>
<td></td>
<td>o Has head supported so airway does not become obstructed</td>
</tr>
<tr>
<td></td>
<td>• Discourage women from holding baby when receiving analgesia which causes drowsiness or alters state of awareness (e.g. nitrous oxide)</td>
</tr>
<tr>
<td></td>
<td>• Consider safety if pain not well controlled as the mother is unlikely to be able to hold her baby comfortably or safely</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Risk factors during skin to skin contact</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• If risk factors are identified, provide documented direct supervision during skin to skin contact</td>
</tr>
<tr>
<td></td>
<td>• A non-exhaustive list of factors which may raise safety issues for unsupervised skin to skin contact include:</td>
</tr>
<tr>
<td></td>
<td>o Intrapartum</td>
</tr>
<tr>
<td></td>
<td>▪ Extended labour</td>
</tr>
<tr>
<td></td>
<td>▪ Maternal fatigue</td>
</tr>
<tr>
<td></td>
<td>▪ Emergency caesarean section</td>
</tr>
<tr>
<td></td>
<td>▪ Assisted delivery</td>
</tr>
<tr>
<td></td>
<td>o Pain</td>
</tr>
<tr>
<td></td>
<td>o Medications</td>
</tr>
<tr>
<td></td>
<td>▪ Narcotics administered in last five hours</td>
</tr>
<tr>
<td></td>
<td>▪ Sedation administered in last four hours</td>
</tr>
<tr>
<td></td>
<td>o Current illicit substance use</td>
</tr>
<tr>
<td></td>
<td>o Alcohol intoxication</td>
</tr>
<tr>
<td></td>
<td>o Underlying health conditions for mother and/or baby</td>
</tr>
<tr>
<td></td>
<td>▪ Obesity</td>
</tr>
<tr>
<td></td>
<td>▪ Mental health concerns</td>
</tr>
<tr>
<td></td>
<td>o Any other identified risk</td>
</tr>
</tbody>
</table>
## Appendix C: Input/output checklist

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

- 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

### Appendix D: Recommendations for common breastfeeding concerns

- 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

<table>
<thead>
<tr>
<th>Concern</th>
<th>Signs/Consideration</th>
<th>Recommendations</th>
</tr>
</thead>
</table>
| Sleepy baby not exhibiting feeding cues           | • 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 | • Reassure mother this is usually temporary  
• Refer to Flow Chart: Sleepy baby  
• Refer to Queensland Clinical Guideline: Neonatal jaundice |
| Alert baby who is exhibiting feeding cues but unable to attach | • 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  
• Woman related reasons include:  
  o Inverted or flat nipples, areola engorgement/oedema  
  o When nipple is flat or inverted, or areola engorged, it obliterates nipple and makes grasping nipple/areola difficult or impossible for baby  
  o 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 | • 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)  
• 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  
  o Ongoing surveillance encouraged to monitor milk transfer |
| Delay in secretory activation or poor milk transfer | • Common cause of poor milk transfer is sub-optimal attachment  
• Possible causes of delay in secretory activation include:  
  o Postpartum haemorrhage, diabetes, obesity  
  o Possible causes of low milk production at stage of initiation include, breast surgery, hypoplastic breasts, chronic disease or medical conditions | • 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 |
<table>
<thead>
<tr>
<th>Concern</th>
<th>Signs/Consideration</th>
<th>Recommendations</th>
</tr>
</thead>
</table>
| Nipple pain and trauma | • 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:  
  o Infections such as staphylococcus aureus and candida  
  o Vasospasm                                                                                                                                  | • 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  
  o Avoid soaps and synthetic bras  
  o Change breast pads frequently  
  o Expose breasts to air briefly after breastfeeding  
  o Wash daily  
  o 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 | • 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                                                                 | • Best management is prevention  
• Reduce engorgement so baby can breastfeed effectively  
  o Encourage reverse pressure softening before attempting breastfeeding or hand expressing  
• Manage discomfort  
  o Paracetamol and Ibuprofen are safe options for breastfeeding women in appropriate doses  
  o Cold packs may provide comfort  
• Provide anticipatory guidance regarding possibility of engorgement to women prior to hospital discharge  |
| Blocked duct or mastitis | • 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:  
  o 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                                                                 | • Improve milk removal  
  o 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  
  o Apply heat (shower, warm cloth, heat pack) to facilitate milk ejection reflex  
• Supportive/comfort measures  
  o Rest, adequate fluids and nutrition, analgesia and cold packs  
• Antibiotics indicated if symptoms not improving within 12–24 hours or if acutely ill  |
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