Breastfeeding and You:
A handbook for antenatal educators

Second edition

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Introduction to the handbook

‘Before my life started properly, I was doing the usual mewling and sucking, which in my case occurred on a pair of huge, soft, black breasts. In the African tradition I continued to suckle for my first two and half years after which my Zulu wet nurse became my nanny. She was a person made for laughter, warmth and softness and she would clasp me to her breast and stroke my golden curls with a hand so large it seemed to contain my whole head.’\cite{1}

Welcome to Breastfeeding and You: A handbook for antenatal educators. This handbook is a resource package for antenatal educators based on recent biological and social research in breastfeeding and adult learning theory. Antenatal education is integral to pregnancy care, and breastfeeding education is a key part of preparing expectant women and their families for the arrival of an infant. Pregnancy is a remarkable experience, with many ‘teachable’ moments, so this handbook is for midwives, antenatal educators and indeed for anyone who cares for, supports, and befriends an expectant woman, her partner and family.

1. Context of this Handbook

- Breastfeeding is an unparalleled way of providing the ideal food for the healthy growth and development of infants.\cite{2}
- Breastfeeding plays an important protective role in the short and long-term health of the mother and her infant; an explanation of this role is provided under Module 1.6. Why Breastfeed?
- The evidence-based recommendation of the National Health and Medical Research Council (NHMRC) is that infants be exclusively breastfed\footnote{I} until around 6 months of age when solid foods are introduced, and that breastfeeding be continued until 12 months of age and beyond, for as long as the mother and child desire.\cite{3} The World Health Organization (WHO) similarly recommends exclusive breastfeeding to 6 months followed by appropriate complementary foods with continued breastfeeding to 2 years of age or beyond.\cite{4, 5}
- Rates of breastfeeding in Australia have increased over the last 50 years, although there remains room for improvement. Most Australian mothers initiate breastfeeding (96%) but rates decline to 61% of infants being exclusively breastfed to 1 month. Only 15% are exclusively breastfed to 6 months. Some women are less likely to breastfeed than others – these include Aboriginal and Torres Strait Islander women, younger women, less educated women and those of lower socioeconomic status. These groups in particular would benefit from increased antenatal support.\cite{6}
- The NHMRC recommends routinely offering breastfeeding education as part of antenatal care, noting that research has shown that assisting women to plan for

\footnote{I} Exclusive breastfeeding means breast milk only (including expressed breast milk) and no other liquids or solids, with the exception of drops or syrups consisting of vitamins, minerals supplements or medicines including oral rehydration solutions.
breastfeeding by providing information and support during pregnancy can improve rates of initiation and duration of breastfeeding.\textsuperscript{[7]}

- Research into parents’ preferences for antenatal education has found they want more information on breastfeeding.\textsuperscript{[8]}
- Antenatal breastfeeding education is common practice in most maternity units in Australia but in the past has emphasised the biology and physiology of breastfeeding, without encouraging parents to reflect on the individual, diverse and somewhat unpredictable nature of the experience.\textsuperscript{[9]} Complete information and realistic expectations may help parents to better manage any breastfeeding problems they encounter and thus improve breastfeeding duration rates.

2. The aim of the Handbook

The aim of this handbook is to contribute to breastfeeding promotion and support in the key antenatal stage, by providing information and resources on breastfeeding and adult learning to antenatal educators, program managers and health professionals who inform and support women, their partners and family.

As noted in the \textit{Australian National Breastfeeding Strategy 2010-2015} (the Strategy), breastfeeding occurs on a continuum, or ‘natal cycle’, that commences well before the birth of an infant.\textsuperscript{[5]} Pregnancy is the preparatory stage for breastfeeding and the goal of antenatal breastfeeding education is to ensure that expectant parents understand the importance of breastfeeding, that mothers are equipped with knowledge to enable them to breastfeed and have established or consolidated their support networks. Research has shown that the extent to which a mother commits to breastfeed at this point can impact on the duration of breastfeeding.\textsuperscript{[10]}

The needs of expectant parents for information change between the stages of pregnancy. Antenatal breastfeeding education can be provided not only in formal sessions but by care providers in the many ‘teachable moments’ of pregnancy.

Not all mothers breastfeed and a very small number are unable to. This handbook is intended to promote an approach to antenatal education which encourages and inspires expectant parents to breastfeed, while also recognising that the feeding decision can be complex, it belongs to the parents and that ultimately each decision – whether to breast- or formula feed - should be respected and supported.

3. How to use this Handbook

For ease of use the handbook has been divided into two sections, with each section divided into modules.

\textbf{Section One} provides a summary of current breastfeeding and antenatal education evidence and best practice. The modules in this section are:

- \textbf{Module 1} Preparing to breastfeed
- \textbf{Module 2} The breastfeeding experience
- \textbf{Module 3} Facilitating groups
- \textbf{Module 4} Planning programs
- \textbf{Module 5} Evaluating programs
Module 6 Resources for educators

Section Two provides activities and material for use in antenatal programs and sessions, with the appendices providing additional material and resources. The modules in this section are:

- Module 7 Activities for programs
- Module 8 Handouts for parents
- Appendices Supplementary reading and a list of the organisations and individuals consulted for this handbook.

The icons throughout the text

Throughout the handbook are think, reading, action and tip icons as shown below. These may be particularly useful if you are new to antenatal education.

Think  Reading  Action  Tip

The language used in the handbook

The following words have been used:

- sessions instead of classes;
- participants instead of clients;
- partners instead of men, to be inclusive of same sex partners;
- parents instead of couples;
- parents to refer to expectant and new parents;
- infant/s instead of baby/babies except in quotations and references to BFHI; and
- educator or facilitator instead of teacher.

List of abbreviations

Appendix 1 provides a list of the abbreviations used throughout this handbook.

Consultation

The consultation for this edition of the handbook, conducted over 3 months in 2013, involved:

- 32 expectant parents, both women and their partners;
- 46 new parents, predominantly women; and
- 26 professionals from a range of disciplines (see list in Appendix 2).

Quotations from those consulted appear throughout the handbook for illustrative purposes.
Module 1: Preparing to breastfeed

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1. Introduction

This module looks at the prenatal or antenatal stage of the breastfeeding ‘continuum’, at the importance of breastfeeding for the health of the mother and infant and the role of antenatal educators and midwives.

Learning outcomes

Upon completion of this module you should be able to:

- describe when and how the decision to breastfeed is commonly made;
- discuss the factors that influence the decision;
- identify the breast changes that women experience in pregnancy;
- outline the importance of breastfeeding for the health of the infant and mother; and
- describe strategies that an antenatal educator can use to help prepare women and their partners for breastfeeding their infant.

2. The realisation of Pregnancy

The human breast changes profoundly during pregnancy, with marked expansion of the ducts and the formation of additional lobules. These structural changes and associated increase in breast size for many women are the first signs of pregnancy, together with tingling, sensitivity and tenderness. The breast changes and feelings are similar to those experienced before a woman menstruates although they are often stronger or more noticeable in pregnancy. (Further information on physical changes to the breasts in pregnancy is provided under Module 1.5. The Breast in Pregnancy)

Some women, even at this early stage of pregnancy, express their decision and their ability to breastfeed in terms of ‘being a good mother’. The desire to give their infant the ‘best’ has been shown to be the single, most influential motivator that women give for choosing to breastfeed. They begin to construct an image of the characteristics and qualities of a ‘good mother’, and see breastfeeding as a part of a maternal identity, and even as a moral obligation. They reflect on their own upbringing, observe their families and friends and begin to formulate ideas of what they will and won’t do as parents. This broad exploration is described as examining ‘global parenting’ concepts, and contrasts with examining ‘specific parenting’ tasks or skills which typically occurs later in the pregnancy, when both women and their partners seek in-depth information about breastfeeding and want to learn the necessary skills. Breastfeeding for these women is not only healthier for their infant, but may also be important to their identity as a mother.

3. The decision to Breastfeed

For centuries, infant feeding has been influenced by prevailing cultural attitudes and the availability of viable alternatives. (See Appendix 3 for an historical perspective on the decision to breastfeed.) Evidence suggests that today the majority of women decide how they will feed their infant in the early weeks of pregnancy, prior to, and irrespective of, any contact with health professionals; some even make the decision prior to conception. A decision to breastfeed at this early stage is not always made in a planned, thoughtful,
rational way, weighing up the pros and cons of breastfeeding at a specific time, but rather as a more subconscious, emotional consideration reflecting a desire to be a ‘good mother’. Many women know that breastfeeding is important; the message ‘breast is best’, though no longer used\(^\text{II}\), has been successful in improving women’s awareness of the important role of breastfeeding in maintaining their health and that of their infants.\(^{[18]}\) However the decision to breastfeed is frequently not based on a good understanding of what breastfeeding actually entails. Further into the pregnancy, often in the second trimester, women and their partners begin to actively seek breastfeeding information.\(^{[8, 15]}\) The callouts here capture the words used by women in their second trimester who were interviewed for this handbook.

\begin{tikzpicture}
  \node[draw, rounded corners] (A) {
    \textbf{I’ll give it a go. I’ve always thought that, but I’m really keen to know how it (breastfeeding) really works.}
  
  \textbf{What actually happens with the baby when it is born, surely it is not ready to breastfeed then?}
  
  \textbf{I guess... well Mum and all of my friends have breastfed, so why do some say it is so hard?}
  
  \textbf{Friends have told me breastfeeding is hard – I so want to know why.}
  
  \textbf{Pregnant women may therefore seek breastfeeding information prior to formal antenatal education sessions, for example at antenatal appointments. Whether you are an educator or a midwife, breastfeeding concerns and questions from women in the early stages of pregnancy are important ‘teachable moments’. The ‘Your Role as an Educator’ tips provided later in this module may assist you. You can also direct expectant parents to reliable sources of information such as the Australian Breastfeeding Association (ABA) website. (See Useful Websites for a full list of suggested resources for parents.)}

Factors that influence the decision

There are a range of influences on parents’ infant feeding decision, discussed below. The think and action excursions will help you to determine how best to support your program or session participants.

\(^{\text{II}}\) The message ‘breast is best’ implied that there is another option that is perhaps almost as good, leading breastfeeding advocates to propose that breastfeeding should simply be presented as the physiological norm.
Most likely, you have made a list of socio-cultural factors, as well as personal characteristics that may influence a woman’s decision to breastfeed. You may have included those shown in Figure 1.

Figure 1 Some of the factors influencing the infant feeding decision.

**Age:** Older women are more likely to initiate breastfeeding than adolescent women. Recent research reports that some adolescents believe that breastfeeding can be embarrassing with this embarrassment being multifaceted. There is a need to protect one’s modesty, avoid being seen to behave indecently and prevent unwanted ‘voyeurism from strangers’. These concerns relate to the breast being viewed as a sexual object, without a functional role after the birth. It has been identified that the pregnant adolescent’s mother and the infant’s father have the greatest influence on her decision to breastfeed. An adolescent in an intimate relationship with another teenager is more likely to breastfeed compared to a young mother with an older partner.

**Maternal characteristics:** Certain maternal personality traits, such as being reserved, sceptical or less likely to try new things, have been associated with being less likely to initiate breastfeeding. Women with lower self-confidence and those with decreased personal knowledge of breastfeeding are less likely to breastfeed. Less commonly recognised factors (of women of any age) are a perceived altered body image with the concurrent concern of the breasts being for use other than as ‘sexual objects’, and/or
maternal obesity, both of which are linked to decreased rates of breastfeeding initiation. For some women their own sense of self, a feeling of comfortableness or even a feeling of repulsion by the whole idea of breastfeeding, can have an effect on their decision, as can maternal self-identity. Breastfeeding doesn’t ‘feel’ normal to them, rather they feel it can make a woman ‘feel like a cow’ and as Sheehan et al found for those who did breastfeed ‘it certainly doesn’t create or enhance a bond with their infant’. In addition, maternal obesity, discussed further in Module 2, increases the incidence of complications, such as gestational diabetes, thromboembolism, and pre-eclampsia, which may also impact on the decision to breastfeed and its initiation.

Socioeconomic status and education: Women who have attained a higher level of education and women who earn a higher income are more likely to initiate breastfeeding. A review of recent Australian National Health Surveys reveals that a socio-economic gradient exists with regards to initiation, with fewer infants in the lowest socio-economic quintiles being breastfed. In general, people with higher incomes are more likely to adopt healthy behaviours such as exercising, eating a healthy diet and quitting smoking. Women from lower-income families are less likely to make such changes. Additionally, they are less likely to breastfeed for a number of reasons, including less family support for breastfeeding, less ability to seek help with breastfeeding problems, less flexibility with working arrangements and concerns about breastfeeding in public. They are also more likely to interact with women who themselves are less likely to breastfeed, such as those who are younger, obese or smokers. Women learn about breastfeeding from those around them; in groups in the Australian community with low breastfeeding rates, there are fewer breastfeeding role models for expectant mothers.

Support from partner, family and friends: Women are more likely to decide to breastfeed and to initiate breastfeeding if their partner is supportive; if their mother, other family members and friends have also breastfed their infants; and if these people had positive breastfeeding experiences. This informal breastfeeding support can be more influential than the support from formal sources, with women having more contact with their personal social network. Research has shown that the majority of partners feel the decision to breastfeed should ultimately be ‘the mother’s call’, as they perceive breastfeeding as involving ‘her body, time and energy’. Adding complexity to the picture, in a Canadian study many women suggested that a decision to breastfeed would exclude their partners (who had already missed out on firsthand experience of pregnancy) from involvement in feeding the infant. Indeed one reason given by women for choosing to formula feed is the desire for the father’s involvement with feeding their infant.

Cultural Background: The decision to breastfeed is also influenced by the norms of the culture or cultures from which the parents originate, with some major differences between groups. For example, Indigenous Australians in remote areas generally consider breastfeeding to be a normal activity that is not hidden and does not have sexual connotations, yet those living in urban areas are less likely to initiate breastfeeding.

In some cultures women are not the only or even the predominant decision-maker. In a study in Zambia, fathers and grandmothers, who were less knowledgeable and more negative about exclusive breastfeeding but had considerable authority over the infant feeding decisions, were an important barrier to exclusive breastfeeding practice. Similarly, in countries such as Ghana and Malawi pressure from family and friends was an important barrier to exclusive breastfeeding, with the belief that breast milk alone will
not satisfy an infant.

In Hindu communities, breastfeeding is nearly universal and continues for most children beyond infancy. As the birth of an infant is a celebration for Hindu families and society, breastfeeding is strongly influenced by cultural and religious ceremonies. While Hindu women may receive guidance from health care professionals, relatives, especially grandmothers, can have an important influence on breastfeeding practices. Additionally, most mothers have some understanding of the superiority of breast milk over commercial formulas and cow’s milk, although the lure of advertising has taken its toll.\[45\] In some cultures there are powerful social forces that prescribe how long women may breastfeed. If a woman breastfeeds for too long, a lack of social acceptability, particularly of breastfeeding in public, results in pressure to wean.\[46, 47\]

Immigration and dislocation can, however, have a profound influence on cultural norms around infant feeding. For example, in one study, women in Australia from India, Vietnam, the Philippines, rural China and Korea report that in their countries of origin women often breastfeed for one to two years, yet here in Australia they may breastfeed for a shorter time. These women state that breastfeeding is more difficult in Australia for several reasons, such as:

- their transition from an extended to a nuclear family where they no longer have the support they require to care for their infant and any other children;
- their need to return to work and/or study soon after the birth of their infant; and
- health services and breastfeeding support are not always accessible or culturally appropriate to the needs of migrant and refugee women.\[48, 49\]

In addition, many believed that Australian women do not breastfeed, as they are rarely seen breastfeeding in public and as infant formula is so readily available.\[44\]

Acculturation has been shown to have an impact on breastfeeding practice, with breastfeeding initiation being highest among women from some communities who are least acculturated, and lowest among women most acculturated.\[50, 51\] For example, as Maharaj highlights from a study conducted in Melbourne, ‘for ethnic Indian immigrant women breastfeeding practice is closely linked to acculturation and identity construction, both personal and communal. The lack of social and cultural networks for recent immigrants prevents the involvement in the cultural systems that traditionally support breastfeeding. With an awareness of this, healthcare professionals should deliver services in a culturally appropriate and sensitive manner where women feel supported as well as empowered’.\[50\]
The image of the breast within society: Another influence on a woman’s decision to breastfeed appears to be the way in which the female breast is viewed in her society. Some commentators believe that the preoccupation in western societies with breasts as objects of sexual desire and gratification, visibly used in marketing, can be particularly influential in a woman’s decision on how to feed her infant. Some women appear to be concerned that their breasts will lose their sexual attractiveness if they breastfeed, or that their partner may become jealous of the infant suckling at their breast. Women living in contemporary western societies pay detailed attention to the appearance of their body, its control and function. The physiological changes that occur in relation to pregnancy and lactation may distress some women, deterring them from considering breastfeeding. For some women there is also a general feeling of unease or even repulsion at the thought of breast milk leaking from their breasts, and both breastfeeding and formula feeding women can be ambivalent about breastfeeding in front of others, with feelings of embarrassment and disgust expressed by women of varied socio-economic backgrounds. This further highlights the tension between the breast’s function as a symbol of sexuality within western society and its function as an organic source of nutrition for the infant.

The media and breastfeeding: Media images of the female breast are important in shaping our ideas about the breast and therefore women’s comfort with breastfeeding. The media also actively shapes our understanding about breastfeeding. An examination of three leading Australian women’s magazines suggested that while there are frequent references to celebrities choosing to breastfeed, the focus of the messages is frequently how breastfeeding can optimise maternal weight loss. While the idea of breastfeeding as a weight loss strategy is, at first glance, pro-breastfeeding, it also reinforces a negative post-partum body image. The eroticism of the breast and the idolisation of slim and immature bodies are at odds with the reality of motherhood. Images of scantily clad women, often portrayed in provocative poses, do not treat women as whole persons with unique thoughts and feelings.

Further, some images and messages suggest breastfeeding is difficult, requires patience, practice, time and is a battle or a problem to be solved. This type of media portrayal is negative, underestimates and underemphasises women’s competence and may undermine
a female readers’ confidence in her prospects of successfully breastfeeding. Underlying many of these reports is the message that women require the assistance of health professionals to succeed at breastfeeding.

Through advertising, the media not only alerts the public to new merchandise, but also suggests to people why they need to buy the product.\[59\] A recent Australian study of women’s understanding of follow-up toddler milk advertisements indicated that although the women clearly understood the advertisements were not just for a single product, but an affiliated range of products, including formula for infants under six months that could undermine breastfeeding, the women accepted the advertising claims uncritically.\[60\]

**International marketing of infant formula and related products:** Researchers and commentators have identified that the marketing and supply of free and low-cost infant formula and related products contributed to the rapid decline in breastfeeding this century and promoted bottle feeding as the norm in western societies.\[54\] The WHO and UNICEF\[61\] held a summit of infant feeding experts in 1979 regarding the marketing and use of infant formula, and concluded that an international code of ethics was required to control the marketing of infant formula. As a result, the 34\textsuperscript{th} World Health Assembly adopted the International Code of Marketing of Breast-milk Substitutes in 1981 (the WHO Code).\[62\] The Code aims to limit the promotion and supply of formulas to consumers in order to protect breastfeeding and assist in increasing initiation and duration rates. In response to the Code, Australia introduced the *Marketing in Australia of Infant Formulas: Manufacturers and Importers Agreement 1992* (MAIF Agreement) which is a voluntary self-regulatory code of conduct between some manufacturers and importers of infant formula. The MAIF Agreement aims to protect and promote breastfeeding by ensuring the proper use of breast milk substitutes, when they are necessary. It restricts the marketing of infant formulas to the public by manufacturers and importers who are signatories to the Agreement.\[iii\]

**The ‘medicalisation’ of breastfeeding and loss of breastfeeding culture:** In Australia in the 1960s, health professionals recommended that infants be fed on a rigid four-hourly schedule and for limited times. We are now aware such practices compromise the initiation and maintenance of breastfeeding by hindering breast milk production. As a consequence, women came to view breastfeeding as problematic and a practice that required continuous assistance and support of professionals.\[9, 63\] This undermined women’s confidence in their ability to breastfeed and resulted in the loss of a breastfeeding culture in the community and a disintegration of traditional knowledge about how breastfeeding mothers and infants

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\[iii\] Despite the introduction of the Code, the continued aggressive marketing of infant formula by multinational companies continues in many other parts of the world.\[62\]
behave, the kind of strengths they possess and the type of support they require. Rigid feeding practices have all but disappeared in Australia, however, as with all of the other factors influencing the infant feeding decision, until there is a return to a strong breastfeeding culture in our society, women may lack confidence, and qualify their decision to breastfeed with ‘if I can’. As an antenatal educator you can help couples to understand the true worth of breastfeeding, and the totality of its physiological processes, to hopefully assist them to solidify their decision.

4. The Importance of Antenatal Education

Knowledge of the contribution of breastfeeding to life-long health is not enough to develop women’s confidence and increase the rates of breastfeeding initiation and duration. Comprehensive discussion of breastfeeding is therefore an important part of antenatal care, especially as the traditional learning of breastfeeding skills from mothers and family members is now less common. As the preparatory stage for breastfeeding, the goal is to enable women to develop knowledge, strengthen commitment to breastfeeding and establish or consolidate support networks. A planned approach even in the early weeks of pregnancy, and continuity of care and support during pregnancy, birth and early parenthood can ensure that women receive opportunities for education, consistent advice, and appropriate support to continue breastfeeding. A combination of antenatal and postnatal interventions increases the initiation and duration of breastfeeding.

Currently recommended are:

1. antenatal educational strategies, that include:
   - health professionals ‘capturing’ the many teachable moments in pregnancy; and
   - small group, discursive antenatal breastfeeding education, including topics such as how breastfeeding works, the impact of intervention in labour on initiation of breastfeeding, prevention of common problems, and resources available to parents; coupled with

2. readily available breastfeeding specific, practical and problem solving support from a health professional in the early postnatal period.

Fathers benefit when some of the subject matter of the education addresses factors which are directly linked to outcomes relating to father–child and father–partner relationships. Involving men in discussions regarding the type of feeding their infant will receive, and informing them about potential problems and strategies to solve them has been shown to increase the level of support women received at 6 weeks post birth. Further, peer support at both the pre- and post-natal stages improves early breastfeeding outcomes; you could therefore consider inviting an ABA counsellor and/or breastfeeding mother to your antenatal class.

There is evidence that certain groups are less likely to breastfeed than others and would thus benefit from increased antenatal and postnatal support. These include Aboriginal and Torres Strait Islander women, young women, less educated women and/or those from other countries. In some countries female family elders and the wider community support and promote breastfeeding through traditional aspects of care in the postpartum period. Women who have recently arrived in Australia from these countries may benefit from
ethnically specific peer support in hospital and/or in the community, to assist with breastfeeding. Likewise, peer and elder support for Aboriginal women and those from the Torres Strait Islands can be beneficial especially when they are distant from their family and community. The inclusion of partners, mothers and peers in breastfeeding education and support for younger mothers has also been identified as crucial. [71]

5. The Breasts in Pregnancy

The physical changes

Breast changes may be the first physical changes that women notice in pregnancy and are most apparent in the first trimester. To support women and answer their questions, knowledge of the anatomy and function of the breast is important.

With pregnancy the adipose or fatty tissue of the breast, which has primarily been supporting the breast since puberty, decreases as the glandular tissue and the ductal system develops and matures in preparation for the birth. Two stages of breast growth are understood to occur during pregnancy. During the first half there is intense lobular-alveolar growth (mammogenesis), resulting in both an increased number and size of alveoli and extension and branching of the ductal system. [72] This growth of the mammary gland is influenced by a number of hormones including oestrogen, progesterone, prolactin, growth hormone, epidermal growth factor, fibroblast growth factor and insulin-like growth factor [73] and parathyroid hormone-related protein. [74] High levels of oestrogen and progesterone inhibit lactation prior to birth.

The nipples begin to enlarge and become more erect, the areola darkens and may enlarge, and the Montgomery glands, which are a combination of sebaceous glands and mammary milk glands, become more pronounced and noticeable. It is believed the secretions from these glands protect the nipple from both mechanical stress of sucking later and pathogenic invasion. [74, 75] As the breasts enlarge, the skin becomes translucent and as the blood supply to the breast increases the veins become more prominent. These changes all indicate that the breast is undergoing a remarkable maturation to develop the milk-making cells and ductal system, in readiness for the infant to be fed after birth.

Proliferation of the glandular tissue is believed to occur by an invasion of the adipose tissue in the breast. By mid-pregnancy there is some secretory development with colostrum present in the alveoli and milk ducts increasing throughout the second half of pregnancy (lactogenesis I). Branching of the ductal system continues but is less marked than in the first half of pregnancy. [72]

Ramsay and co-workers have demonstrated using ultrasound that the milk ducts in the lactating breast are small, superficial and easily compressed. [76] Of possibly greater significance is their discovery that the ductal system does not display the typical sac-like appearance of the ‘lactiferous sinus’. Instead ducts drain glandular tissue throughout the breast and merge into main collecting ducts close to the nipple. [76] (See Figure 2.) Ultrasound studies have also demonstrated that the milk ducts increase in diameter at milk ejection, concluding that the main function of the ducts is transport of milk rather than storage. [77]
How these changes are perceived

Women’s responses to these changes are often mixed and may range from joy and fascination to distress and dismay. You will find that some participants in antenatal education will regard their breasts and breastfeeding as a sensitive issue and you may hear a range of responses in discussion in your sessions. Tightly crossed arms or hunched shoulders may indicate that a woman is uncomfortable with her breasts and the changes. Some will ask direct questions such as ‘My breasts are huge now - what will they be like when I start breastfeeding?’ or ‘My partner thinks they are wonderful – but he doesn’t have to carry them around. Will they get bigger?’ Women with smaller breasts may ask about their ability to produce enough breast milk. It can help women to understand that the major increase in breast size is usually completed by 22 weeks of pregnancy and that there is no correlation between breast size and ability to produce breast milk.

In the second trimester many women become concerned about their ability to breastfeed, as they have heard that it is ‘hard’. In the third trimester partners seek answers to more practical issues, such as ‘What can I do to help with breastfeeding?’ Whenever you can, capture opportunities and address issues as they arise, such as when you are asked direct questions or when negative comments are made; fears can become significant concerns if they are not dealt with.

Breast care during pregnancy

One question that women often ask is what they should do to prepare their breasts for
breastfeeding. The simple answer is that there is no specific care necessary during the pregnancy. No creams, ointments, breast shells or nipple pullers have proven to make any difference to breastfeeding outcomes. The best way to prepare for breastfeeding is to learn more about it. There is no evidence to support antenatal breast examinations as a means of promoting breastfeeding. \[7\]

6. Why Breastfeed?

There is convincing epidemiological evidence of the protective effects of breastfeeding for mothers and infants \[78, 79\]. It is one of the most cost-effective investments in child survival and development and life-long health.

The importance of breastfeeding for the health of the infant

For the developing infant, breastfeeding confers improved visual acuity, psychomotor development \[78\] and cognitive development, \[80\] and reduced risk of malocclusion as a result of better jaw shape and development \[81\]. Breastfeeding then reduces the risk or severity of a number of conditions in infancy and later life, including:

- physiological reflux \[82\]
- pyloric stenosis \[83, 84\]
- gastrointestinal infections \[79, 85, 86\]
- respiratory illness \[79\]
- otitis media \[79, 87, 88\]
- urinary tract infections \[89, 90\]
- bacteraemia-meningitis \[91\]
- necrotizing enterocolitis in preterm infants \[79\]
- some childhood cancers \[79\]
- type 1 \[79\] and type 2 diabetes \[78, 79\]
- cardiovascular disease risk factors including blood pressure \[92, 93\] and total and low-density lipoprotein cholesterol \[78, 79\]
- obesity in childhood and in later life \[78, 79, 94, 95\]
- sudden infant death syndrome (SIDS) \[79, 96\]

Breastfeeding is particularly important while an infant’s immune system is immature but continues to offer significant protection throughout lactation. Factors present in breast milk that provide active or passive immunoprotection include immunoglobulins A, G and M. \[97\] In the general population and families with a history of allergic disease, exclusive breastfeeding for around 6 months reduces the risk of allergic rhinitis, wheezing, asthma and atopy in children \[98, 99\]. Premature and sick newborns survive and thrive at a significantly higher rate when they are breastfed or receive donor human milk. \[100, 101\]

Breastfeeding can be an important factor in bonding between mother and infant. The interdependence between the breastfeeding mother and infant, regular close interaction
and skin-to-skin contact during breastfeeding encourages mutual responsiveness and attachment.\[^{[102, 103]}\]

**The importance of breastfeeding for the mother’s health**

Mothers who start breastfeeding immediately after they have given birth recover more quickly. Breastfeeding hastens uterine involution and reduces the risk of haemorrhage, thus reducing maternal mortality. Preservation of maternal haemoglobin stores, through reduced blood loss, leads to improved iron status.\[^{[104]}\] Those who continue to breastfeed also lose weight gained during pregnancy more quickly and have reduced risk of breast and ovarian cancers, cardiovascular disease and osteoporosis later in life.\[^{[105, 106]}\] Women with diabetes should be encouraged to breastfeed because of maternal and childhood benefits specific to diabetes that are above and beyond other known benefits of breastfeeding.\[^{[107]}\]

Women who breastfeed have a reduced risk of post-partum depression and reduced fertility, helping to space their pregnancies. The likelihood of pregnancy during periods of lactational amenorrhoea is as low as 1.7% in the first 6 months if a woman is amenorrhoeic and fully or nearly fully breastfeeding day and night.\[^{[108, 109]}\]

7. **Your role as an Educator**

Many women have already decided how to feed by the time they have contact with a health professional, with that decision the product of a range of factors. So what is your role as an antenatal educator?

Although expectant parents may make a decision to breastfeed their infant before they see a health professional, they may or may not have a good understanding of the importance of breastfeeding for many aspects of the health of the mother and infant. This knowledge can strengthen their commitment to breastfeed, which in turn can help them overcome any difficulties they may experience after the birth. Parents who have not decided to breastfeed may be encouraged to consider it in light of this knowledge. As noted in Module 1, research has shown that the extent to which a mother commits to breastfeed at this point can impact on the duration of breastfeeding.\[^{[10]}\]

Additionally, discussing breast changes and what they mean will assist women and their partners to become more aware of the physical capacity and potential of their breasts. This sometimes leads to questions about the need for a supportive bra and the importance of correct shape and size of bra. Make yourself available for women to privately discuss any concerns they may have regarding their breasts and their ability to breastfeed. If the information they require is too specific or you are unsure of the answer, suggest that they discuss the matter with their midwife, obstetrician, general practitioner or International Board Certified Lactation Consultant (IBCLC).

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\[^{[10]}\]Skin-to-skin contact contributes not only to successful breastfeeding but also to a baby’s brain being set on the best developmental path. In Kangaroo Mother Care (KMC) the infant is cared for skin-to-skin vertically between the mother’s breasts and below her clothes, 24 h/day, with father/substitute(s) participating as KMC providers. Intermittent KMC, for short periods once or a few times per day, for a variable number of days, is increasingly employed in high-tech neonatal intensive care units. KMC enhances bonding and attachment; reduces maternal postpartum depression symptoms; enhances infant physiologic stability and reduces pain; increases parental sensitivity to infant cues; contributes to the establishment and longer duration of breastfeeding; and has positive effects on infant development and infant/parent interaction.\[^{[102]}\]
Some women in antenatal classes will be daunted by the breastfeeding difficulties they may face, while others may benefit from being forewarned. As an antenatal educator you can both reinforce a woman’s decision to breastfeed and help give her both realistic expectations as well as confidence in overcoming any problems which may arise.

Many educators believe it is important for participants in antenatal education sessions to discuss how they intend to feed their infant. This can, however, create rifts within a group and can alienate those who are not intending to breastfeed. Women may say that they are going to breastfeed just so they do not feel ostracised. As a first step, try and assess a group’s attitudes, expectations and information needs, while taking care to use inclusive language about infant feeding and create a sense of acceptance of and respect for each woman’s/couple’s individual decision.

8. Conclusion

Congratulations, you have now completed Module 1 – Preparing to Breastfeed. In this module we have explored:

- when and how the decision to breastfeed is commonly made;
- factors that influence the decision;
- breast changes that women experience in pregnancy;
- the importance of breastfeeding for the health of the infant and mother; and
- strategies that an antenatal educator can use to prepare women and their partners for breastfeeding their infant.

We hope this module has given you an understanding of how breastfeeding is perceived by women and their partners during a pregnancy and that you will be able to provide them with the information and support they require as they begin their journey.
## Module 2: The breastfeeding experience

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1. Introduction

In Module 1 we explored the physiological breast changes which occur in pregnancy as the mother’s body prepares to feed the infant, as well as the decision-making of expectant parents in relation to infant feeding. In this module we look at the physiological processes by which breastfeeding is initiated with the birth of the infant, established over the first few days and continues to provide complete and optimal nutrition for the infant for the first 6 months of life (and beyond that point with complementary foods). We also look at the range of external factors which can impact upon breastfeeding initiation, maintenance and duration. The influences on breastfeeding are summarized in Figure 3: Influences on breastfeeding initiation and maintenance, which you may like to use in your antenatal sessions.

Expectant parents will be better prepared for breastfeeding if they:

- have an understanding of the physiology of breastfeeding, especially the symbiotic relationship between maternal and infant physiology and behavior which brings about lactogenesis II and maintains the ongoing milk supply; and
- are aware that problems can arise with breastfeeding, that it can require perseverance, and importantly, that there are many sources of support and assistance for breastfeeding mothers.

The existence of some of the factors influencing breastfeeding initiation and duration, such as multiple birth, maternal diabetes and illicit drug use, will be known during pregnancy, and affected parents can be prepared before the birth for breastfeeding in their particular circumstances.

Learning outcomes

Upon completion of this module you should be able to:

- discuss how women and men describe their breastfeeding experience;
- discuss the diversity of the breastfeeding experience for those involved;
- describe how breastfeeding is initiated and maintained;
- identify factors that can influence the physiological process of breastfeeding; and
- describe the role of an antenatal educator in preparing participants for the breastfeeding experience.

2. The Breastfeeding relationship

In recent Australian and international research, women have described the powerful and varied responses that they have towards breastfeeding. For many women, nourishing their infant is so emotionally consuming it is seen as central to and indeed shapes their experience of motherhood in the first three to six months following the birth. For example, comments such as ‘it’s a special kind of moment when you breastfeed, when you look up and then look down and he’s down there looking at you’, and ‘I suppose it’s a bit of an ego trip. I like feeling that…I’m responsible for him’ and ‘I feel really needed... crucial’ are common. In an article by Schmied and Barclay breastfeeding is described as an ‘embodied’ experience, the power of which amazed many of the women in their study.[9]
Especially in the early postnatal weeks however, many women also describe the demanding and difficult nature of the experience. Breastfeeding can be enjoyable, even wondrous for some, but it can also demand commitment and some degree of perseverance and support.

Figure 3 Influences on breastfeeding initiation and maintenance

3. How Breastfeeding works

The physiological process

The biological and physiological processes of breastfeeding are summarised below.

Colostrum is the first stage of human milk and is high in immunoglobulins, lactoferrin, chloride and sodium, and low in lactose and fat. As stated in Module 1, it is present from around 16 weeks gestation and available to the infant at birth. A newborn infant placed skin-to-skin on the mother will instinctively crawl up her abdomen to search for the breast and seek this colostrum.

At birth, an infant’s stomach is about the size of a marble and the amount of colostrum an infant receives at each feed is approximately ½ a teaspoon (a statistic that amazes parents-to-be). It is not until lactogenesis II occurs between 30 and 72 hours after delivery of the placenta that copious milk secretion occurs. Placental expulsion precipitates an abrupt decline in the levels of human placental lactogen, oestrogen and progesterone, the initiating events of lactogenesis II.

Plasma prolactin levels increase sharply after expulsion of the placenta and they rise and fall with the frequency, intensity and duration of nipple stimulation. Frequent feeding in early lactation stimulates the development of prolactin receptor sites in the mammary gland. The belief is that the controlling factor in breast milk production is the number of prolactin receptor sites and not the amount of prolactin in the circulating blood. In addition, there is a prolactin circadian rhythm with prolactin release being higher at night, surging in response to an infant’s suckling.

Within seconds of an infant stimulating the sensory nerve endings around the nipple by sucking, a pulse of oxytocin is released from the posterior pituitary gland. Oxytocin stimulates the contraction of the myoepithelial cells surrounding the alveoli and milk is forced into the ducts and then down towards and through the nipple. This process is known as milk ejection or milk let-down. Multiple releases of oxytocin can occur during a breastfeed or during milk expression. The amount of milk transferred by the infant is correlated to the number of milk ejections per feed and is independent of the amount of time spent at the breast. Milk ejection can be seen by the dripping of milk from the breast or when the infant begins gulping milk, such as when the rapid pattern of two sucks per second decrease to one suck or so per second with swallowing. Milk ejection can be inhibited by stress and eliciting milk ejection can at times be difficult for mothers expressing breast milk.

The endocrine system drives breast development and milk production during pregnancy and the first few days after birth, and then as the milk supply becomes established, autocrine, or local control, commences. From then the more milk removed the more the breast will produce, as shown in Figure 3, demand = supply. The rate of milk production is regulated to match the amount of milk removed, with the infant controlling milk intake. Thus the milk supply is strongly influenced by how well the infant feeds and how well it is able to transfer milk from the breasts. Low breast milk supply can often be traced to:

- not feeding or expressing enough;
- inability of the infant to transfer milk effectively, caused by, among other things:
  - jaw or mouth structure deficits;
poor latching technique;

- rare maternal endocrine disorders;
- hypoplastic breast tissue;
- inadequate calorie intake or malnutrition of the mother; and/or
- maternal medications, specifically prolactin-inhibiting factors also known as dopamine agonists, such as bromocriptine and ergotamine, which inhibit prolactin secretion.[72]

If milk withdrawal has not commenced within 3 days postpartum, the changes in milk composition with lactogenesis are reversed and the likelihood of establishing effective breastfeeding declines.[111]

Human milk composition is not static or uniform, which makes it significantly different from artificial infant milks. Colostrum transitions through to mature milk over the first few weeks post birth, as it adapts and changes as the infant grows, making it the ideal and complete nutrition and hydration for the infant. Fats are the most variable compound in human milk and provide up to 50% of kilojoules. Fat content of mature milk is independent of breastfeeding frequency and is directly related to the relative fullness or emptiness of the breast. As the breast empties during an individual feed and/or over a day, the proportion of fat increases.[112] The fat content further increases as the infant grows.

Breastfeeding in the initial postnatal period

Infants are hardwired to seek out their mother’s breast, and if left to their own devices they are able to attach themselves and start to feed; this is known as ‘baby-led attachment’. In fact the first hours after birth are a developmentally distinct time for an infant and there are well documented short and long term physical and psychological advantages when an infant is skin-to-skin on the mother after birth.[113] As Widstrom et al. have described, an infant placed skin-to-skin immediately after birth, will exhibit instinctive behaviours in nine sequential stages, the duration of each stage varying with each infant:

- Stage 1: The birth cry: Intense crying just after birth.
- Stage 2: Relaxation: Infant resting / recovering.
- Stage 3: Awakening: Infant begins to show signs of activity.
- Stage 5: Crawling: Pushing which results in shifting body.
- Stage 6: Resting: Infant rests, with some activity, e.g. sucks on hands.
- Stage 7: Familiarisation: Infant reaches areola with mouth positioned to lick nipple.
- Stage 8: Suckling: Infant takes nipple in mouth and begins suckling.
- Stage 9: Sleep: The infant closes its eyes.[113]
Encouraging the mother and infant to maintain skin-to-skin contact will increase the chance of the infant attaching correctly at the first feed. Even removing the infant to be washed and weighed after 20 minutes can have a detrimental effect on the initial breastfeed. Odour itself seems to play a role in guiding the infant to the nipple. When an infant is placed between his mother’s breasts, one washed the other not, the infant will turn towards the unwashed breast.\[113\]

Full-term healthy infants are born with reflexes that are vital for their early survival, with several of them important for feeding. These are:

- **rooting reflex**: helps the infant to locate the nipple. When something touches an infant’s lips, nose or cheek, he will respond by opening his mouth and putting his tongue down and forward. This reflex is present at birth and extinguishes between 2 and 4 months of age;
- **sucking reflex**: observed in utero as early as 15 to 18 weeks gestation. It is stimulated by pressure along the tongue and stroking near the junctions of the hard and soft palates;
- **swallowing reflex**: develops early in fetal life (12-14 weeks gestation) and is triggered when a bolus of fluid reaches the back of the tongue, such as when the infant’s mouth fills with milk;
- **gag reflex**: the function of the gag reflex is to protect the airway from large objects and is triggered by pressure on the rear of the tongue; and
- **cough reflex**: protects against the aspiration of fluids into the airways.\[114\]

During breastfeeding, an infant’s ‘milking’ of the breast is dependent on two things, correct positioning at the breast and attachment to sufficient breast tissue. Numerous options and variations exist for positioning, but the key points for the mother are:

- she is in a comfortable position;
- her body is in good alignment with her infant, supported in such a way that the weight of the infant does not cause fatigue;
- she brings her infant to the breast, rather than the breast to the infant;
- her hand is placed at the base of her infant’s head (top of the neck) to avoid pressure against the back of the infant’s head because this action causes the infant to arch away from the breast;
- the infant’s head is supported so that the neck is neither extended nor flexed;
- the infant’s chest is to the mother’s chest and chin is to the breast;
- the infant’s nose and mouth are aligned with the nipple and areola; and
- the limbs are tucked in toward the infant’s body to prevent flailing.\[115\]

Correct attachment of the infant’s mouth to the breast, or ‘latchment’ as it is termed in the US, is as follows and as shown in Figure 4.

- the infant’s mouth is wide open and the lips turned outwards. The lower lip especially is seen to be curled right back and the infant’s chin is touching the mother’s breast;
- the nipple will be deep in the infant’s mouth, with the tip touching the infant’s palate;
- the infant suckles by making two simultaneous movements – the lower jaw goes up and down and a muscular wave goes from the tip to the back of the tongue. This
action presses the milk out of the ducts, through the nipple into the back of the infant’s mouth;

- the infant suckles with short quick movements at first, then changes the rhythm to a more continuous deep suckling as the milk flows. The infant pauses throughout with the pauses getting longer as the feed continues;

- the infant’s cheeks will be rounded and not drawn in and sometimes the ears will move as it suckles, and

- at the end of the feed the mother’s nipple may be lengthened but not pinched or squashed. Telling mothers to observe their nipple shape at the end of feeds enables them to assess (feel) the feed to detect and prevent problems.

Figure 4 Effective attachment internal view (permission to copy granted by R. Glover)

With poor attachment the infant:

- sucks or chews on the nipple only, with lips, gums or tongue;
- the mouth is not wide open and lips sucked in;
- the lips and gums press against the nipple instead of the areolar;
- the tongue may be misplaced, blocking the protrusion of the nipple into the infant’s mouth; and/or
- the cheeks are pulled in.[116]

Women and their partners want to know what to expect in the first few hours and weeks with their newborn infant. Specifically they want to know ‘how frequently will our infant feed’, ‘how will we know whether our infant is getting enough milk’ and ‘do we need to give anything else?’ This information is outlined below and provided as a Fact Sheet in Module 8.

Postnatal Day 1-2: The mother and infant are quite sleepy and they need to rest and recover from the labour and birth.

- The time taken by the infant when it is breastfeeding will be minimal, as the protein and kilojoule-rich colostrum will meet its needs. The amount of colostrum an infant receives at each feed is approximately ½ a teaspoon.
- The infant is well hydrated from being in the amniotic fluid with continual feeding from the placenta, so it will not require frequent feeds. Feeds may only be every 3-3½ hours. If the infant does not want to feed after about 5 hours, he or she should be roused and put to the breast.
- In the first 2 days, urine produced by the infant is concentrated and often contains chemicals called urates, which can turn the nappy orange or pink.
The first bowel motion is a sticky greenish black substance called meconium. Every baby should pass meconium within the first 24 hours after birth.

**Postnatal Days 2-3:** The infant will become wakeful and want to feed more frequently.

- The infant’s thirst intensifies a few days after birth and this triggers the need to breastfeed more frequently.
- The mother’s breast milk will begin to change from colostrum to transitional milk with the volume of the milk slowly responding to the infant’s needs.
- The mother’s breasts may feel heavier with the veins being more obvious.
- As the infant feeds more frequently its stools and urine output will increase.

**Postnatal Days 3-4:** The infant may become unsettled, feeding more frequently and not wishing to be separated from its mother. The mother is often emotional with ‘day 3 blues’ and in need of sleep and rest.

- The breasts become firm as the milk volume increases.
- Once the mature milk begins to flow, the infant tends to have bigger feeds and then a long sleep. This may cause temporary over-fullness in the breasts.
- Infant’s stools change to transitional stools as the mature milk begins to be absorbed.

**Postnatal Days 4-5:** The infant settles into a somewhat more predictable feeding pattern.

- The breasts are softer after feeds as they start to synchronise with the infant.
- The infant’s stools change to breast milk stools, which are yellow and soft. The infant has 6-8 wet nappies per day.

It should be emphasised that this is a typical pattern for a newborn infant and mother but there is individual variation on this pattern, for example when caesareans and/or analgesia in labour delay lactogenesis. Mothers should be encouraged to feed their infants when they show signs of hunger. Infant feeding cues can include:

- opening of the mouth and sucking movements and sounds;
- rapid eye movements;
- soft cooing or sighing sounds;
- restlessness and turning head from side to side searching for the breast;
- opening the mouth and sucking hands;
- eyebrows furrowing and tension in the face; and
- finally crying.

(Refer to the [Queensland Government Department of Health website](http://www.health.qld.gov.au) for photos of these cues.) It is often easier to breastfeed an infant who is a little hungry than one who is very hungry.

An infant’s feeding pattern can vary and can be related to the mother’s breast storage capacity. Mothers with a large breast capacity have more milk at each feeding, with the infant satisfied with one breast each time. The infant might feed fewer times per day than average but gain weight at an average or above-average rate. Mothers with a small breast storage capacity can produce plenty of milk overall, but their infants can have a very different breastfeeding pattern. Note that breast size itself bears no relationship to the storage capacity of the breast.
Overall, as breastfeeding establishes in the early postnatal weeks:

- it is common for infants to breastfeed 8-12 times in 24 hours;
- some infants will breastfeed every 3 hours day and night, whereas other infants will cluster-feed, every hour or less for 4-6 feeds then sleep 4-6 hours;
- some sleepy infants may need to be woken for feeds;
- night feeds are important for making milk; and
- infants indicate when they are hungry before crying by putting hand to mouth, rapid eye movements, soft cooing or sighing sounds. It is often easier to breastfeed an infant who is a little hungry than one who is very hungry.

Signs of an infant getting enough milk in the early postnatal weeks are:

- 6-8 wet cloth nappies or 4-5 heavy disposable nappies per day;
- soft, regular bowel motions;
- infant’s arms and hands relaxed when feeding;
- infant is alert, acts hungry at times, is fussy at certain times of the day and acts satisfied after feeds;
- the mother’s breasts become softer and lighter during a feed;
- you can hear and see the infant swallowing when feeding;
- feeding is rhythmic with a swallow following most sucks; and
- infant gains weight and grows in length and head circumference.

The length of time an infant feeds at the breast is less important than what they are doing when at the breast.

For the mother, the signs of a functioning milk-ejection reflex are:

- their infant swallowing and establishing a suck-swallow rhythm;
- tingling or prickling pins and needles which may take several weeks to develop;
- a sudden feeling of fullness;
- an increase in skin temperature;
- a feeling of wellbeing or relaxation;
- for some mothers pain or nausea;
- dripping, leaking or spurting from the unsucked breast;
- for some mothers an intense thirst; and
- uterine contractions accompanied by a gush of lochia in the immediate postpartum period.\(^3\)

It is important to note that the pattern of feeding in the first few weeks, described above, is potentially quite vulnerable and if for some reason one of the stages is interfered with, the whole situation can change. Supportive environments, consistent advice, being pain free and positive encouragement are all important when the woman and infant are learning to breastfeed.
Factors that influence Breastfeeding

In Section 3 above, we discussed the physiological process by which breastfeeding and a mother’s milk supply is established. A number of the factors discussed below can interfere with this process. Some relate to the birth or the health of the neonate, others impact upon the mother’s behavior and feeding choices. A number impact on breastfeeding success because they delay the onset of lactation and/or affect the infant’s initial weight loss and early weight gain, leading to pressure to supplement the infant with infant formula if its weight drops below 10% of its birth weight.

Supplementary feeding, such as with infant formula, water, or glucose, when there is no medical reason adversely affects the establishment and maintenance of successful breastfeeding. An Australian study confirmed that formula feeding in hospital decreased the likelihood of breastfeeding to 6 months of age. Supplements, complements or pacifiers/dummies when the infant is unsettled, even on days 2-3, will impact on sucking stimulation at the breast and thus delay the milk coming-in. They can increase the incidence of venous and/or milk engorgement and physiological jaundice as described below. One of the “Ten Steps” of the Baby Friendly Health Initiative (BFHI) is: ‘Give newborn infants no food or drink other than breast milk, unless medically indicated’. (Appendix 4 explains the BFHI). If an infant is unable to take all feeds directly at the breast, expressed breast milk should be the preferred method of feeding.

In cases where supplementary feeding is necessary, the mother should make an informed decision and give permission before this is undertaken. The mother should be encouraged to breastfeed, if possible, before offering the supplementary feed. A number of milk banks in Australia provide screened and pasteurized donor human milk for preterm infants or those with serious medical conditions.

It is important that mothers understand that:

- there are specific measures to support breastfeeding if difficulties arise. (Depending on the nature of the problem, these may include skilled assistance with latching on, proper positioning, expression (pumping) of milk, additional feeds, use of a feeding tube and medication); and
- advice and support are available in hospital and after discharge from a range of sources including home midwifery services, maternal and child health nurses, the ABA and lactation consultants for complex breastfeeding issues.

The following is an overview of factors which can impact upon successful breastfeeding; further detail can be found in resources such as Brodribb 2012.

Gestation: Researchers have found that after adjusting for standard confounding factors, preterm infants are less likely to be breastfed at six months compared to those born at term. When explored further, infants born at 37-39 weeks, who are considered full term, had lower breastfeeding rates than those born at 40 weeks gestation. Wight describes how the near to term infant may present with subtle immaturity, poor ability to clear normal lung fluid, increased incidence of apnoea, increased risk of hypothermia,

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V In October 2014 the Australian College of Midwives published a Position Statement on the Use of Donor Human Milk.
neurological immaturity and immature oro-motor development all of which can have an impact on suckling.\[120\]

**Maternal fluids in labour:** The use of intravenous fluids prior to birth is standard practice with epidural anaesthetic and caesarean section, and at times with fetal decelerations and maternal health complications such as diabetes. This extra maternal fluid raises a question about how the unborn neonate is affected and whether the ensuing post-birth newborn weight loss is related to a fluid shift rather than feeding or pathology. A Canadian study conducted from 2008 to 2010 found positive relationships among the variables of maternal IV fluids, neonatal output, and newborn weight loss, although the relationship between maternal IV fluids was not evident until 60 hours postpartum. Women were asked if they noticed the day their “milk came in”, with a significant positive correlation between late onset of lactogenesis II (day 3 for 41% of the sample), and percentage of newborn weight loss at 72 hours. The reported late onset of lactogenesis II was positively related to the total amounts of maternal fluids from admission to birth. Noel-Weiss et al. then proposed that baseline weight be taken at a point after the diuresis, not at birth, to potentially reduce the practice of supplement feeding provided to an infant whose weight loss since birth weight is greater than 10%.\[121\] A protocol for clinicians was developed to collect and analyse data from their own maternity site. Baseline weight at point of diuresis has the potential to reduce unnecessary supplementation.\[122\]

**Mode of birth:** There is evidence that a caesarean section and some forms of labour analgesia may be negatively associated with the initiation of breastfeeding. Studies propose that this is related to the type of analgesia or anesthetic used, in particular the potential infant ‘drowsiness’ from opioids, a delay in skin-to-skin contact with the impairment of the infant’s natural breastfeeding reflexes, culminating in a deferral of the initiation of breastfeeding.\[123, 124\]

A stressful vaginal birth experience, with a long 2nd stage, may interfere with the release of oxytocin, the hormone responsible for milk ejection.\[125\] Prospective observational studies indicate that both maternal and fetal stress during labour and birth, including in cesarean birth, are associated with the delayed onset of lactation.\[125\]

Oxytocin integrates the function of several body systems and exerts many effects in mothers and infants during breastfeeding. Infants also produce oxytocin. In infants born by vaginal delivery, oxytocin levels in umbilical arterial blood shown to be higher than in infants born by caesarean section, with the material oxytocin levels also higher. Both mother and infant become more socially interactive and synchronise their interactions, they become calmer, the infant cries less, the pain threshold increases, cortisol levels decrease and skin temperature of the mother’s breast and of the infant increases. These effects are likely to involve oxytocin release in the brain.\[126\] Clinicians are advised to focus on providing additional support to breastfeeding mothers who experience a caesarean or a difficult labor and birth with multiple interventions.\[124\]

**Skin-to-skin contact at birth:** Until recent changes in practice, drying, weighing, eye care and vitamin K injections were performed in more than 90% of newborns within minutes of birth. We now know that early skin-to-skin contact (ideally beginning at birth and involving the placing of the naked infant, head covered, with a warm towel across the back, prone on the mother’s bare chest) evokes neurobehaviors ensuring fulfillment of basic biological needs. This time may represent a psychophysiological ‘sensitive period’ for programming
future physiology and behaviour. For example, it has been shown that skin-to-skin for 25 to 120 minutes after birth, early suckling, or both, positively influenced mother-infant interaction one year later when compared with routines which involved separation of mother and infant. Infants who do not have skin-to-skin contact at birth are at greater risk of not being breastfeed, of neonatal hypothermia and hypoglycaemia and increased episodes of crying.

Retained placental tissue: Retained placental products, with or without a postpartum haemorrhage (PPH), can continue to signal progesterone release, which inhibits prolactin from triggering the breasts to function. Additionally the expected increase in milk volume on days 3-4 may then be affected if maternal-infant separation occurs as a result of the PPH.

Maternal diabetes: Type 1 diabetic mothers and their infants, and some with insulin-dependent gestational diabetes, may experience birth complications as well as a delay in lactogenesis II related to a temporary imbalance in the amount of insulin required for glucose homeostasis, although these are less likely with well-controlled diabetes. However, it is important that women with Type 1 or gestational diabetes know in advance of the birth that:

- they can breastfeed successfully;
- there is no significant difference in the composition of the breast milk of diabetic mothers;
- both skin-to-skin contact and breastfeeding can enhance the diabetes-related health of both mother and infant; and
- specialised care and advice can assist in overcoming any breastfeeding difficulties.

Some centres encourage women to express and store colostrum before the birth so that it can be provided to the infant if needed (for example, if the mother has insulin treatment for diabetes). While the benefits of early colostrum are well documented, the benefits of antenatal breast expression are yet to be substantiated and its safety is yet to be determined. A large RCT (the Diabetes and Antenatal Milk Expression [DAME] study) will provide evidence about the potential benefit (or harm) of the practice.

Maternal obesity: There is a negative association between obesity and initiation of breastfeeding and its duration, and obesity has been associated with delayed onset of lactation. It has been postulated that, as adipose tissues concentrate progesterone, obese women may have higher levels of progesterone leading to a reduced prolactin response and a subsequent delay in the onset of lactogenesis stage II. An alternate theory is that impaired suckling as a result of mechanical difficulties leads to the diminished prolactin response, suggesting a physical rather than physiological mechanism. Despite these initial difficulties, with guidance the vast majority of overweight women are able to establish exclusive breastfeeding.

Other maternal health conditions that can impact on initiation of breastfeeding: Previous breast reduction mammoplasty, hypoplasia (insufficient mammary tissue), polycystic ovarian syndrome, infertility and thyroid dysfunction can all have an impact on the initiation of breastfeeding.

Other problems that can arise: Poor positioning or attachment of the infant can affect the amount of sucking stimulation with the potential to delay the milk volume increase. In addition, it can increase the incidence of damaged nipples, venous and/or milk
engorgement and ultimately physiological jaundice, as it delays the laxative effect of the breast milk.

**Multiple births:** There has been a substantial increase in multiple births in recent years. Many parents expecting more than one infant are uncertain as to whether breastfeeding will be possible. They can be reassured that:

- breastfeeding of two or more infants is usually possible;
- they are capable of producing sufficient milk;[137]
- breast milk gives these infants, who are often preterm, health protections;
- breastfeeding helps ensure frequent mother-infant interaction with each infant; and
- professional advice and support is available to assist the mother as she meets the challenges of feeding more than one infant.

Detail on breastfeeding twins and higher order multiple births is provided in Core Curriculum for Lactation Consultant Practice, Chapter 30.[137]

**Maternal confidence, anxiety and/or depression:** The importance of maternal confidence on breastfeeding outcomes has been reported in studies. Mothers with high levels of extraversion, emotional stability and conscientiousness have been shown to be significantly more likely to initiate and continue breastfeeding for a longer duration. Counter to this, introversion and anxiety may prevent women from seeking support and/or challenging negative attitudes of others at this critical time. Understanding the influence of maternal personality may thus be a useful tool in antenatal support to recognise women who may need extra, directed support while facilitating discussion of potential barriers to breastfeeding.[138] Support and reassurance, including in the antenatal period, can help mothers develop confidence in their mothering and breastfeeding abilities.

A study of 253 human infants provided suggestive evidence that cortisol in breast milk may also contribute to behavioral tendencies in humans.[139] Breastfeeding mothers with higher plasma cortisol concentrations, used as a proxy for milk cortisol concentrations, rated their infants as significantly more fearful than did breastfeeding mothers with lower plasma cortisol concentrations. Importantly, maternal cortisol concentrations were not associated with infant fearfulness among mothers who were formula-feeding their infants. These data suggested that the cortisol ingested via milk directly contributed to infant fearful temperament, rather than maternal cortisol influencing behavioral care of the infant or the mother’s rating of her infant’s temperament.[139] Little is known about the actual interplay between maternal stress and breastfeeding, except that maternal stress can be a risk factor for delayed onset and establishment of breastfeeding.[140, 141] Likewise, research is required to understand the interplay between prenatal and postnatal depression and breastfeeding. In the meantime, it is proposed that screening for depression symptoms during pregnancy can help to identify women at risk for early cessation of exclusive breastfeeding. Exclusive breastfeeding may indeed help to reduce symptoms of depression from childbirth to 3 months postpartum.[142, 143]

**Conflicting advice:** As with any skill we learn, our introduction to it can have a significant impact on the outcome. New parents are on an emotional roller coaster so they are receptive to all information and are vulnerable in their aim to be ‘perfect parents’. Comments made by women such as, ‘but every midwife had a different way of showing me how to breastfeed so in the end I just did what I thought was best’ and ‘everyone told me
something different, I became quite confused’ indicate that, for some, advice can be conflicting and confusing to the detriment of their breastfeeding experience and their maternal confidence more generally. As an antenatal educator you can help prepare parents–to-be by explaining the diversity of infant feeding (and indeed birthing and parenting) experiences and the consequent quantity of advice, not always consistent, they will encounter. The best advice is to be found at ABA and government websites. Meeting parents and other parents-to-be, such as at an ABA group meeting, can also be helpful. Equipped with this knowledge and understanding they can begin to have confidence in their decision-making and understand that there is ‘no one right way’ to breastfeed an infant.

In addition, familiarising yourself with policies and resources, including those of your maternity unit, Early Childhood/Maternal and Child Health Centres and/or the ABA can help to reduce the conflicting advice given by health professionals involved in the care of the mother, her infant and family.

Half-truths, myths and rules: The family and community in which the mother and her partner live are a significant influence on breastfeeding practices. Practices have changed greatly over the years as we have moved from the rigid, prescriptive, scientific era of regulating and timing feeding, to the more flexible unrestricted breastfeeding practice of today. Some of the early ‘rules’ still linger and have been added to the pool of myths surrounding breastfeeding.

As an educator you will find that women and their partners may ask you an amazing range of questions and some pass quite unexpected comments, such as ‘I was told I couldn’t wear a black maternity bra as the dye would get into the milk’ or ‘I’ve heard you can feel like a milk-making machine when you feed, it sounds a rather gross’. If you are uncertain as to how to address their concerns or questions, you could ask them why they asked the question or passed the comment as they may have misinterpreted or misunderstood a family comment or experience. If they remain concerned and you don’t know the answer, you should refer them to their care provider or an IBCLC. Activity 3.4 in Module 7 provides examples of myths you may encounter.

Unrealistic expectations: Most infants have unsettled periods which can be quite distressing for the parents even though the causes when found are usually minor. Some new parents mistakenly think that infants sleep for 3-4 hours in regular patterns around the clock. Frequent feeding is normal and infants’ individuality and variations in their appetites need to be carefully explained to parents. (See also ‘Perceived inadequate milk supply’). Teaching them infant feeding cues, and infant sleep cycles, as per the handout in Module 8, as well as the fact that breastfeeding is a learned function and may take time to adapt to, can help.[3]

Support from partner and family: The early days and weeks with an infant can be exhausting, confusing and overwhelming if the new mother attempts to do everything for herself. Many skills have to be learned and experiences negotiated. The partner is an important support factor in successful breastfeeding but can feel excluded from the mother-infant relationship.[36] Some fathers describe feeling helpless when their infant is hungry, and others that feeding their infant with a bottle would be an activity they could participate in, providing a sense of intimacy with their newborn.[36][VI] Discussing with

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[VI] In the past attachment theorists focused on the maternal–infant relationship, however there is now
expectant parents the possible contributions of the partner (and other key supports), including emotional support, assuming greater domestic and practical responsibilities, and the intimate ways they can bond with their infant (for example by bathing, massaging and even skin-to-skin contact), can help to reduce their feelings of isolation and increase their connection to their infant. As Mitchell-Box outlines, using language such as ‘breastfeeding triad’ can also help acknowledge the importance of the partner in supporting and strengthening the breastfeeding experience.[36]

Research has found that informal support, for example from partner and family, is more influential than support from formal sources, such as midwives, doctors and nutritionists.[146, 147] Women have more contact with their personal social structures than health care providers, with research demonstrating that the mother’s partner and her own mother are the most influential people in her informal support network.[148-150] An increasing number of hospitals are providing antenatal grandparent education sessions, so that the members of new parents’ support networks understand the importance of breastfeeding as well as the reasons for current newborn care practice, such as rooming in and demand feeding.

**Peer support:** Peer support can increase parents’ understanding and knowledge of the breastfeeding process, peer counsellors have been found to increase initiation and duration rates of breastfeeding and women welcome and appreciate breastfeeding support groups when they are offered. Peer support engenders a sense of personal empowerment to breastfeeding women, giving credibility and value to breastfeeding. Women value the emotional warmth, supportive social interactions and advocacy that peer support provides.[151-153] Additionally, peer support can have a positive impact on initiation and duration among younger mothers by helping them to view breastfeeding as the norm and creating an environment where breastfeeding is accepted.[154] Breastfeeding peer support has been identified by the WHO as a key intervention to help improve breastfeeding and exclusive breastfeeding rates.

Parents may be unaware of the value of peer support before they have their infant, so involving the parents of new infants in your antenatal program, as we describe in the Activity 5.1 ‘Reality of Breastfeeding’ in Module 7, can be valuable. Encouraging them to contact and/or join their local ABA branch is another. ABA is an effective community peer support network, with active branches in all states and a toll-free 24 hour telephone helpline providing breastfeeding information and peer support.

**The pressure to breastfeed:** Women and their partners sometimes feel ‘pushed’ to breastfeed by midwives (see callouts below), and feel that little consideration is given to the practical, emotional and relational support necessary for women to achieve sustained breastfeeding.[13, 155] It has been shown that some women breastfeed whilst in hospital just to ‘get the midwife off my back’.

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recognition of the importance of the infant-male relationship and a growing understanding of the role of infant communication in the development of this early relationship.[144, 145]
While midwives and other health care professionals are well-motivated in their efforts to encourage mothers to breastfeed, care must always be taken to ensure breastfeeding information and support are offered without pressure or judgment, particularly where parents are uncertain or have decided not to breastfeed. First time parents in particular are experiencing a momentous change in their lives and may feel vulnerable or easily overwhelmed.

Anecdotally it appears that some instances where parents feel pressured to breastfeed may be due to the way in which policies and procedures to promote, support and manage breastfeeding are applied by health professionals and/or interpreted by parents. For example, the BFHI ‘Ten Steps’, which are in place in around 20% of Australian maternity facilities (see Appendix 4), are framed to ensure that promotion of infant formula does not interfere with parents’ infant feeding decision and that supplementary feeding of a breastfed infant with formula does not interfere with a mother’s milk supply. The Ten Steps therefore include that:

- parents are given no group education or written promotional material on use of formula; and
- newborn infants of breastfeeding mothers are given no food or drink other than breast milk unless medically indicated (with an acceptable medical reason recorded, and written informed consent obtained, before a newborn infant is offered a supplementary or complementary feed of anything other than the mother’s breast milk).

Some women and clinicians have described the application of the Ten Steps as ‘extreme pressure to breastfeed’ with some women ‘left feeling extremely guilty for not doing so’. The principles have also on occasion been misinterpreted by staff as a prohibition on the discussion of options other than breastfeeding. At strategic, policy and practice levels the infant feeding message needs to change to encourage a more woman-centred focus including discussions about the realities of all types of infant feeding. It is important that

**Quotes from parents**

- Even the posters on the walls pushed breastfeeding – you couldn’t escape!
- I was just so over the pain – my nipples hurt so much but I kept being told to just keep going.
- Dave (partner) told me to stop, give myself a break but I felt so bad about giving up, but it was best for Tom (baby).
- Every midwife had her own view – some say it is good to have different opinions but I found it hard.
health providers continue to promote and support breast feeding; and that effective services are provided to women who wish to breast feed to help them to do so. However provision of information about all aspects of feeding is needed as well as support for women who do not wish to breast feed.\[156\] In fact the criteria for baby friendly hospitals in Australia include that staff are trained to provide mothers who are not breastfeeding with one-on-one guidance on safe and hygienic preparation and storage of infant formula and best practices for bottle feeding their infants. (See the information on expressing and storing breast milk and the use of infant formula)

Return to paid work: There is probable evidence that both initiation and duration of breastfeeding are negatively associated with mothers’ intention to work or return to work. \[3\] Among the factors that limit mothers’ ability to continue breastfeeding are the relative brevity of maternity leave, inflexible hours of work and the lack of paid breastfeeding or expressing breaks at work, along with a lack of facilities, such as work-based childcare and a suitable place to express and store milk.

This has implications for antenatal breastfeeding education because many women make decisions during their pregnancy about returning to work after the birth and it is important that they be made aware that:

- exclusive breastfeeding for even a few weeks or months provides significant health advantages for themselves and their infant;
- continued partial breastfeeding following return to work is possible and has health advantages;
- breastfeeding can be combined with paid work (and mothers can establish in advance whether there is support for breastfeeding at their place of work and what arrangements can be made); and
- support and advice are available to assist them to transition from exclusive to partial breastfeeding or formula feeding.

The media and breastfeeding: The sensationalisation of breastfeeding by the media can create unnecessary anxiety for parents which can then have an impact on the initiation and duration of breastfeeding. Below are two examples of newspaper headlines that were alarmist and somewhat misleading.
This article, published in the New York Times on 9 January 2005, stated that ‘if human breast milk came stamped with an ingredients label, it might read something like this: 4 percent fat, vitamins A, C, E and K, lactose, essential minerals, growth hormones, proteins, enzymes and antibodies’. However read further on and this article becomes alarmist: ‘But read down the label, and the fine print, at least for some women, sounds considerably less appetizing: DDT (the banned but stubbornly persistent pesticide famous for nearly wiping out the bald eagle), PCB’s, dioxin, trichloroethylene, perchlorate, mercury, lead, benzene, arsenic. When we nurse our babies, we feed them not only the fats, sugars and proteins that fire their immune systems, metabolisms and cerebral synapses. We also feed them, albeit in minuscule amounts, paint thinners, dry-cleaning fluids, wood preservatives, toilet deodorizers, cosmetic additives, gasoline by-products, rocket fuel, termite poisons, fungicides and flame retardants.’

The article continues: ‘If, as Cicero said, your face tells the story of your mind, your breast milk tells the decades-old story of your diet, your neighbourhood and, increasingly, your household decor. Your old shag-carpet padding? It’s there. That cool blue paint in your pantry? There. The chemical cloud your landlord used to kill cockroaches? There. Ditto, the mercury in last week’s sushi, the benzene from your gas station, the preservative parabens from your face cream, the chromium from your neighbourhood smokestack. One property of breast milk is that its high-fat and -protein content attracts heavy metals and other contaminants. Most of these chemicals are found in microscopic amounts, but if human milk were sold at the local Piggly Wiggly, some stock would exceed federal food-safety levels for DDT residues and PCB’s’. This article sensationalised the impact of toxins and had the potential to alarm parents.
This second media clip is also emotive and alarmist, purposely so to promote breastfeeding. The implied causation of the headline is indeed only an association. (This link provides the article in *Nature World News*.)

The study followed 1,312 expectant mothers who enrolled between 1999 and 2002 in Project Viva which examined their pregnancy, labor and the overall health of the child. The findings, which were published in *JAMA Pediatrics*, found that each additional month a child was breastfed resulted in better language skills at 3 years old and intelligence at age 7, compared with babies who had formula milk. The study is one of the largest to analyze the impact of breastfeeding on a child’s intelligence. The reality is though that breastfeeding is not the only contributing factor to intelligence, thus there being a correlation not causation as implied by this headline.

As an educator you can help to counter the emotive, sensationalised, sometimes negative impact of media portrayal of breastfeeding by keeping up-to-date with the latest information, research and media coverage on breastfeeding. This will enable to you to address participants questions and concerns in breastfeeding sessions.
Mothers can experience difficulties when breastfeeding, especially in the early days or weeks when they and their infant are learning. These difficulties are usually minor and can be readily overcome with advice, assistance and support. They are outlined below and sources of more detailed information include NHMRC ‘Infant Feeding Guidelines’ 2012, the ABA and Brodribb 2012.

**Nipple pain and trauma:** Nipple pain or discomfort is common during the early days as breastfeeding is being established and is one of the most commonly given reasons for ceasing breastfeeding. Women should be informed of the likelihood of early discomfort as they become accustomed to the sensations of an infant suckling, but also aware that continuing nipple pain is not normal and if it occurs, advice from a health care professional should be sought. Causes of ongoing nipple pain include incorrect positioning of the infant at the breast, flat or retracted nipples, lack of nipple exposure to light and air, infant mouth or palatal abnormalities and nipple vasospasm.\(^3\)

Many interventions have been proposed to prevent or treat nipple pain, with antenatal education on positioning and attachment technique being the one for which there is the most evidence. Evidence also supports early postnatal education. Common treatment for nipple pain is expressed breast milk and fresh air, compresses with warm water, or tea bags. There is inadequate evidence in particular for breast shields, aerosol spray, film dressing and modified lanolin.\(^3\)

**Engorgement:** Engorgement is the distension and swelling of the breast that occurs as milk production increases, typically on the third to fifth day after birth. It is normal but if not managed effectively it can be very distressing and may progress to mastitis and abscess formation. A range of approaches to symptom management have been advocated, including compression binders, cold packs, application of cold or room temperature cabbage leaves, ultrasound and analgesia. It is unclear whether any of these techniques offer any advantage over no intervention. Mothers can be advised to hand express enough milk for comfort so that the breast is soft enough for the infant to attach. If engorgement persists for more than a day or two, the cycle can be broken by completely draining both breasts with an electric pump. Generally engorgement is preventable and by encouraging rooming in, frequent feeding with good attachment it should settle down quickly.

**Mastitis:** Mastitis is an inflammatory process that may or may not progress to a breast infection. The signs are pain, swelling, redness and often fever. Approximately 10-25% of breastfeeding women experience at least one episode of mastitis. The initial cause is thought to be an unresolved increase in the intra-ductal pressure, first causing a flattening of the lactocytes and an increase in permeability of the tight junctions. A paracellular pathway may then occur between the cells, which allows some of the components in breast milk to leak into the interstitial tissue resulting in an inflammatory process.\(^{157}\) Contributing factors are milk stasis and inefficient milk removal. Prevention includes 24 hour rooming in and increased skin-to-skin contact as this promotes the prompt recognition of infant feeding cues, avoiding the use of pacifiers, recognition of the early warning signs of milk stasis, massaging blocked ducts and if an infant remains an inefficient feeder the mother may need to hand express or use a pump.

With management of mastitis breastfeeding can continue, in fact it is advised. Management
includes:

- adequate rest;
- checking the infant’s positioning and attachment;
- feeding the infant frequently, starting with the affected side;
- a warm cloth applied before and during a feed to assist milk ejection; and
- gentle massaging of the affected area towards the nipple while feeding or expressing.

If symptoms persist after trying these methods, antibiotics should be commenced early and continued for 10-14 days.\[^3\]

**Perceived inadequate milk supply:** The most common reason that women give for stopping breastfeeding prematurely is insufficient milk.\[^{116}\] It is thought that approximately 25-30\% of women reduce breastfeeding duration due to perceived breast milk insufficiency.\[^{158, 159}\] Mothers are often concerned that they are not producing enough breast milk, with many wishing that ‘if only I could see how much is coming out’. Parents can be reassured regarding the adequacy of the milk volume and quantity if the infant is exclusively breastfed and:

- has 6-8 pale urine soaked wet cloth nappies, or 4-5 heavy disposable nappies over a 24-hour period;
- produces a breast milk soft stool daily or every second day. Stooling generally changes to less frequency after 6 weeks;
- is alert with bright eyes, moist lips and good skin tone;
- is reasonably content for some time between some feeds; and
- has appropriate weight gain when averaged out over a 4 week period.\[^3\]

Parents can also be reassured that there is very wide variation in the feeding patterns of healthy exclusively breastfed infants. A cross-sectional study of a group of infants between one and six months of age, who were growing normally against the WHO Growth Charts, showed the following variability:

- between 4 and 13 breastfeeding sessions per day;
- between 12 and 67 minutes – the duration of a breastfeeding session;
- between 54 and 234 ml – volume of milk consumed in a breastfeeding session; and
- between 478 and 1356 ml – volume of milk consumed in a 24 hour period.\[^{160}\]

Parents should also understand that the factors that could contribute to inadequate milk volume are poor attachment or frequent disruption of an infant, restricted feeds, use of nipple shields, maternal nicotine or other substance abuse, severe maternal under-nutrition, maternal illness, use of pacifiers and the use of supplementary feeds and tongue/lip ties. Generally cases of what is thought to be low milk supply are in fact inadequate intake. Restrictive feeding practices such as used with sleep training techniques may lead to inadequate intake and breast stimulation.

### 6. Additional Considerations

There are few situations in Australia in which breastfeeding is contraindicated or not advised. Examples include where an infant has galactosaemia or maple syrup urine disease, or where a mother is HIV positive. There are other situations where parents may require
special advice, either ante- or postnatally, in relation to breastfeeding. The most common situations are described briefly below.

**Tobacco:** There is convincing evidence that maternal and paternal smoking is negatively associated with breastfeeding outcomes, including initiation and duration.\(^{[78]}\) It remains unclear whether the mechanism for this association is biological, psychological, behavioural and/or cultural. Parents should be educated about the negative impact of smoking on breast milk supply, the impact of secondary exposure for the infant, and the increased risk of SIDS and respiratory allergy. Smokers are less likely to breastfeed but they should be encouraged to do so because of the modifying effect breastfeeding has on the adverse effects of smoking. (They should be warned however that co-sleeping and bed-sharing are not safe – see below.) Secondary smoking is a separate concern regarding the child's long-term health. Of note, the two most commonly used smoking cessation medications (varenicline or *Champix* and bupropion or *Zyban*) are not recommended during pregnancy or lactation.\(^{[3]}\)

**Alcohol:** Alcohol transfers into milk readily, with an average milk/plasma ratio of about 1.1. The NHMRC guidelines state 'maternal alcohol consumption can harm the developing fetus or breastfeeding infant. For women who are pregnant or planning a pregnancy, not drinking is the safest option. For women who are breastfeeding, not drinking is the safest option.'\(^{[3]}\) Alcohol enters breast milk and may persist in the milk for several hours after consumption. Analysis of the 2001 National Health Survey found that, although most breastfeeding women drink at low levels (up to two standard drinks per week), 17% were drinking more than seven standard drinks per week.'\(^{[3]}\)

Alcohol consumption is associated with decreased lactational performance in terms of the milk ejection reflex, milk production by the mother and milk consumption by the infant. Excess levels of alcohol in infants may lead to drowsiness, deep sleep, weakness and decreased linear growth. The recommended advice for women who do drink is, avoid breastfeeding while consuming alcohol and for at least 2 hours subsequently for each standard drink consumed.\(^{[163]}\) The option of expressing prior to consuming alcohol could be discussed.\(^{[3]}\)

**Caffeinated beverages:** While some mothers report that infants become unsettled and irritable following maternal consumption of quantities of caffeine, there have been no controlled trials of early caffeine exposure on infant behavior. The amount of caffeine transferred to breast milk is dependent on the quantity and the mother’s ability to absorb and metabolise caffeine. The caffeine content of a cup of tea or coffee also varies due to the method of preparation and quantity consumed. On average, an espresso coffee has 6—120 mg per 250 ml cup, instant coffee has 6—80 mg per 250 ml cup and tea has 10-50 mg per 250 ml cup. Cola, energy drinks and some sports drinks also contain significant amounts of caffeine. Peak levels of caffeine in breast milk are reached approximately one hour after consumption. Mothers are encouraged to moderate their intake of tea, coffee and other caffeinated drinks. For most adults the elimination half-life of caffeine varies between 3 and 7 hours, but in a newborn infant it is 50-100 hours. By 3-4 months of age infants have the ability to metabolise caffeine. The reduced elimination by newborns could potentially lead to caffeine accumulation with adverse effects.\(^{[3]}\)

**Illicit drugs:** Breastfeeding mothers should not smoke marijuana or use other mood-altering substances, as these substances may be excreted in the breast milk. In addition to the
effects of such drugs on the infant, a mother who is not fully alert can be a hazard to herself and the infant while breastfeeding or preparing infant formula. Specialised management of breastfeeding is needed where a mother is using addictive drugs.[3]

**Hepatitis B:** Current Australian recommendations are that all infants be vaccinated against hepatitis B within 24 hours of birth. In Hepatitis B-positive mothers breastfeeding may begin once the infant has been immunised. Extensive experience indicates that the birth dose of Hepatitis B vaccine is tolerated well by newborn infants and does not interfere with the establishment or maintenance of breastfeeding.[3]

**Hepatitis C:** The evidence suggests that there is no association between transmission of hepatitis C and mode of infant feeding. The virus may be inactivated in the infant’s gastrointestinal tract or neutralised in the colostrum. Mothers who have hepatitis C can and should breastfeed. Concern arises however if a mother has a co-infection such as HIV.[162]

**HIV:** At present, women in Australia who are HIV positive are advised not to breastfeed if replacement feeding is acceptable, feasible, affordable, sustainable and safe (specialist advice is needed for each individual case). Transmission of HIV through breastfeeding is well documented.[3]

**Maternal medications:** Most medications are excreted into the breast milk usually in concentrations similar to blood levels. Typically this amounts to less that 1-2% of the maternal dose, which rarely poses a danger to the infant. Prior to consumption however each drug should be assessed by a health professional. Current information on the use of medications while breastfeeding (or pregnant) is available from Medicines Information Centres in most jurisdictions or the NPS Medicines Line. The numbers are listed on the ABA website.

**Healthy eating and supplementation:** Breastfeeding women have additional nutritional requirements. These include increased energy needs; breastfeeding women require on average an extra 2,000-2,100 kJ/day (although this will vary with the mother’s level of milk production, rate of postpartum weight loss and changes in physical activity level). The NHMRC recommends that breastfeeding women consume a variety of nutritious foods from the Five Food Groups, drink plenty of water and take a daily oral iodine supplement of 150mcg. (For further information see the NHMRC Infant Feeding Guidelines 2012 and the NHMRC Australian Dietary Guidelines 2013). Maternal diet during pregnancy and breastfeeding (including consumption of nuts), does not appear to affect the risk of asthma, eczema or other allergy symptoms in infants.

Iron deficiency is common in Australia and iron supplements may be needed. Mothers who are on restrictive diets (for example some vegan diets) are at risk of deficiencies of nutrients including vitamin B12, iron, zinc and calcium and may need referral to a dietitian. Vitamin D supplementation of 10mcg/day is recommended for breastfed infants of dark-skinned and veiled women.

**SIDS, bed-sharing and co-sleeping:** SIDS & Kids, as well as other organisations, recommend that to minimize the risk of SIDS, infants should sleep in a cot in their parent/s room for the first 6-12 months. However bed-sharing and co-sleeping are common and have been shown to have potential benefits such as more and longer breastfeeding episodes, more maternal touching and looking, faster and more frequent maternal responses, and more sleep for the mother.[72] Some parents make a conscious decision to bed-share or co-sleep, others do so
inadvertently and/or intermittently. Antenatal education should offer up-to-date information on safe sleeping practices so that parents who choose to co-sleep with their infant can do so fully informed about the potential risks and benefits for their particular circumstances. A safe sleeping environment includes placing the infant in the supine position from birth; using a firm, flat surface and avoiding waterbeds, couches, sofas, pillows and loose bedding; using a thin blanket to cover the infant, ensuring that the head will not be covered (swaddling a co-sleeping infant can contribute to over-heating and also restricts infant’s ability to move); and avoiding the use of quilts, comforters, pillows and stuffed animals in the infant’s sleep environment. An infant should never be left alone on an adult bed and there should be no spaces between the mattress and headboard, walls and other surfaces. Also important in reducing the risk of SIDS is keeping infants smoke free before birth and afterwards. It is not safe for a parent to co-sleep with their infant if any parent is a smoker or if the mother smoked during pregnancy. As noted in Module 1, research suggests that breastfeeding is protective against SIDS. A useful resource for more detailed information is the ABA position statement on Safe Sleeping.

Adolescent mothers: Adolescent mothers can face unique challenges, such as poor nutrition and for some, inadequate antenatal care, resentment toward the infant and parenting because they interfere with their social life, unresolved issues about their sexuality and the need to return to school within as little as a few weeks after birth. An adolescent mother needs a trusting relationship with her mother, grandmother, partner, a midwife or even a peer counsellor. Specialised antenatal education where they learn from, and gain much needed support from peers and the educator/s has been shown to increase desire to breastfeed and subsequent initiation and duration of breastfeeding. Following the birth hospital staff can encourage adolescent mothers to room-in with their infant, invite interaction between mother and infant and treat the mother in an adult way, giving options and including her and close family in decision making.

7. Expressing and storing Breast milk

Almost all breastfeeding mothers in Australia will express breast milk at some point before their infant is 6 months old. Mothers may choose or need to do this for a range of reasons including to increase their milk supply, to stimulate lactogenesis II when initiation of breastfeeding is delayed due separation of infant and mother, to prevent or relieve breast engorgement, to have milk available if she leaves her infant with her partner or another caregiver or to supply milk if her infant is sick, preterm or hospitalised. For whichever reason, removal of breast milk either by hand or mechanical breast pump is a learned technique.

In certain circumstances hand expression is preferred, including:

- to soften the areola to make it easier for the infant to attach;
- to elicit the milk ejection reflex prior to breastfeeding or pumping;
- to increase milk transfer especially with a sleepy or preterm infant to keep them suckling;
- if nipples are painful or macerated and the use of a pump will exacerbate the tissue damage;
- where unfavorable sanitation conditions preclude the effective cleaning of pump parts; and
when breast pumps are unaffordable.\cite{164}

The NHMRC recommends that every woman should be shown how to hand express, regardless of whether she chooses other methods to use in the longer term. For some it is difficult but many women find that hand expressing becomes easier with practice.\cite{3}

Mechanical devices for expressing can be easier and less tiring than hand expressing, can be faster, can collect more milk, can be more comfortable especially with a severely engorged breast, and some women who have experienced sexual abuse may better tolerate mechanical pumping over hand expression.\cite{164} Hand pumps are portable and relatively inexpensive, with many types available. Electric breast pumps can be preferable for longer term use and can be hired or purchased from many pharmacies or from the ABA.

General guidelines for milk expression are:

- frequency of milk expression depends on the reason for the expression. A greater volume of milk is obtained first thing in the morning;\cite{72}
- milk can be expressed into any type of sterile container such as a bottle, cup, glass or bowl preferably with a wide opening;
- eliciting the milk ejection reflex may take longer, applying warm compresses, taking a shower or thinking about the infant may help;
- breast massage stimulates oxytocin release which aids the milk ejection reflex;
- expressed breast milk must be refrigerated, or frozen if it won’t be used within 2 days. The container should be dated at the time of collection and the oldest milk used first. Freshly expressed milk in a sterile container can be stored at room temperature for 6-8 hours, in a refrigerator for 72 hours, for 2 weeks in the freezer compartment of a refrigerator and for 3 months in the freezer section of a refrigerator with a separate door;
- once thawed breast milk must not be refrozen and can be kept at room temperature for only 4 hours (this is usually the next feed). Thawed milk that has been warmed must be discarded at the completion of the feed; and
- breast milk should be transported in an insulated container.

For more information on milk expression technique, see pages 55-59 of the NHMRC ‘Infant Feeding Guidelines’. You may also wish to access the ABA website which provides fact sheets you can distribute in your sessions. The ABA web address is www.breastfeeding.asn.au.
8. Infant Formula

Given the importance of breastfeeding for the health of both infant and mother, midwives, educators and other health care providers have a responsibility to promote breastfeeding first, but where infant formula is required, parents need education and support to formula feed safely and effectively. A parent’s informed decision not to breastfeed should be respected and supported. Instruction on the use of infant formula should be done individually for parents who are intending to formula feed - it should not be conducted in a group setting.

Infant formula contains similar nutrients to that of breast milk such as proteins, fats, carbohydrates, vitamins and minerals but most types do not contain bioactive components. It also does not change its composition to meet the changing needs of a growing infant, and it does not contain growth factors, hormones, live cells, immunological agents or enzymes.

In Australia, a range of cow’s milk, soy and goat’s milk formulas that meet the Australia New Zealand Food Standards Code for infant formula is available. Interchanging between formulas with the same generic group is possible, but frequent changes create confusion and increase the risk of inaccurate preparation. Tap water is preferred for preparing infant formula; it should be boiled and then cooled prior to being used. Bottled water can be used if unopened but it is not necessary. Ideally only one bottle of formula should be prepared at a time. If it needs to be prepared in advance then it must be refrigerated and used within 24 hours. Alternatively, prepared sterilised bottles of boiled water can be refrigerated and used as required, first warming the bottle by standing it in a container of warm water and then adding the formula. The quantity of formula power required per bottle of water varies so parents must be told of the importance of correctly preparing infant formula, including using the correct scoop and not under filling or overfilling the scoop. Health professionals have a responsibility to ensure that parents from culturally and linguistically diverse backgrounds, or indeed any parent, can read and understand the instructions. A useful resource is the Raising Children Network infant formula preparation in pictures.

Formula feeding can be a calming time for both parent and infant, with holding, cuddling and talking to the infant while feeding and responding to the infant’s cues. Parents should be informed:

- that bottle feeding according to need is best. The information on formula packages recommending certain amounts for various ages is a guide only and does not necessarily suit every infant;
- to use cow’s milk-based infant formulas until 12 months of age;
- that special formulas may be used under medical supervision for infants who cannot take cow’s milk-based formulas;
- to check the temperature of the formula before feeding by shaking a little milk on to the wrist. It should feel warm, not hot;
- that they must not leave the infant to feed on its own;
- that an infant should not be put to sleep whilst drinking a bottle;
- that a cup can be introduced at around 6 months of age; and
- that it is safer to prepare bottles of infant formula at the destination when travelling, because harmful bacteria thrive in warm, moist conditions. [3]

With sterilisation of equipment and bottles, boiling is the preferred method as it provides
consistent and reliable results if undertaken correctly. Parents should:

- wash bottles, teats and caps in hot soapy water with a bottle brush prior to sterilisation;
- place utensils, including bottles, teats and caps in a large saucepan on the back burner of the stove;
- cover utensils with water, making sure that all air bubbles are removed from the bottles;
- bring water to the boil and boil for 5 minutes then turn off the element;
- allow the equipment to cool in the saucepan, and remove it when hand hot;
- store equipment that is not being used straight away in a clean container in the refrigerator; and
- boil all equipment within 24 hours of use.

Other methods of sterilisation are using chemicals, steam sterilisers and microwave stem sterilisers. [3]

9. Your role as an educator

The infant feeding experience is a lengthy one, beginning before birth and influenced by a myriad of interacting physiological, personal, cultural and other factors. The antenatal educator’s window is small but important for giving comprehensive and evidence-based information to expectant parents.

Parents commonly seek breastfeeding information in antenatal sessions. As an educator you need to be prepared for a range of needs and questions, such as:

- ‘How will I know if the baby is getting enough?’
- ‘How frequently will I have to feed my baby?’
- ‘How will I know when things are going wrong?’
- ‘All my friends have had problems. What can I do to prevent them?’

Through this module you have learned about the reality of the breastfeeding experience and how breastfeeding works. Expectant parents thrive on this information, as these callouts reveal.
Antenatal breastfeeding education should be balanced, non-judgmental and it should:

- ensure that parents-to-be are aware of the significant role breastfeeding plays in protecting the health of the mother and child;
- allow participants to explore issues that are of importance to them and encourage them to consider the implications of their infant feeding decision;
- provide the participants with an understanding of how the mother, infant and the breast interact physiologically and emotionally, and the factors that can influence this interaction;
- introduce the skills that are required for a positive breastfeeding experience as well as a realistic sense of the challenges parents may encounter;
- introduce the range of sources of reliable infant feeding information and support that expectant and new parents can draw on;
- emphasise the importance of a postnatal support network; and
- acknowledge the cultural and social context within which the learning occurs.

The extent of information provided in Modules 1 and 2 may have left you wondering how the necessary information can be adequately covered in your antenatal sessions. Careful planning and judicious use of handouts will assist. In hospitals which offer breastfeeding education as part of birth and parenting programs (by an antenatal educator) as well as through separate, breastfeeding-specific sessions (facilitated by an IBCLC), effective collaboration by program providers can help ensure optimal coverage of information. Additionally Module 4 provides session plans you may find helpful.
10. Conclusion

Mothers and infants instinctively ‘know’ how to initiate breastfeeding, as is evident from the behaviour of healthy newborn left undisturbed on the mother’s abdomen at the time of birth. In our culture breastfeeding is also a skill that has to be practiced and nurtured through the support of birthing facilities, family and the community.

When you think about it, preparing women and their partners for breastfeeding is similar to preparing them for the birth. Both are fundamentally physiological processes, however they occur in a personal and social context and are significant psycho-emotional events.

Congratulations, you have now completed Module 2 - The Breastfeeding Experience. In this module we have explored:

- how women and men describe their breastfeeding experience;
- the diversity of the breastfeeding experience for those involved;
- how breastfeeding is initiated and maintained;
- factors that can influence the physiological process of breastfeeding; and
- the role of an antenatal educator in preparing participants for the breastfeeding experience.

In Module 7 you will find a large range of activities to use in programs.
Module 3: Facilitating groups

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1. Introduction

This module is intended to assist readers with little or no experience in delivering antenatal education. It is not a comprehensive guide, rather it provides an overview of information on facilitating groups to help prepare you. Facilitating a group is a skill that develops over time. Some of the material may also be of use for one-to-one teaching sessions and for ‘teachable’ moments.

Learning outcomes

Upon completion of this module you should be able to:

- identify the characteristics of antenatal group participants;
- describe factors that can affect the functioning of groups; and
- identify areas for your own professional development as an educator.

2. Antenatal group participants

As an antenatal educator you will primarily work with motivated and enthusiastic adults, most of whom already have a wealth of knowledge, so the approach required is quite different from that which you may have experienced at school, college or university. You may like to take a few moments to think about individuals and groups you have engaged with as adult either as a teacher or student. Generally, what are the characteristics of adult learners? What are the characteristics of expectant women and their partners/families as learners?

In a learning situation:
adults are
adults like
adults need
adults hate

To enhance their learning I can

Adults have knowledge, experience and values and attitudes that they like to have respected. To summarise, antenatal group participants:

- **have specific learning needs.** You may think you know why they are attending your program or session, but it is worthwhile checking the specific needs of the group. They may be different from those that you expected. (Doing this at the outset of a session can also be a useful icebreaker – see the ‘tip’ box on page 56.)
- **bring knowledge and experience to any learning situation.** Agenda setting and questioning are techniques you can use to gauge the existing knowledge of the group. Respect their knowledge and when it is appropriate use their comments as a springboard for further group discussion. On occasion you may feel they know more than you do, but their knowledge may well be fragmented or incomplete.
- **are stimulated by variety.** Adults hear what they want to hear, see what they want
to see, and pay attention to whatever is relevant, interesting or stimulating. Providing a range of relevant learning strategies within a session sustains interest. For example, a one-hour session could begin with a 5-minute icebreaker, followed by a 15-minute mini lecture or demonstration, a 10-minute small group activity, a 20-minute large group feedback and discussion, and concluding with 10-minutes summation and final questions. (In Module 7 there are a range of activities you may wish to use in your sessions. Select activities carefully; quality is better than quantity.)

- **expect their dignity to be respected.** No one likes to look stupid, foolish or ‘exposed’ in front of other people. To prevent this from occurring, try to create an atmosphere that is informal, relaxed and non-judgemental. For example, when the group is using dolls to practise positioning and attachment, rather than singling out participants who are incorrect, you can make suggestions on how it should be done to the group as a whole.

- **value their independence.** When adults are treated as if they are dependent beings, their pride feels attacked and their self-respect is undermined. Adults do not appreciate people talking down to them or treating them as children. Encourage participants to trust their own judgements and find solutions to problems. Decision-making activities in a group learning situation can assist in this regard.

- **have strong feelings about learning situations.** Some don’t like being lectured to, some are uncomfortable with role-plays, and others hate butcher’s paper or group discussions. Provide a range of learning strategies, make them relevant and be aware of the language that you use. For example, talking about ‘classes’ could remind your participants of school, so you may like to refer to ‘programs’ or ‘sessions’.

- **like to understand what they are expected to do.** Adults can worry about keeping pace with the demands made upon them. At the beginning of each activity outline the purpose, the timing and the feedback mechanism for the activity.

- **need time to unwind.** Adults can come to a learning situation preoccupied with family, work and other matters. Greet each person warmly and help him or her to relax by playing background music and offering refreshments. It is a good idea to begin each session with a group activity, such as an ‘icebreaker’, so if group members are running late they do not miss a large amount of content. (See Activity 3.1) (Ensure though that the activity has meaning and adds to the program, otherwise you may find that some group members come late every week if they feel the opening activities are a waste of time.)

- **have attitudes and beliefs.** Firmly established attitudes and beliefs can impede acceptance of new information. To help participants, allow them time to explore and discover the new way of behaving or thinking. When results can be seen attitudes and behaviour will change, so incorporating decision-making and problem-solving activities, as well as group discussions, in your sessions may help in this regard.
3. Understanding Groups

Thinking about and understanding your participants as a group, as well as a collection of individuals, may help in your role as facilitator. Much has been written on group development, and some sources of further information are listed on page 85. A purposeful group is more than a collection of people – it develops over time into an entity with its own ‘personality’, its own potential and its own limitations. As the educator you are a part of the group and have an important role in its development.

When you begin as an educator you may feel as though the group and you are separate entities. You are the expert and they are your pupils. You stand in front of the group and present everything you want them to know. As you gain confidence in the subject matter and your facilitation skills develop, you may begin to feel more a part of the group and able to broaden your role to also act as supportive peer and sounding board for participants’ ideas. Remember that adults have knowledge, they have experience and above all they like to actively participate in their learning.

As mentioned earlier, groups have a physical form and they have their own potential. They can be open or closed, formal or informal, structured or unstructured, time limited or ongoing, productive or unproductive. The purpose of the group and the qualities of the group participants normally determine the physical form or structure of a group. For example, most antenatal education programs are time-limited and closed in order for the participants to have a chance to form a support network for themselves whilst they are...
gaining the knowledge and skills they require.

The potential of the group primarily depends upon the skill of the facilitator. Group facilitation is the art of guiding a group towards its goal. You will acquire the art over time, with practice, careful planning of your sessions and reflection on your performance and that of the group. Watching an experienced facilitator lead a group can be very helpful, as can an understanding of the factors that affect group functioning.

4. Factors that influence group functioning

Style of leadership

One of your main roles as a group facilitator is to help the group develop, as far as possible, into what is described as a ‘goal-directed, mutual-aid system’, which enables open communication and encourages the formation of networks and friendships. One study of effective leader techniques found that it was not just the methods used by leaders that were important, but the qualities and attributes of the leaders themselves.[166] Effective leaders were friendly, confident, organised, sensitive to group needs, had realistic expectations of the group and themselves, were creative and adaptable, had good time management skills and they knew their own limitations.

When you observe group leaders you will notice that they have particular qualities, but they also have their own leadership style. Some leaders are task-focused, directive and determine how and what the group will do. Others are willing to share the leadership role when appropriate. Some are laissez-faire leaders who are non-directive, focused on the needs of the group and allow the group members to decide how things will be done. No one style of leadership is correct, but rather the personality of the leader, the purpose of the group and their level of functioning are factors that influence the style which may be useful in a particular situation. The group member’s expectations are important; as noted earlier in this module, an assessment of the group needs, goals, or agenda setting should occur early in the life of the group.
Participant attributes

Age, gender, ethnicity, educational status, personality and health status are all qualities of group participants that can affect the functioning of the group, and while they cannot be changed, awareness of them can help you as the facilitator.

There are times when it can be helpful to have specific sessions for minority groups, such as when language or age is an issue, but mixed and multicultural groups can also be very enriching, break down barriers and contribute to multicultural, postnatal informal support groups.

The ‘Z’ generation of new mothers and fathers are hungry for instant access to data that can be linked and mapped in seconds and may arrive on their mobile phone, along with other multi-media resources including video, blogs, YouTube links, Google alerts and online publications.[167] Technology-based learning may have many advantages over a traditional educational setting, however face-to-face education has a unique role especially in antenatal education when friendships are developed and skills learned.

Learning styles

Learning styles refer to the different ways in which individuals process, focus and make information meaningful, and use information to build new skills. A multitude of learning styles exist, however the three cited most frequently in antenatal education are:

- visual – prefers to learn through seeing images, pictures and demonstrations;
- auditory – prefers to learn using sound; and
- kinesthetic – prefers to learn using the body, hands and the sense of touch.[168]

Using a variety of teaching strategies - for example a combination of pictures, posters,
handouts and physical demonstrations - in your sessions will ensure that different learning styles within a group are accommodated. To assist you, Module 7 presents a large variety of teaching strategies.

**Group size, structure and stages of development**

The size of the group can affect the amount of interaction between participants. Educational theorists believe that to establish a sense of cohesion and trust within a group, as a general guide there should be no more than 8–12 participants. The most appropriate size however can depend upon the nature and type of the group. In antenatal education the total number of participants is predominantly 18-22 or 10-12 couples. To facilitate cohesion and relationship-building, a large group can be broken down into sub groups, either single or mixed gender, for particular activities.

The best form or structure of an antenatal breastfeeding education session will also vary according to the purpose of the group, participant attributes and the resources that are available. You may like to investigate what other services offer and draw on existing successful models.

An effective group is dynamic and has what is described as a life cycle. We all know that a group has a beginning and an end, but there are important stages in between those facilitators can influence. ‘Forming’, ‘storming’, ‘norming’, ‘performing’, and ‘adjourning’ are stages of group development outlined by Tuckman and Jensen. You may wish to familiarise yourself with this conceptual framework (see Appendix 6) as it may assist you in understanding how your sessions work.

**The Physical Environment**

The ideal physical environment for a group is well ventilated and lit, has free space, accessible toilets, refreshments available and minimal distractions. Either of the following seating arrangements encourages participant interaction, as they do not involve participants looking at the back of other’s heads.
A session break enhances group interaction and also aids learning. The concentration span of an adult is approximately 20 minutes, so providing a variety of learning strategies during your session and having a break can have a dramatic impact on the amount of learning achieved.

**Strong Personalities**

Dealing with strong personalities in a group can be of concern to new educators. Individuals occasionally assume roles within a group that may be an exaggeration of their own personality or a reaction to the process they are experiencing or to a life issue they are dealing with. For example, if a woman is concerned about her ability to breastfeed because she has had breast reduction surgery, she may become a persistent questioner in the group. The ‘know-it-all’, the shy person, the passive resistant and the ‘clown’ are just a few of the terms educators have used to describe the roles individuals can assume.

For information on how to respond to different personalities in your sessions refer to the people management or leadership books listed in Module 6, but also think about the possible reason for the behaviour. Many of the roles assumed by people are due to underlying insecurity, concern and anxiety. If a strong and/or difficult person in your group is delaying progress of topic coverage or seems to be making others uncomfortable, sometimes the simplest thing to do is to take the person aside during a break and quietly ask them questions such as: ‘From the questions that you have been asking I sense that you are concerned about, is that correct?’ or ‘I appreciate your input, how are you feeling about...?’ For more information on strong personalities see the Fact Sheet in Appendix 7.

**Guest speakers, new group members and time-keeping**

Adults are more likely to interact when they feel comfortable in the group. Some people develop a sense of trust in a very short time, whereas others can take hours or weeks. Using guest speakers or having participants coming and going from the group can impede this process. Guest speakers should be used only if they the group something valuable that you cannot provide.

New members, late arrivals and early departures can also affect the group. Persistent problems can be addressed by negotiating group ‘agreements’, sometimes called group rules, although it is often easier to work these out in consultation with the group at the first session so participants know what to expect.
5. Gaining Confidence

Being prepared, having an adequate knowledge base, feeling confident, self-aware and honest and being supported by colleagues or friends are all important to becoming an effective group facilitator. Group facilitation can be extremely rewarding, but it can be isolating if you feel you are on your own. Is there anyone who can support you through this process of developing your skills and your confidence? In Module 6 you will find the names of professional associations you may like to join, such as CAPEA and LCANZ. Your local ABA group can also provide support.

Every time you facilitate a group you are likely to feel slightly apprehensive. In fact a small adrenaline surge is quite healthy as it heightens your senses and keeps you alert. However, if you find that your nerves are interfering with your ability to function then acknowledge that it is happening and seek assistance from your manager/coordinator or an understanding colleague.

Professional development of group facilitators should also involve a process called ‘reflective practice’ which is more than just learning from mistakes; it is reflecting upon what, why and how things were done and the outcomes that followed. It needs to take into consideration the positive and negative aspects of a situation. You may like to keep a journal for noting your reflections, not only for professional registration and/or managerial appraisal, but also for monitoring your development as an educator and as a quick reference should problem situations recur.

6. Your role as an Educator

As an antenatal educator and midwife you may have personal views, sometimes strong ones, on the best way to feed an infant. It is important to be aware of your views and mindful:

- that parents need to be given the best information available to make their own informed decisions; and
- of any policies on infant feeding and antenatal education that your health care service has.

It is your responsibility to be accepting of parents’ choices, to create a non-judgmental environment in class and to provide all participants with the information they need to feed their infant the way they choose.

7. Conclusion

Congratulations, you have now completed Module 3 – Facilitating Groups. In this module we have explored:

- the characteristics of antenatal group participants;
- the factors that can affect the functioning of groups; and
- the areas for your own professional development as an educator.
Module 4: Planning programs

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1. **Introduction**

Educational programs, sessions and strategies require careful planning and navigation. Most of this module will be of particular relevance to less experienced educators and includes advice on such aspects as session planning and learning strategies. The key information for experienced educators is in Section 2 ‘Recommended content’. At the end of the module is:

- an example of a [session plan](#) for a 2-hour stand-alone breastfeeding information session; and
- sample [program outlines](#) for integrating breastfeeding education into a birth and parenting education program.

**Learning outcomes**

Upon completion of this module you should be able to:

- discuss recommended antenatal breastfeeding education practice;
- write a breastfeeding session plan;
- identify strategies that enhance expectant parents' learning; and
- describe how to elicit specific learning needs of expectant parents.

2. **Recommended content**

The recommended topics for antenatal breastfeeding education, that is inclusive of education provided during pregnancy teachable moments, and that provided in structured formal sessions, such as a ‘stand-alone’ two hour breastfeeding session, are as follows:

- The recommendation of exclusive breastfeeding until around 6 months of age when solid foods are introduced, with breastfeeding continued until 12 months of age and beyond, for as long as the mother and child desire.\(^3\)
  - Exclusive breastfeeding and what it really means (including that water is not necessary for the infant, as breast milk is sufficient food and drink for the first 6 months)
  - The role breastfeeding plays in the health of mother and infant and the risks of not breastfeeding
  - Key differences between breast milk and infant formula
  - The value of colostrum and the size of an infant’s stomach at birth
  - The facility’s breastfeeding policy including, where applicable, the Ten Steps to Successful Breastfeeding.

- How breastfeeding works
  - Basic anatomy of the breast, focusing on key structures
  - The action of prolactin and oxytocin and factors that can impede their production
  - The importance of feeding on demand for establishing and maintaining mother’s milk supply and why supplementary feeds of formula milk should be avoided in terms of the infant’s health and maternal milk supply.
  - Why teats and dummies should be avoided during the establishment of breastfeeding.
• Basic breastfeeding management
  o Early uninterrupted skin-to-skin contact at birth - why it is important, its role in maintaining temperature, calming both mother and infant, enhancing digestion and enhancing hormone production to encourage mothering instinct and support ongoing breastfeeding.
  o The benefits of having the woman’s partner and if wanted a support person of the mother’s choice with her throughout labour and birth
  o The effect of pharmacological pain relief on initiation of breastfeeding
  o Newborn behaviour at birth and the infant’s ability to adapt to extra-uterine life
  o Feeding when infant shows signs of wanting to feed – what to expect in terms of newborn feeding frequency, recognising feeding cues.
  o Keeping the infant close – the importance of keeping the infant close to enable the mother to recognise feeding cues and gain confidence in caring for her infant and to help the infant learn to recognise his/her mother.

• Practical skills and issues
  o The importance of effective attachment and how it ‘feels’ for the woman
  o How an infant feeds at the breast and instinctive newborn reflexes
  o How to recognise effective milk transfer
  o Positions that a mother may like to use and how attachment can be maintained
  o The importance of healthy eating and supplementation when breastfeeding.

• The reality of breastfeeding for parents
  o Why 24-hour rooming-in is important and maternal-infant instinctive behaviour
  o The partner’s role in the breastfeeding experience, male-infant attachment and potential relationship changes
  o Breastfeeding behaviour in the early postnatal weeks, feeding cues and sleep cycles
  o Problems that can occur, how to manage these and when to seek help
  o The mother’s previous experience of breastfeeding and any concerns related to these
  o The range of community support resources available to parents
  o Expressing and storing breast milk.
  o The developing infant from ‘prematurity’ at birth compared to that of other mammals.

Safe infant formula feeding should be taught on a one-on-one basis to women who have chosen to formula feed.

In planning how best to provide breastfeeding education to your target audience, feedback on the current content of sessions gained from women and their partners interviewed for this handbook included that they:

• ‘knew the benefits of breastfeeding for an infant, but had not really thought of the health benefits for the mother so it was good to hear about those.’
• ‘really did find it helpful to learn about infant sleep cycles and how to recognise
when our infant needed feeding.’
- ‘had heard about reflexes but had no idea of the impact of them on feeding – the way a baby even soon after birth seeks the breast.’
- ‘would have liked more about what a partner can do to help with breastfeeding – there is so much emphasis on the woman so I wanted to know what I could do.’
- ‘had never thought of the whole messiness of feeding and the way oxytocin makes milk squirt with sex.’
- wanted to learn about ‘all potential problems would have been great – or at least the common ones, not so much to scare us but more to be prepared.’
- ‘had never really thought about how a mother could get touched-out having nursed all day and didn’t want me when I came home.’
- ‘all I wanted was information on expressing and storing milk, and formula too so my partner could feed our baby. We were rather amazed when it wasn’t covered.’
- ‘I really wanted to help my partner but I felt so left out when with her feeding all the time. I guess my way to get to know our baby was from the nightly bath which I did.’

3. Preparing session plans

The above list of topics is lengthy and we recommend careful session planning. In health care facilities/hospitals using the common model of a 2-hour breastfeeding session to supplement the breastfeeding education included in a broader birth and parenting program, collaboration between facilitators of these programs can help ensure the best coverage of material and the most effective use of the available time.

An important consideration when you are planning programs is how to engage with and prepare the partner and sometimes the family for their important role. As noted in Module 3, dedicated breastfeeding sessions are frequently run in the day-time, which can exclude working partners. If they cannot be offered after hours, thought needs to be given to the breastfeeding content of the antenatal birth and parenting program. Mitchell–Box et al in their systematic review of the literature recommended that breastfeeding education aimed at partners should include:

- the breastfeeding health benefits for mother, infant and family;
- why partners are important and a necessary part of the infant feeding decision-making process; and
- strategies they could use to support breastfeeding.\[170\]

The work of Condon et al, highlighting the ‘importance of pregnancy as a significant phase in the genesis of the future father–infant attachment relationship, as well as providing a possible window of opportunity for recognition and early intervention, not only for attachment per se, but couple relationship dysfunction and men’s mental health. The findings suggest that assessments aimed at identifying difficulties in these domains during pregnancy could have the potential to significantly enhance the future father–child relationship’.\[144\]

Also important is considering the learning needs and interests of your ‘audience’ / target group and allocating time to different topics accordingly. To some extent this can be done in advance and written into your session plan, but is also done in consultation with participants at the outset of the session (see tip box on page 54).
At the end of this module we have provided an example of a session plan for a 2 hour stand-alone breastfeeding information session and two program outlines for integrating breastfeeding education into a birth and parenting education program.

Session planning involves giving careful thought to what you plan to do, how you will do it and what you expect the outcomes to be. Writing aims and objectives and expanding them into session plans is time consuming, but helps you think clearly about the content and process of the session and the program as a whole.

A typical session plan includes:

- **an aim or aims** - an aim is a statement that gives a general idea of what the session hopes to achieve. It provides a focus and a sense of direction without any details. (It does not state how the outcomes will be achieved).

- **intended learning outcomes** or objectives – these state precisely what the participants will learn or achieve as a result of attending the session. They are the specific steps taken to achieve the aims of the session. They are usually prefaced by an opening statement such as ‘by the end of this session participants should be able to’ and they commence with an action verb (so the outcome can be measured) such as: ‘identify’, ‘list’, ‘describe’, ‘demonstrate’, and ‘perform’;

- **topics and issues** to be covered;

- **learning strategies** to be used – these explain how the information will be presented. When determining the strategies you will use, keep the learning outcomes and the participants in mind. If the outcome relates to a manual skill, the strategy used will be more effective if the participants have an opportunity to practice the skill. For simplicity, the session plan examples at the end of this module list numbered activities described in Module 7;

- **time allowed** for each strategy – this is an approximation. When planning sessions we recommend you write a list of topics that are very important and another of those that can be covered only if time allows. Decide how you will present each topic and then allocate enough time for each to be covered effectively. As the session unfolds do not be surprised if your timing is unrealistic, as active learning strategies stimulate interest, interaction and participation, all of which require time. If this happens refer to your ‘must include’ list and begin to prioritise the items you wish to include; and

- **resources** that are required.

A session plan should ideally include all the information needed to facilitate the session, whether by you or a colleague in your absence. While a session plan should be comprehensive, as noted above you will need to be flexible in your delivery, to accommodate the interests and prior knowledge of your group as well as issues, questions and opportunities that arise during the session.
4. Learning strategies

Of equal importance to the content of sessions is the method of facilitation and the resources used. The ways you impart information to a group are commonly called learning strategies and can be divided into two main groups, teacher-centred or learner-centred. Direct instruction, lectures and deductive teaching are teacher-centred strategies where the teacher controls what and how the students learn. Discovery learning and inductive learning are learner-centred and place a greater emphasis on the learner’s role in the learning process. With learner-centred strategies the educator sets the learning agenda or learning outcomes, but does not have direct control over what and how the participants learn.

When considering the strategies to use in your sessions, you need to have a clear idea of what you want the participants to be able to do as a result of attending the session. For example, if you want expectant parents to explore their feelings and concerns about breastfeeding, you could involve them in either a small or large group discussion so they can share their feelings, their concerns and gain support from each other. Peer support, as stated in Module 1, can engender a sense of personal empowerment and it gives credibility and value to individuals’ ideas.

Learning strategies are not ‘right’ or ‘wrong’, but some are more effective than others in particular situations. We recommend you use a variety of strategies and decide when each one is likely to be more effective in meeting the needs of the group and the learning outcomes of the session. A range of strategies is also important to accommodate the different learning styles of the participants. For example, a mini lecture followed by a group discussion with feedback and then a practical component on the same topic would serve the needs of visual, auditory and kinaesthetic learners. Enhancing these strategies with the use of a modulated voice, music, visual aids and bright colour will add vitality to your presentation.
Guidelines for selecting and using learning strategies

All strategies should:

- **have a purpose.** Learning strategies can be used to relay new information, to reinforce information already covered, stimulate discussion on a particular topic, increase confidence or enhance an individual's ability to make decisions. At times they can simply be used to lift energy levels or provide time for social interaction.

- **be clearly introduced or explained.** Adults will respond positively to a learner-centred strategy if it does not seem pointless or child-like and group members understand what they are going to do. Demonstrations may need to be given. Clear feedback instructions help to reduce anxiety.

- **have realistic time limits.** Learner-centred strategies frequently take up considerably more session time than teacher-centred strategies, because they stimulate interaction. It is important to plan for this because if you allow insufficient time the strategy may be ineffective. During a session if a learner-centred strategy is taking longer than you anticipated you can refer to your ‘must include’ list and prioritise accordingly.

- **have an appropriate closure.** For example you may need to follow a learner-centred strategy with a summing up discussion to fill in any gaps or sort out any misconceptions.

Strategies will be more effective if the materials required are prepared in advance and organisational details have been determined. Think of effective ways to distribute materials, such as cards, paper, pens etc. and consider the amount of space the groups will occupy to complete a particular activity. Decide in advance the composition and size of sub-groups if you are using them and explain the type of feedback you expect from participants before they begin an activity.
Icebreakers

Every session of a program begins with a ‘forming’ stage, that is the first stage of group development as outlined by Tuckman\(^{[169]}\) and mentioned in Module 3. This means that sessions can be more effective if they begin with an icebreaker or small group activity, to relax participants and focus them on the topic. For example, you may like to ask the participants what they will gain when they are breastfeeding their infant and what they will lose. A list of suitable icebreakers is provided in Module 7.

Group discussions and questioning

As individuals we are involved in verbal interaction with others every day, but in a structured learning environment participants sometimes struggle to contribute. Triggering and sustaining a group discussion is a learned skill. Thoughtful preparation, gaining experience with questioning techniques and trusting yourself and the ability of the group can help.

There are many issues surrounding breastfeeding that lend themselves to a group discussion (see examples such as Activity 3.3 and 5.1 in Module 7). Discussion is the art of cooperative thinking aloud, and can be used as a part of the session, as a whole session or it can be carefully integrated with another learning strategy. It can involve the whole group or sub-groups and these can be mixed or single gender. It is important to consider whether a group discussion is the most appropriate strategy for covering the topic and to be aware of possible outcomes of the discussion.

Questioning can be an important component of a discussion, and is a learned skill. Prior to presenting a question to a group, you should prepare them. Give background information on the topic (if required) and explain why you want their point of view or input. When you present the question, pose it, pause so they have time to think, and then restate the question. If necessary use a prompt, but do not give too much additional information as it may confuse the group.

Questions fall into two categories – closed or open. Closed questions require a limited response, such as ‘yes’ or ‘no’, and typically they have ‘right’ and ‘wrong’ answers. Open questions require thought and an organisation of knowledge and facts into an appropriate response. Unlike closed questions there are no right or wrong answers – rather they are the ‘why’, ‘how’ and ‘what’ questions.

When using questions to stimulate discussion and to maximise the number of participants who respond to the question, it may help to break the group into sub-groups. Your question/s can then be presented verbally, on trigger cards or on a graffiti sheet, as
described later in this module. Whichever method you use, you should give the group an understanding of the type of feedback required at the end of the discussion. If the topic is controversial or sensitive it may not require feedback, but it will require closure.

Closing a group discussion is extremely important as without an obvious conclusion participants can be left wondering why they undertook the strategy or they may come away with misconceptions or misinformation. Closure can consist of a summary or an evaluation of what has been discussed. It can include gathering feedback from the group/s, asking participants for any final comments or questions and thanking them for their contributions.

For your own credibility it is important that you respond openly and honestly to any comments made in the closure of a group discussion. Occasionally comments and questions can take the discussion into areas that you are not familiar with. If this happens and the participants want to know more about the issue, take the question on notice or refer them to appropriate resources.

**Spontaneous questions or comments**

Spontaneous questions and comments from participants can be used to trigger a group discussion. For example, if a participant asks ‘How long should I breastfeed?’, it could be helpful to refer the question to the group: ‘Well what do you all think – how long do you think you should breastfeed?’ This strategy can stimulate an active discussion but it should only be used when the input of the others would be beneficial. Don’t overuse the technique as you can easily lose credibility if you never give a direct answer. (Your own response to the question might be to describe a range of six months to 2–3 years and the advantages and disadvantages of points across the range.) Be careful of giving a definitive answer where the question you are asked has no right, wrong or specific solution. Such questions need to be considered before being answered, and may benefit from being thrown open to discussion.
You have facilitated a group discussion on the benefits and challenges of demand feeding. Feedback from the groups suggests that feeding according to need is beneficial for all involved. However, one participant, Joanna, totally disagrees and states that ‘feeding according to need is an absolutely ridiculous idea as you will just spoil the baby and make life difficult for yourself. You have to feed every four hours – there is no other way to do it’.

How would you respond? Should you disagree with Joanna and run the risk of being judgmental of mothers who find routine necessary and suitable for themselves and their baby? Take a few moments to think about this situation and how you might respond.

You could clarify that routine 4 hour feeding was in common practice prior to the mid-1980s. Now however there is recognition that in the early weeks of breastfeeding it is best to feed the baby according to need which may be every 3-3.5 hours. Breast milk is metabolised faster than infant formula and the infant’s stomach is small. As the weeks progress the feeding pattern will change, with feeds becoming less frequent. You could remind the group that breast milk supply meets demand and that problems such as engorgement are less likely when feeding is according to need.

Graffiti Sheets

Group discussions are an excellent way of gaining information and of sharing ideas and concerns. Beginning a discussion can be difficult for a new group or when a sensitive issue is being discussed. Graffiti sheets can be useful in these situations. For a group of 20 people place 4-5 sheets of butcher’s paper around the room with thick marker pens. Across the top of each sheet of paper write an open-ended statement for the participants to complete, for example *Activity 3.6* can be presented using graffiti sheets rather than small group discussion. Each sheet should have a different statement. Participants are asked to move around the room and to complete the statements as they like. They should not take time considering their response, they should *not* discuss it and they should *not* read the other responses; they are just to write the first thing that comes to mind. Graffiti sheets are an anonymous form of brainstorming.

When participants begin to mingle and it appears that all their ideas have been listed, ask them to return to the large group for a discussion on the comments made. The most
effective way of triggering a discussion from the comments is for the feedback to be given by participants. In Module 7 you will find several activities that use trigger questions on cards to stimulate group discussion. You may like to use graffiti sheets instead.

Peer support

As noted in Module 1, research clearly shows the effectiveness of peer support as a breastfeeding intervention. Smale et al found in a comparative study measuring outcomes of peer-led classes versus educator-led classes, that the former had the advantage of offering ‘practical’ answers to problems rather than ‘textbook’ answers. As noted below, expectant parents find observing a mother breastfeeding to be very valuable. You may wish to consider how you could use peers in your sessions, perhaps with the assistance of your local ABA branch. Finally, increasing use of social media, on-line forums, chat rooms and blogs for accessing peer support means that antenatal breastfeeding educators need to educate and direct participants about the most reliable sources of breastfeeding information.

Models and Visual Aids

Models and visual aids, such as Figure 4, can enhance a presentation, they support those who are predominantly visual learners and can be used to communicate information and trigger group discussion. Throughout this handbook we have given examples of how and when specific visual aids can be used. Parent feedback suggests that use of a marble and golf ball to demonstrate the size of an infant’s stomach is particularly helpful. The use of dolls in sessions for the learning of attachment and positioning are also appreciated, as is observing a mother breastfeeding.

DVDs and Media Clips

DVDs and media clips can communicate information, reinforce issues already discussed and stimulate thoughts and discussion within a group. Most DVDs can be used at any stage in a session, but some may come with specific instructions. DVDs can be used in their entirety or individual scenes or segments shown for your particular purpose.

Prior to using any DVD, become familiar with its content and think of how a group would respond to it. You should decide when in a session or program it could be shown and whether it will be shown from beginning to end, or in segments as described above. Check the DVD player and track the DVD prior to the session, give an overview of its contents before it is viewed and allow time for small or large group discussions and comments at the end. Presenting the group with trigger questions, such as the key messages provided in the DVD, can encourage an active group discussion on the conclusion of this learning strategy.

There are now a large number of breastfeeding DVDs from a diverse range of countries available, as are video-clips on YouTube. Take care with your selection as many come with copyright instructions and may also have been sponsored or funded by a company that produces infant formula. You will find a list of suggested DVDs in Module 6.

Reference Material

Expectant parents are receptive, but as with any learner they will only retain a small percentage of the information they acquire from any session they attend. To reinforce and
increase the retention of important information, as well as address issues you have been unable to cover, handouts, brochures and other reference material can be distributed.

Reference material can, however, be expensive to reproduce and may have a limited life span, so make sure that handouts and brochures are accurate, concise, up-to-date, meet the needs of the participants and do not contain unacceptable advertisements. In Module 6 we have listed internet sites that provide a range of information for you and the participants.

**The spoken and written word**

The language surrounding breastfeeding can have a powerful effect on families. Words such as ‘tits’ and ‘boobs’ can offend and be viewed as denigrating women. Even terms such as sagging breasts, leaking breast, inverted nipples and flat nipples can have negative connotations and discussion of ‘successful’ in relation to breastfeeding automatically implies that the opposite equals ‘failure’. Think about the words you use and try to always use positive and descriptive language.

As an educator however you also need to be familiar with the colloquial or cultural expressions used by your participants and adjust your language and vocabulary accordingly. For example, if you are facilitating a group of young women and their partners, words such as ‘boobs’ may be acceptable. Take care and inform yourself when working with expectant parents who speak languages other than English, as the word ‘breast’ in some cultures is not acceptable.

The spoken and written words you use should be both consistent and correct.

**Example A:** The local hospital’s breastfeeding handout recommends to mothers of premature infants that they express every four hours. If mothers are told verbally by staff to express six times in 24 hours, some may be confused. Use the same language – be consistent.

**Example B:** The breastfeeding resource book your participants are using has correct written descriptions of attachment and positioning, but incorrect illustrations. This will be particularly confusing as visuals have a stronger impact on learning than words.

**Obtaining feedback**

In this module we have used the term ‘feedback’ several times in relation to learning strategies. Feedback, in this context, is the small group’s specific response to the questions or discussion triggers. Feedback can be obtained by:

- a spokesperson for each group reading listed points to the large group prior to the closure of the activity;
- pinning feedback sheets on the wall. Participants can mill around them and look at the points listed by other groups;
- using white boards to record the main points, although this tends to be a slow process.

Formal feedback to the large group or further discussion may not always be required. The strategies in Module 7 use a range of feedback mechanisms, so if you are unsure of when it is required, please refer to them.
5. Assessing the needs of each group of participants

Agenda setting at the commencement of a session lets you know what the participants want to know or explore and allows you to adapt your plan accordingly.

Agenda setting can be simply asking participants as they introduce themselves to state one or two things they would like from the session. If the participants don’t know each other the answers may be superficial and repetitive, such as everyone asking ‘how will I know when my infant needs feeding’. For answers which are more considered you may like to hand out paper for participants to record what they would like to learn. This can be done in small groups on butcher’s or graffiti sheets.

6. Sample session plan and outline of antenatal education programs

As noted earlier, it is important that the content and structure of your programs or sessions reflect the needs of the participants and we encourage you to explore the specific needs of your target audience/local community.

On the following page is a sample session plan for a 2-hour antenatal breastfeeding information session, and two examples of how breastfeeding strategies/activities could be integrated into comprehensive birth and parenting programs. You may wish to use or adapt these to meet the needs of your target audience.

The ‘Having a Baby’ program outline provides an example of how the activities presented in Module 7 can be incorporated into a 7-week birth and parenting program. This outline may also be useful for an antenatal clinic midwife capturing ‘teachable moments’ during routine visits. Be flexible and be creative.

The final session plan, ‘Birth and Parenting in a Nutshell’, is for a weekend birth and parenting program or a more intensive ½ day program. Even in shorter programs breastfeeding can be included.

The learning strategies identified in the plan and outlines are those presented in more detail in Module 7.
7. Conclusion

Congratulations, you have now completed Module 4 – Planning Programs. In this module we have explored:

- recommended antenatal breastfeeding education practice;
- writing a breastfeeding session plan;
- strategies that enhance expectant parents’ learning; and
- how to elicit specific learning needs of expectant parents.

Educational programs, sessions and strategies are the lifeblood of an educator; each one is a unique journey that requires careful navigation. As with any journey, planning is essential if the outcome is to be positive.
Sample two hour Breastfeeding session

Breastfeeding: A skill to learn

Aim of the session: This 2-hour session aims to give expectant parents an understanding of the breastfeeding process and how they can prepare for breastfeeding.

Learning outcomes: By the end of the session participants should be able to:

- describe how family members can influence the infant feeding experience;
- discuss how breastfeeding is initiated and maintained;
- identify factors that can influence the physiological process of breastfeeding;
- identify community resources available to parents.

Duration of session: 2 hours

Target audience: Women and partners in the third trimester of pregnancy

Materials required: Breast model, dolls, visual aids including marble and golf ball, breastfeeding and infant behaviour handouts

<table>
<thead>
<tr>
<th>Topic</th>
<th>Learning Strategy</th>
<th>Time</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creating a relaxed</td>
<td>Background music, name labels, refreshments</td>
<td>Prior to session</td>
<td>CD player, CDs, pens, labels, refreshments</td>
</tr>
<tr>
<td>environment</td>
<td>Welcome and overview of session</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Introduction to session</td>
<td>Housekeeping</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Participant introductions</td>
<td>Each participant to state their name, when baby is due, and one thing they would like to gain from the session</td>
<td>10</td>
<td>Tree paper, pens</td>
</tr>
<tr>
<td>The role of family members</td>
<td>Activity 3.2: A family feeding tree</td>
<td>10</td>
<td>Breast model, dolls, visual aids</td>
</tr>
<tr>
<td>How breastfeeding begins</td>
<td>Activity 4.3: How breastfeeding begins</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Activity 4.4: Infant’s stomach size</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintaining breastfeeding</td>
<td>Activity 41: Oranges and breasts</td>
<td>20</td>
<td>Oranges, cups, straws</td>
</tr>
<tr>
<td></td>
<td>Activity 4.2: Breasts, nipples and suckling</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Activity 4.5: Breastfeeding according to need</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Break</td>
<td>Breastfeeding DVD – refer to Module 6</td>
<td>30</td>
<td>‘What if’ cards</td>
</tr>
<tr>
<td>Breastfeeding experiences</td>
<td>Activity 5.2: What If cards</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Postnatal support</td>
<td>Activity 6.4: Community resources</td>
<td>20</td>
<td>24 hour clocks</td>
</tr>
<tr>
<td></td>
<td>Activity 6.1: 24 hour clock</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Summary of issues discussed and questions answered. Distribution of handouts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overview of the session</td>
<td>Handouts</td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>
Sample plan for Incorporating Breastfeeding activities in a birth and Parenting program

Having a baby program outline

The aim of having breastfeeding activities within each session of the program is to meet the breastfeeding learning needs of expectant parents.

<table>
<thead>
<tr>
<th>Session number</th>
<th>Session title</th>
<th>Breastfeeding activity to be incorporated</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>Approaching birth</td>
<td>Activity 3.2: Family feeding tree</td>
</tr>
<tr>
<td>Two</td>
<td>Unraveling labour</td>
<td>Activity 6.4: Community resources as take-home</td>
</tr>
<tr>
<td>Three</td>
<td>Labour continues</td>
<td>Activity 3.4: Myths and half truths</td>
</tr>
<tr>
<td>Four</td>
<td>Our infant is born</td>
<td>Activity 3.10: The first few hours</td>
</tr>
<tr>
<td>Five</td>
<td>Are we prepared?</td>
<td>Activity 4.3: How breastfeeding begins</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Activity 4.4: Infant’s stomach size</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Activity 4.1: Oranges</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Activity 4.2: Breasts and nipples</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Activity 5.2: ‘What if cards’</td>
</tr>
<tr>
<td>Six</td>
<td>Being a Mother and a Dad</td>
<td>Activity 5.1: The reality of breastfeeding</td>
</tr>
<tr>
<td>Seven</td>
<td>Our new life</td>
<td>Activity 4.6: Infant sleep</td>
</tr>
</tbody>
</table>

Birth and Parenting in a nutshell

<table>
<thead>
<tr>
<th>Session number</th>
<th>Session title</th>
<th>Breastfeeding activity to be incorporated</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>Unraveling labour</td>
<td>Activity 3.8: Prepare in late pregnancy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Activity 4.4: Infant’s stomach size</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Activity 6.4: Community resources as take home</td>
</tr>
<tr>
<td>Two</td>
<td>Becoming a Mother and a Dad</td>
<td>Activity 4.3: How breastfeeding begins</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Activity 4.1: Oranges</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Activity 4.6: Infant sleep</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Activity 6.2: My needs are....</td>
</tr>
</tbody>
</table>
Module 5: Evaluating programs

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5. Conclusion 82
1. **Introduction**

Educators need to constantly monitor their practice and make changes as and when appropriate. Monitoring or evaluating sessions and programs does not have to be a laborious task; with some planning and creative thinking you can gather useful information simply. For example, the comments and feedback you receive from session participants provide useful indications as to whether expectant parents are receiving the information they require. The depth and complexity of the information you need to collect primarily depends on the purpose of the evaluation.

**Learning outcomes**

Upon completion of this module you should be able to:

- discuss the value of program evaluation;
- identify evaluation strategies you could use in your sessions and programs; and
- describe the benefits of self-evaluation.

2. **Program Evaluation**

Evaluation is the process of measuring the value of a program or an activity. It involves looking critically at the aims and objectives of the program to determine whether or not they have been met.

It is a process which may be undertaken to:

- determine the appropriateness of a program and in particular whether it is meeting the needs of the participants;
- assist in the development of new or revised programs;
- justify the acquisition of new resources or provide support for the continued use of current ones;
- obtain feedback on the ability of an educator to facilitate a group; and
- determine the long-term impact of the program on the participants.

**Types of evaluation**

There are three aspects of a program which can be evaluated - the process, the impact and the outcome. These are:

- **process evaluation** measures the effectiveness, efficiency and the adequacy of the program. It is normally performed at the completion of the program or a segment of the program.
- **impact evaluation** measures the short-term effect/s of the program. This is performed several weeks after the completion of the program.
- **outcome evaluation** measures the long-term effect of the program. The timing of this evaluation will depend upon the outcomes that need to be measured.
Data collection methods

Program evaluation can be subjective or objective, it can be performed during the learning experience or at its conclusion, and there are a variety of methods and tools that can be used. The data collection methods and strategies listed in this module are examples of those used by members of the project team in their professional practice. You will need to determine the best strategies for your own use, taking account of the aims and objectives of your antenatal programs and sessions and the composition of your target audience.

The purpose of an evaluation primarily determines the data collection method/s. To determine the purpose you should ask yourself three simple questions:

- Who is the evaluation for?
- Why am I doing the evaluation?
- What do I want from the evaluation?

Think about how the data will be analysed and ensure you have the required resources before the data is collected.

3. Program Evaluation Strategies

Program evaluation questionnaire

A common way to evaluate a program is to give participants a paper-based questionnaire at the end of the program. Alternatively, on-line surveys allow participants to respond in their own time. Each method has advantages and disadvantages depending on the audience.

Paper-based questionnaires at the end of a program only provide a limited response, as participants rarely write how they ‘feel’ or respond at a very personal level to an issue. They comment more on topics and activities delivered later in the session than on earlier sessions and the ‘halo’ effect can be a problem. A questionnaire does, however, provide a written

VII The halo effect is a cognitive bias in which an observer's overall impression of a person influences the observer's feelings and thoughts about that person's character
record of the participant’s initial response to a program and it is a time-saving way to obtain information. Questionnaires should be easy to read, succinct and each question should only focus on one issue. For example if you want to know whether participants valued the discussion on community resources for new parents, you could simply phrase it as question – ‘Did you value the discussion on community resources for breastfeeding parents?’ This closed question providing a ‘yes’ or ‘no’ answer. If, however, you want more comprehensive information you could ask an open question, such as ‘How would describe the discussion on community resources for breastfeeding parents?’ To maximise the response to a program evaluation questionnaire distribute it at the completion of the program and allow time for participants to respond.

On-line surveys have the potential to get a better response rate in comparison to a postal survey, but assume that respondents have access to a computer. On-line surveys allow educators to develop, collate and analyse simple surveys easily via websites, email and blogs. 

**Ongoing program evaluation**

Rather than distributing a specific questionnaire at the end of the program, evaluation can occur throughout the program and it does not have to be written. Simply ask a group an open ended question at the end of a session, such as ‘what is it that you learned about breastfeeding in this session’?

The dart board technique, where participants place dots around a target, is another simple, yet effective evaluation strategy. Concentric circles are drawn onto a large piece of paper so as to resemble a dartboard on a wall. The circles are then divided into sections with the dividing lines coming from the centre, as with the spokes on a wheel. The number of sections will depend on the number of issues and topics you want to evaluate. For example, if you want the participant’s response to the amount of time spent on small group discussions, practical activities and lecture-style input you should divide the dartboard into three sections. At the end of the session ask participants to place a dot in each section of the dartboard with the middle being the target or their most favourable response.

**Attendance records**

Many educators do not think of these as being an evaluation tool, but what would you think about your program if 20% of participants did not return after the first session? Did they have a legitimate reason for not returning, did you scare them away, or were they bored and found the content was not useful to them? Keeping accurate records is important.

**Impact evaluation**

To determine the impact of a program you can send a follow-up questionnaire to participants several weeks or months after completion of the program, or invite them to complete an on-line survey. The distribution time is determined by the outcomes to be measured. If using a paper-based survey enclose a self-addressed envelope and a brief covering letter to maximize the response rate. Ethics Committee approval may be required.

**Postnatal reunions**

Postnatal reunions provide an opportunity for debriefing and they give a wealth of
information about the antenatal program. They can be informal or formal and feedback can be obtained from mixed or single gender groups. A comments and suggestions book, or cards to be written on and placed in a box, can be useful to obtain written feedback.

**Focus groups**

A focus group is a special form of group discussion commonly used in the needs assessment process, but it can be used for a program evaluation. Six to ten people who are homogenous in nature are required for a focus group and they participate in an unstructured interview moderated by a facilitator. Trigger questions are pre-determined, the dialogue is usually recorded and the facilitator ensures that the focus of the discussion remains on the program or strategy being evaluated. Focus groups typically last for 60-90 minutes and they are a very effective way to learn from a group of participants of their experiences around the topics being evaluated. For example, you may want to know the effectiveness of the antenatal breastfeeding education at your hospital in preparing women and their partners for their infant feeding experience; this was one strategy used to collect data for this handbook. Questions such as these could be used:

- Overall how would you describe your feeding experience, either breast or formula, in the first week of your infant’s life?
  - What helped you?
  - What hindered it?
  - Did you do any preparation (classes / reading / talk family etc.) and if so what did you do? What helped and what hindered this?
  - Is there anything else we (health professionals) could have done during your pregnancy which may have made those early days easier?

Focus groups are not necessarily intended to be ‘representative’ but rather are designed as a means of exploring specific topics and experiences.[172]

**Letters and telephone calls**

These strategies provide useful feedback and each one should be documented/kept. Once again, check if you need to submit to an Ethics Committee for approval.

As an educator what can you do to make the programs offered by your facility or hospital more appropriate for the women and partners who attend?

What can you do to ensure the sessions meet the needs of the participants?
4. **Self-Evaluation**

Given the pace of modern life there is a tendency for educators to allocate some time to planning, but little or no time to reflection or self-evaluation. A learning journal, or diary, can be useful to record your sessions and promote reflection, but ideally it should be used in combination with other self-evaluation strategies. For example, it could be combined with a self-assessment questionnaire or a feedback session with a colleague.

Three steps are necessary for effective self-evaluation. These steps are:

- **Step 1:** Current behaviour must be scrutinised. The facilitator must be aware of what they are doing verbally and non-verbally in the session.
- **Step 2:** Strengths need to be acknowledged. Ineffective behaviours need to be identified and strategies for improvement determined.
- **Step 3:** New ideas are integrated into current practice and the cycle recommences.

Self-evaluation is a continuous, on-going process not a single, one-time event.

5. **Conclusion**

Congratulations, you have now completed Module 5 – Evaluating programs. In this module we have explored:

- the value of program evaluation;
- evaluation strategies you could use in your program/sessions; and
- the benefits of self-evaluation.
Module 6: Resources for educators

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1. Introduction

The process of preparing for any major life change usually includes gathering information and resources that may be required. As an educator you will have your own learning needs, but more importantly you will have the needs of the participants in your group/s. The desire of women and their partners to accumulate information on an extensive range of health and lifestyle issues during pregnancy and in the postnatal period requires educators to be informed. Having up-to-date knowledge at your fingertips, being aware of your strengths and limitations and knowing where and how to access information/resources are essential skills for antenatal educators.

Learning Outcomes

Upon completion of this module you should be able to:

- identify the resources that relate to your information needs as an educator working with a specific target audience;
- describe how to access the resources required to maintain your own professional development as an educator; and
- identify the resources that would be of interest to your target audience.

2. Where you can you can obtain resource

Information needs and resources are ever-changing and expanding. To keep your database of resources current you will need to add and delete items on a regular basis. This list is purely to get you started. As you read it another online resource will have just been born!

The general reference books listed should be available in major bookshops or local libraries, but the specific resources for antenatal educators or health professionals may have to be obtained from a specialist bookshop. Specialised bookshops that are of interest include:

- [Australian Breastfeeding Association](#) provides books, brochures and detaching aids for use in your practice.
- [Birth International](#)
- [CAPERS Bookstore](#)
- [International Lactation Consultant Association](#)

You could also contact:

- A university or medical bookshop, such as the Co-op Bookshop
- [The Feminist Bookshop](#) in Sydney for Gay and Lesbian Parenting Books
  Tel: (02) 9810 2666

3. Useful evidence based and reliable resources

Resources, firstly websites, then books and teaching aids are listed in alphabetical order:

**Useful websites**

- [Academy of Breastfeeding Medicine](#)
• Australian Breastfeeding Association
• Australian College of Midwives
• Australian Multiple Birth Association
• Australian National Breastfeeding Strategy
• Baby Friendly Health Initiative
• Best Beginnings
• Birth International
• Breastfeeding Education Materials
• Breast Crawl
• CAPERS Bookstore
• Childbirth And Parenting Educators of Australia
• Department of Health
• Healthtalk Australia
• Healthtalk
• International Childbirth Education Association
• International Lactation Consultant Association
• Lactation Consultants of Australia and New Zealand
• La Leche League International
• Mothersafe
• Multicultural Health Communication
• NHMRC
• Queensland Health
• Raising Children Network
• The Royal Women’s Hospital, Victoria
• UNICEF UK Baby Friendly Initiative
• World Alliance for Breastfeeding Action
• World Health Organization
Useful books

- Australian Breastfeeding Association Booklets.
- Colson, S. *An Introduction to Biological Nurturing*. 2010.
- Cox, S. *Breastfeeding with Confidence*. 2006.
Useful DVDs

• ACT Health Breastfeeding DVD for Young Parents
• Best Beginnings. From Bump to Breastfeeding
• Bergman, N. Grow your Baby’s Brain.
• Cox, S. Breastfeeding: Mom and I can do that.
• Cox, S. Mother and Baby 2 DVD set:
  o Mother and Baby....the first week.
  o Mother and Baby ....baby can breastfeed easily when well positioned.
• Glover, R. Follow me Mum.
• Hastwell, T. Being a Dad.
• Institute of Psychiatry, Getting to Know You.
• Inch, S. and Woolridge, M. Learning to Breastfeed your Baby.
• The Mid North Coast Aboriginal Breastfeeding DVD
• Smillie, C. Baby Led Breastfeeding... The Mother-Baby Dance.
• Queensland Health. Babies Know.

Useful Journals

• Breastfeeding Review. ABA national journal
• Interaction. Childbirth And Parenting Educators of Australia national journal
• Journal of Human Lactation. International Lactation Consultant Association journal
• Women and Birth. Australian College of Midwives
4. Conclusion

Congratulations, you have now completed Module 6 – Resources for Educators. In this module we have explored:

- the resources that relate to your information needs as an educator working with a specific target audience;
- how to access the resources required to maintain your own professional development as an educator; and
- the resources that would be of interest to your target audience

Resources and information needs are ever changing and expanding so you need to keep your database current. This list is purely a basis from which to start.
## Module 7: Activities for Programs

### CONTENTS

1. Introduction  
2. How to use the Activities  
3. Preparing to Breastfeed  
4. Learning to Breastfeed  
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6. Becoming a Parent  
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1. **Introduction**

Becoming a parent is one of life’s most significant events and yet in contemporary society many are ill-prepared for the reality of the experience. Modern lifestyle and a reduction in traditional family networks have meant that many expectant parents do not receive the experiential learning and parental role modeling of yesteryear. You, as an educator, are in a unique position to help prepare them.

The activities in this module may focus on breastfeeding, but many can be broadened or adapted to address a range of parenting issues. Be flexible and creative in their use.

**Learning Outcomes**

Upon completion of this module you should be able to:

- identify activities that you could incorporate in your sessions and programs;
- describe how the activities could be implemented; and
- state the likely outcome of the activities.

2. **How to use the Activities**

The activities in this module:

- **should be of interest to male and female participants.** The role of practical and emotional support from fathers/partners is an ‘essential ingredient’ to successful breastfeeding, increasing the mother’s confidence and assisting her to maintain an adequate breast milk supply. Men may not spontaneously ask as many breastfeeding questions as women in the antenatal period, but this is no indication of their level of interest or their knowledge base. To foster partner/peer support and sharing of ideas, concerns and interests we have suggested single gender, small groups for several of the activities. The composition of the small groups can, however, be changed as required. If there is a same-sex couple, generally it is best to let the partner decide which group she would like to be in;

- have been **designed to stand alone.** Each activity has a set of instructions and can be used independently or in combination with others in the handbook;

- **cover a range of breastfeeding issues** and for convenience they have been placed into four categories. Selecting one activity from each category would cover a range of breastfeeding issues in your program or session. Remember, however, that you should base your selection on the needs of the participants and the time available in the program or session;

- **can be used at any stage of pregnancy.** Monitor the needs of your group and integrate the activities as appropriate;

- may be **appropriate for or can be adapted for special needs groups.** The language used in the activities should allow them to be used in age or culture-specific groups;

- have been **designed for a group of 20 people** as this is the average size of antenatal education groups in Australia. If your groups differ in size, adjust the activities so you have 4–6 participants in a small group; and
- have an identified aim, the materials required are listed, time allocation is given, the method of facilitation is stated and a predicted outcome is given. The time allocated to each activity is provided as a guide. As you become more familiar with the activities and the needs of the participants, you should vary the time according to your needs and theirs.

As you read through the module you will notice that for several of the activities we have given you two methods by which the activity can be presented to the group. In selecting the method you will use, think about:

- the learning needs of the group;
- the unique characteristics of the participants, such as their age, culture and socioeconomic background;
- your familiarity with the learning strategy;
- your understanding of the issues the activity will raise;
- how it will complement the other activities being used in the session and your program.

The predicted outcomes of each activity have been described based on the experience of the author. Adult learners are fun to work with, but they can be unpredictable so you may find the outcomes from your groups are different.

There are 23 activities in this module – take care with your selection because there is some overlap of topics. Remember quality is better than quantity.

When planning the structure of a session or program you should aim to:

- open with an activity or an ice-breaker that will create a comfortable learning environment;
- move from basic to complex ideas;
- move from known facts to new ones;
- move from the beginning of a process to its conclusion;
- move from concrete content to abstract levels of understanding, reasoning and problem solving; and
- place content of similar nature together.
Activity 3.1: Breastfeeding and other parenting icebreakers

Aim of Parenting Icebreakers:
There are numerous icebreakers that can be used to begin a session or introduce new topics in a program. Those listed below are focused on breastfeeding and other parenting issues, their aim being to foster an interest in issues they may encounter as a mother and a father. They can be used at any time in a pregnancy, birth or parenting ‘teachable moment’ and/or session/program.

Materials Required:
Nil required.

Time Allocation:
Large group activity = 5 minutes

Method:
Select one of the icebreakers from the list below or make up your own. In the large group ask each participant to state their name and give their response to the chosen icebreaker.

Icebreakers that could be used are:

- Breastfeeding means to me that
- When I hear the word ‘breastfeeding’ it makes me think
- One quality I would like to give to my child is
- As a new parent I look forward to
- My favourite girl’s name is
- My favourite boy’s name is
- The best piece of advice I have been given about being a parent is
- My greatest fear about being a parent is
- As a new parent I do not look forward to
- One quality I would like my child to have is
- One thing I have done for my infant this week is
- As a new parent I hope I can
- One thing I would like to achieve in our infant’s first week at home is....
- What does becoming a family mean to you?
- Who can you turn to, apart from your partner, when you need help or support?
- State one thing you will gain as a new parent.
- State one thing you will lose as a new parent.

Allow each participant to give their response without commenting on it. Icebreakers should
allow a free expression of ideas, not an in-depth analysis of issues.

**Predicted Outcome:**
This activity should encourage dialogue and interest in topics that have not been covered or it can be used as revision. The amount of dialogue will depend on the group and icebreaker selected.

**Activity 3.2: A family ‘feeding’ tree**

**Background**
The infant feeding experience of family members can have a significant, yet seldom recognised, influence on the experience of new parents. For this reason it is useful for women and their partners to explore their family ‘feeding’ tree.

**Aim of the Activity**
To give participants an understanding of how the infant feeding experiences of family members can influence their beliefs and their experience.

**Materials Required**
- Paper and pen for each participant

**Time Allocation**
Drawing the tree = 5 minutes
Small group discussion = 10 minutes

**Method**
Each participant draws their family tree on a piece of paper (the next page could be used as a template) and under the names on the tree they write how the person was fed as an infant.

Ask participants to complete the tree to the extent they are able, commencing with their grandparents.

Give participants 5 minutes to complete their tree. Divide the large group into sub groups of 4–6 people. Ask participants to compare their trees and discuss the influence family members may have on their infant feeding experience.

Complete the activity with a comment about how family members can influence breastfeeding. Encourage further exploration/discussion of this issue before they have their infant, as it can help them identify the family members who will provide support in the early postnatal weeks.

**Predicted Outcome**
Some participants may not know how family members were fed. As family experiences can influence their own experience and their beliefs, you might suggest that they may like to explore the issue further, although this could be a sensitive area if family separation has occurred.
Activity 3.3: Practical wisdom

Background

Expectant and new parents are given so much advice and information it is little wonder that they begin to question what is fact, what is fiction is and what is in between. Exposing and clarifying some of the stories and practical wisdom surrounding breastfeeding can assist women and their partners during pregnancy and beyond.

Aim of the Activity

To expose and clarify for parents some of the practical wisdom surrounding breastfeeding.

Materials Required

- Paper and pen for each small group

Time Allocation

Small group discussion = 10 minutes
Large group feedback and discussion = 10 minutes

Method

Divide the large group into four single-gender groups. Give each group some paper and a pen. Ask them to discuss the following questions and write their answers on the paper. Allow 10 minutes for the discussion.

Questions:

- What have you heard or read about breastfeeding?
- From whom or where did you hear this? Family, friends, on-line?

Close the discussions with a spokesperson from each group presenting the answers to the large group. Follow the presentations with a general discussion about the stories women and their partners may hear about breastfeeding and advice they may be given. Emphasise the importance of clarifying incomplete or inconsistent information and advice they receive and, to complete the activity, give participants a list of resources and services they may like to access. A list is provided in Appendix 8.

Predicted Outcome

The answers to this learner-centred activity should be enlightening as participants will probably mention not only the stories and advice they have heard, but also their fears, interests and concerns about breastfeeding. Through the use of single gender groups you should be able to identify and compare the interests and concerns of the women and the men in the group.
Activity 3.4: Myths and half-truths about breastfeeding

Background
As stated in Module 2, the family and community in which the mother lives can have a major influence on her breastfeeding experience. Breastfeeding practices, assumptions and ‘rules’ frequently exist and if they are inconsistent with the evidence-based practice you are teaching, new parents can become quite confused. Women and their partners should be aware of this problem, but they also need to realise that knowledge and practices are time limited and sometimes culturally specific so what is current today may be old tomorrow.

Aim of the Activity
To acknowledge the existence of myths and half-truths in the community and to clarify some of those related to breastfeeding.

Materials Required
- Small cards with one myth or half-truth written on each card. On the next page you will find a template that you can photocopy for your cards.
- One copy of the ‘Response Sheet’.
- Paper and pen for each small group.

Time Allocation
- Small group discussion = 10 minutes
- Large group feedback and discussion = 10 minutes

Method
Divide the large group into sub groups of 4–6 people. Give each group two or three of the ‘myth’ cards, some paper and a pen. Ask them to discuss each card and summarise their comments on the paper. Allow 10 minutes for the discussion. Close the discussions with a spokesperson from each group presenting the comments to the large group. Follow the presentations with a general discussion about the myths and half-truths women and partners may hear about breastfeeding and explain how each community and culture can have their own, taking care not to appear to denigrate incorrect views. Emphasise the importance of clarifying incomplete or inconsistent information and advice they receive and, to complete the activity, give participants a list of resources and services they may like to access. A list is provided in Module 8.

Note: A ‘Response Sheet’ has been provided for the myths in this activity. You may like to share the information with the group to clarify any of the issues or concerns raised in the small group discussions. Remember that the myths and half-truths of one community or culture may be accepted practice in another.

Predicted Outcome
In addition to discussing the myths provided in this teacher-centred activity, you may find that each group will share a range of stories they have heard. These stories can be enlightening as they will probably include not only myths and half-truths, but issues that are of concern. As the educator you do not need to address all concerns, but rather you should refer them to resources they can access themselves. For example, breastfeeding books,
brochures, an IBCLC or an ABA counsellor.

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Myths response sheet

1. Breast size affects milk production
   - The size of the breast does not affect milk production in the majority of women as the breast is mainly composed of fatty and connective tissue, rather than milk-producing glands. Between 1% and 5% of women do not develop sufficient milk-making tissue for adequate milk production. Milk quantity is, however, related to the strength, quality, frequency and duration of infant sucking.

2. Breastfeeding causes sagging breasts. It ruins the shape of your breasts
   - This is simply not true. Research indicates that breast shape is affected by heredity, age and pregnancy in that order and minimally by breastfeeding. Even if a pregnancy does not continue, a woman’s breasts will never be the same as they were before pregnancy. So it isn’t breastfeeding that alters breast shape and size.

3. Nipple creams prevent sore nipples
   Nipple creams tend to make the skin soft and can lead to allergic reactions. Recent research shows that the most effective management of tender nipples is fresh air and breast milk. Initial tenderness is mostly caused by the nipple stretching and should settle within the first week. Nipple damage is prevented by the infant being correctly positioned at the breast with a good mouthful of breast.

4. Fair skin women are more likely to have nipple problems
   Researchers have investigated this belief and found no link between red hair or fair skin women and sore nipples.

5. My mother didn’t make enough milk so I won’t
   - Breastfeeding was not fully supported by hospital practices in the past. Mothers and infants were separated and complementary feeds were common. We now know that these practices reduce mothers’ milk supply by reducing the infant’s stimulation of the breast and therefore interfering with the important “supply = demand” mechanism.

6. There is no milk in the first few days
   - Breast milk (colostrum) is made and stored in the breast from 16-weeks gestation. The quantity is designed to meet the nutritional needs of the new infant. It is low in volume, rich in protein, calories, and antibodies and has a laxative that stimulates the new infant’s gut. Milk volume gradually increases as the infant’s requirements change over the first few days.

7. Women with inverted or flat nipples cannot breastfeed
   Approximately 10% of women have non-protractile or inverted nipples. Breastfeeding with inverted nipples can be a challenge for mothers and midwives in the early days, however, many women are able to breastfeed effectively.

8. Drinking milk makes milk
   - It is not necessary to drink extra milk. Breastfeeding mothers should eat a variety of nutritious foods and stay hydrated.
9. I can’t express any milk by hand so I must not have any
   • Hand expression is a learnt skill. Some women are unable to get milk from the breast by expressing due to incorrect technique. Women who are using breast pumps for long term expressing may experience some delay with their let-down reflex. It takes a while to ‘fall in love’ with the breast pump.

10. If I eat cabbage or green leafy vegetables my baby will have wind
   • There is no evidence to suggest that the foods a mother eats will affect an infant, if foods are eaten in moderation. Breastfeeding mothers should eat a variety of nutritious foods.

11. Formula fed infants sleep better and for longer than breastfed infants
   • Research suggests that formula-fed infants may sleep for longer periods, but they don’t have a better quality of sleep than breastfed infants. Formula milk is harder to digest and stays in the infant’s system for longer, so it begins to ferment and this means that you will have much smellier and bulkier nappies. Breastfed infants typically begin to sleep for longer periods of time after four to six weeks of life and by this time it is estimated that they sleep for the same time period as the formula-fed infant.

12. Breastfeeding ties you down, Infants are like alarm clocks: they continually disturb you and demand your time
   • Yes, breastfed infants rely on their mother for nourishment and love. This doesn't mean you have to stay tied to the house: it’s easy to take your breastfed infant out to the park, shopping or to visit friends. With breastfeeding your milk is readily available to you and you don’t need to take bottle, formula and water with you.
Activity 3.5: Infant feeding and the media

• **Background**

  • In Modules 1 and 2 we identified how the media portrays the breast and breastfeeding, and how it can sensationalise related issues. This can have an impact on new parents, so it is worthwhile preparing them for it.

• **Aim of the Activity**

  To recognise and clarify the role of the media in portraying infant feeding norms.

**Materials Required**

• 3 or 4 articles from newspapers or magazines that sensationalise the breasts, breastfeeding, formula feeding, bottles, or dummies. You can contact the Lactation Resource Centre for articles if you have problems finding some.

• Paper and pen for each small group

**Time Allocation**

• Small group discussion = 10 minutes

Large group feedback and discussion = 10 minutes

**Method**

Divide the large group into sub groups of 4 – 6 people. Give each group one article, some paper and a pen. Ask them to discuss the article and summarise their comments on the paper. Allow 10 minutes for the discussion.

Close the discussions with a spokesperson from each group presenting the comments to the large group. Follow the presentations with a general discussion about the media and how it can sensationalise infant feeding. Emphasise the importance of clarifying incomplete or inconsistent information they receive and, to complete the activity, give participants a list of resources they may like to access. A list is provided in Module 8.

• **Predicted Outcome**

  • Through the process of discussing the articles the participants are likely to discuss a range of articles they have encountered. This adds to their awareness of the impact the media can have and encourages them to seek clarification if they feel the information being presented is incorrect or incomplete.

• **Note:** Mothers have a legal right to breastfeed anywhere. A good resource can be found on the ABA website.
Activity 3.6: Breastfeeding and you

Background
Breastfeeding education has tended to focus on the physical and biological aspects of breastfeeding. Although women and partners do want to know ‘how to do it’, they should be encouraged to explore and discuss how they feel about breastfeeding and the impact they perceive it will have on their lives before they begin. The decision to breastfeed is frequently made prior to conception without a true understanding of the individual nature of the process.

Aim of the Activity
To stimulate during pregnancy an interest in, and a consideration of, the psycho-social and emotional aspects of the breastfeeding experience.

Note: There are many questions that can be used to trigger psychosocial discussions, as can be seen from the list on the following page, and several ways to present them to a group. For example, you can present them as trigger questions during the course of an antenatal program in small or large, mixed or single gender group discussions, they can be presented on graffiti sheets, as homework exercises, or by caregivers during the antenatal period. You can even integrate a number of them through a program, presenting them in different ways to provide variety.

If, however, the program you facilitate has another facilitator or a guest speaker, ask whether they use discussion triggers in their session and if so, which they use. You may want to sit in on their session to confirm their approach. Replication of activities can be useful if you want to see whether there has been a progression of ideas within the group, but it can also be a waste of time.

Method One

Materials Required
- Small cards with one trigger question written on each card
- Paper and pen for each small group

Time Allocation
- Small group discussion = 15 minutes
- Large group feedback and discussion = 15 minutes

Method
Divide the large group into four single-gender groups. Give each group 2 or 3 trigger questions, such as the ones listed below, some paper and a pen. Ask them to discuss the question/s and summarise their comments on the paper. Allow 15 minutes for the discussion.

Close the discussions with a spokesperson from each group presenting the comments to the large group. Follow the presentations with a general discussion about what breastfeeding means to them, their partner and their family. Complete the activity with a summary of the issues raised. Discuss and encourage further exploration and discussion of this issue before they have their infant, as it can help them identify who will provide support in the early
Sample Trigger Questions

- What does breastfeeding mean to you? Why do you feel that way?
- What does breastfeeding mean to your partner?
- Thinking about the media images and/or comments made by others to women through pregnancy, who owns a woman’s breasts – the mother, the partner, the infant, society?
- What effect will breastfeeding have on your relationship with your partner?
- What does your mother think about breastfeeding?
- What does your family think about breastfeeding?
- Were you breastfed?
- How do you feel when you see a woman breastfeeding in public?
- What do you think the infant feels when it is breastfeeding?

Method Two

Note: Discussion triggers can be presented to a group through the use of graffiti sheets, as described in Module 4. For presentation on a graffiti sheet remember that the trigger should be written as an incomplete statement. For example: ‘Breastfeeding means...’ and ‘Breastfeeding makes me feel...’

Materials Required

- Graffiti sheets with one trigger statement written on each sheet, and pens.

Time Allocation

- Graffiti sheets = 10 minutes
- Large group feedback and discussion = 15 minutes

Method

Place the graffiti sheets and pens around the room or the corridor on tables, chairs or pinned to the wall. Explain the purpose of the activity and ask participants to move around the room writing their response to the trigger statements on each graffiti sheet.

At the end of the exercise ask participants to collect the graffiti sheets and return to the large group for feedback and discussion. Complete the activity with a general discussion about what breastfeeding means to them, their partner and their family. Encourage further exploration and discussion of this issue before they have their infant, as it can help them identify who will provide support in the early postnatal weeks.

Predicted Outcome

The amount of discussion that occurs will vary and is influenced by the level of trust and comfort within the group. If your group knows each other and the level of trust is high, you may find it useful to increase the amount of time allocated to this activity.
Activity 3.7: Preparing for breastfeeding in early pregnancy

- Background
  - As we identified in Module 1, breast changes occur early in pregnancy, so women tend to have many questions regarding the care of their breasts at this time. If your facility offers an early pregnancy session, you should include information on breast changes in pregnancy, breast care and how to prepare for breastfeeding.

Aim of the Activity

To give participants an understanding of how to care for their breasts during pregnancy and also how they can prepare for breastfeeding their infant in the early postnatal weeks.

Materials Required

- Paper and pen for each small group
- Breast model and visual aids

Time Allocation

- Small group discussion = 10 minutes
- Large group feedback and discussion = 15 minutes

Method

Divide the large group into four single-gender groups.

- Two of the groups, one mothers-to-be and one partners, are to brainstorm and list on paper the changes they have noted in the breasts since the beginning of the pregnancy, what the changes mean and how they are perceived by women and their partners. In addition they are to discuss how they can prepare for breastfeeding.
- Two groups are to reflect on their own family’s breastfeeding experience and discuss how it could influence their own experience.

Allow 10 minutes for the discussion.

Important Note: Dividing the groups and allocating topics in this way increases the number of issues discussed. If the group has already explored their family ‘feeding’ tree, you will need to change the discussion topic for two of the groups.

Close the discussions with a spokesperson from each group presenting the responses to the large group. Complete the activity with a description of:

- breast changes in pregnancy, what they mean and how they are perceived by women and their partners;
- shapes and types of breasts, areola and nipples;
- breast care;
- breast creams and ointments;
- types of bras and their use;
- how the experience of family members can influence their own experience and their
beliefs.

You may like to use visual aids, such as the graphics in Modules 1 and 2, to enhance your presentation.

Predicted Outcome

Many groups will be able to describe the breast changes that occur early in the pregnancy but they may not know current breast care practices. For example, they may think they have to apply creams or ointments to the nipple.

Some participants may not know how family members have fed their infants. Feeding methods may not have been discussed within the family, or family separation may have occurred.
Activity 3.8: Preparing for breastfeeding in late pregnancy

Background
There is a tendency for educators to think that as the birth becomes imminent most women are only interested in labour and the types of pain relief they may require. As we highlighted in Module 2, this is not necessarily the case. Anticipatory guidance at this time is important as it helps the expectant parents realise the impact breastfeeding may have on their life and their relationship. The division of the large group into single-gender groups is recommended in order that partners can begin to express their significant, yet frequently understated, roles in breastfeeding preparation, its initiation and then duration.

Aim of the Activity
To give participants an understanding of how they can prepare for breastfeeding as they approach the birth.

Materials Required
- Paper and pen for each small group

Time Allocation
- Small group discussion = 10 minutes
- Large group feedback and discussion = 10 minutes

Method
Divide the large group into four single-gender groups.
- Two of the groups, one women and one partners, are to brainstorm and list on paper, what they can do to prepare for breastfeeding.
- Two groups are to discuss and list on paper what their role as a breastfeeding parent involves. In addition they are to identify the role of the breastfeeding infant.

Allow 10 minutes for the discussion.

Close the discussions with a spokesperson from each group presenting the responses to the large group. Complete the activity with a summary of how women and their partners can prepare themselves for breastfeeding and outline the roles of the mother, the partner and the infant in breastfeeding. Emphasise the diversity of the breastfeeding experience and give participants a list of resources they may like to access. A list is provided in Module 8.

Predicted Outcome
The outcome of this activity will vary according to the amount of personal experience the participants have with breastfeeding. You will generally find that if a number of participants have family or friends with babies or infants, they will have a clearer idea of what they can do to prepare themselves for breastfeeding.
Activity 3.9: Is equipment needed?

Background
With some women planning to return to work by six months, and/or women wanting to have ‘a night off’ from breastfeeding, questions are frequently asked about how to express and store breast milk, and some ask about the use of infant formula to supplement breast milk. This activity has been included to give parents an understanding of breastfeeding physiology and how breast milk supply can be adversely affected by the introduction of formula especially in the early postnatal weeks.

Aim of the Activity
To inform parents of the effects, both physical and hormonal, that can occur if a woman has ‘a night off’ from breastfeeding in the early weeks, including physical discomfort for the mother and reduced milk supply for their infant. It also aims to inform parents as to how breastfeeding can continue after a return to work and what preparation is required.

Materials Required
- Breast pump, storage bottles with screw tops, a sterilising unit, ice tray and sterilised milk collection bags.

Time Allocation
10 minutes

Method
Large group discussion on:
- the woman’s physical and hormonal response to ‘a night off’ from breastfeeding, which can affect the supply of breast milk and the mother’s physical comfort, and how this changes as the weeks progress;
- breast expression and the difference between hand, hand pump and electric pump;
- storage of breast milk, including how it is stored and the duration it can be stored;
- the use of dummies, cups and spoons;
- the qualities of breast milk and that no other liquids or solids are required until 6 months;
- how to maintain breast milk supply on return to work; and
- infant-led weaning.

Predicted Outcome
Even in pregnancy couples wonder how a mother can ‘have a night off’ or how the partner can “share the load”, but many do not realise the implications of supplementation for both mother and infant. This activity should help them in their understanding of how breastfeeding actually works.
Activity 3.10: The first few hours with your newborn

Aim of the Activity
To help mothers and partners formulate a plan for how they would like to spend the first few hours with their newborn.

Materials Required
- List of recommended websites and DVDs.

Time Allocation
This is designed to start with a large group discussion and be completed as a take-home activity.

Method
Ask parents to talk through and make a plan for how they would like to spend the first few hours with their infant, including the importance of skin-to-skin contact and the instinctive newborn behaviours leading to the seeking of the breast if left undisturbed. Explore how this can occur and what can hinder it, to help them prepare for this time. Suggest that they:

- seek information on skin-to-skin contact regardless of type of birth;
- talk to their midwife about what may happen after the birth;
- listen to other parents talking about what it was like for them;
- watch video-clips on the internet, or television programs that show parents and infants and notice how interactive the newborn is at birth.

English online resources to view include:
http://www.bestbeginnings.org.uk/fbtb-introduction
The ABA has a wide collection of video clips from a range of sources:
The ACT Government has a video, ‘Breastfeeding give it a go’, aimed at increasing awareness about breastfeeding among young people and empowering young parents to achieve a successful breastfeeding journey. (This video is also available on YouTube.)

Predicted Outcome
Completing this activity and talking with their midwife or other care provider should help prepare them for this amazing time in their life.

4. Learning to Breastfeed

There are many practical activities that can be used to demonstrate breastfeeding techniques and skills. They may sound interesting and will certainly stimulate discussion and participation, but remember that the quality of the information is more important than quantity and too many activities can lead to a rushed session.

Activity 4.1: Oranges and breasts

Aim of the Activity

To make participants aware of the ways milk can be obtained from the breast and how effective they are.

Materials Required

- Oranges (three wedges per person)
- One straw, one cup and serviette for each participant
- Dolls, a breast model and visual aids

Time Allocation

15 – 20 minutes

Method

Ask each participant to take one wedge of orange and a straw. They are to suck as much juice from the wedge as possible through the straw. Ask them to rate, on a scale of 1 to 10, the efficiency of removing juice from the orange by this method. 1 = inefficient, 10 = efficient. This method is usually given 0–1 out of 10.

Ask each participant to take another wedge of orange and a cup. They are to squeeze as much juice from the wedge as possible into the cup. Ask them to rate the efficiency of this method on a scale of 1 to 10. This method is usually given 5–7 out of 10.

Finally they take their last wedge and are asked to suck as much juice from the piece as possible, using their lips, tongues and gums, but not their teeth, as they will damage the flesh of the orange. They are to give an efficiency rating of the method. This method usually is given 9–10 out of 10.

At the end of the exercise explain the reason for doing it and give the following description.

- **The orange and the straw** represent the amount of milk an infant receives when it sucks on the nipple only.
- **The orange and the cup** represent the amount the infant would receive from expressing milk and giving it via a bottle or cup.
- **Sucking on the orange** represents the amount received by the infant when it is feeding on the mother’s breast. It imitates the ability of an infant, with a deep mouthful of breast, to extract milk from the breast through the massaging action of their lips, tongue and gums, along with the suction as they swallow.

Complete the activity with an explanation of the different ways milk can be obtained from the breast and describe when each one would be used. Explain the infant’s role in breastfeeding and show how the infant’s whole body needs to be in alignment and facing...
the breast, so the infant can use its jaw effectively. Remind mothers that the shape of the
nipple when the infant comes off will give them an idea of how effective the mouthful of
breast was. Squashing and/or pinching is predictive of nipple damage.

You may like to enhance your presentation by using visual aids, such as the graphics
in Module 2, a breast model and dolls. The dolls can be passed around the group so
participants can practice holding them and get a feel for supporting an infant.

**Predicted Outcome**

Participants will be amazed by the difference in the amount of juice they obtain from the
three methods. It reinforces the importance of good positioning and attachment of the
infant and will encourage them to practice their positioning techniques with the dolls. It
empowers the mother to check her nipple shape on detachment so she can prevent early
nipple damage. If the women attending the session are at an advanced stage of their
pregnancy, they may find it difficult to position the infant. It is interesting, however, to
watch the way the dolls are handled. Participants will watch you, so make sure you handle
the doll as if it were an infant.
Activity 4.2: Breasts, nipples and suckling

Aim of the Activity
To make participants aware of the different types of sucking and how the breast can be shaped to facilitate comfortable attachment.

Materials Required
- Dolls and a breast model
- The other materials vary according to the method used

Time Allocation
Will depend on the number of methods used.

Method One: Sandwiches and Breasts
Begin by asking the participants ‘What shape is an infant’s mouth?’ The answer is ‘A infant’s mouth is a longitudinal oval shape, rather than a circle’. Once they understand the shape of the mouth, you should explain that the woman’s breast needs to be shaped to meet that of the infant’s mouth.

To demonstrate this place the breast model in front of you so as to mimic your own breast. Cup the breast model with your left hand on the outer quadrant, thumb on the top and the fingers underneath. Your thumb and fingers should be at least 3cm away from the nipple, on the breast. As you gently squeeze the breast, the breast tissue narrows longitudinally and elongates horizontally.

Maintain this hold for a few minutes while you explain that if the infant is in the cradle or underarm position, its mouth will be longer longitudinally and narrower horizontally, exactly the opposite to the current breast shape.

To shape the breast to fit the infant’s mouth better, slide your hand so it cups under the breast. Gently squeeze it once more. The breast is now shaped in the same direction as the infant’s mouth.

You can use a sandwich to demonstrate this shaping exercise. The sandwich is shaped so that the best bite is achieved if the sandwich is placed horizontally or parallel to the mouth.

Method Two: Fingers and Arms / Nipples and Breasts
To compare the difference in breastfeeding when an infant is attached to the nipple versus the breast, this simple exercise can be demonstrated. The infant needs to have a wide-open mouth to get as much breast tissue into its mouth as possible.

Ask participants to suck on the end of one of their fingers, as if they were sucking just on a nipple. Whilst they are sucking ask them to think about the shape of their mouth, their cheeks and the jaw and how they feel.

Now get them to open their mouth wide and suck on their arm. Once again they are to notice the shape of their mouth, their cheeks and the jaw.

At the end of the exercise, ask participants:
- to describe the difference between the two types of sucking;
- what they think would happen when an infant is nipple sucking, as opposed to...
breast suckling?

- what would happen to the nipple? What would it look like?
- would the infant get much milk through nipple sucking?

**Method Three: Balloons, Condoms and Engorgement**

Using a balloon, or even better a condom as it has a nipple, you can give a number of examples of what can happen to the breast under different circumstances.

Give each participant a balloon or condom and ask them to blow them up to various levels. Some should make them big, some small and some medium. When they are inflated they should observe what happens to the nipple. For example they should notice that when a condom is over distended, the nipple flattens out. This demonstration simulates the breast when it becomes venous or milk engorged. The nipple appears to flatten out as the breast enlarges, which can make it difficult for an infant to attach.

Complete the activity with an explanation of the different types of sucking and how the breast can be shaped to facilitate effective attachment. Explain the infant’s role in breastfeeding and show how the infant’s whole body needs to be in alignment and facing the breast, so the infant can use its jaw effectively. Remind mothers that the shape of the nipple when the infant comes off will give them an idea of how effective the mouthful of breast was. Squashing, pinching is predictive of nipple damage.

You may like to enhance your presentation by using visual aids, such as the graphics in Module 2, a breast model, dolls and a DVD that demonstrates positioning and attachment. Whenever possible dolls should be passed around the group so all participants can practice the technique. If the women attending the session are at an advanced stage of their pregnancy they may find it difficult to position the infant. It is interesting, however, to watch the way the dolls are handled. Participants will watch you, so make sure you handle the doll as if it were an infant.

**Predicted Outcome**

Practical activities, such as those described above, stimulate interest so incorporate them into your session whenever you can. For example you could finish a birth session with the oranges and breasts activity. Explain the relevance of the activity to the session and emphasise the close connection between the end of labour and the first breastfeed. It empowers the mother to check her nipple shape on detachment so she can prevent early nipple damage.
Activity 4.3: How breastfeeding begins

Aim of the Activity
To give participants an understanding of how breastfeeding is initiated.

Materials Required
- Breast model and visual aids

Time Allocation
15–20 minutes

Method
Briefly describe, using visual aids, the following:
- the breast – its role and function as the birth approaches;
- the hormonal changes that occur once infant is born and placental separation has occurred;
- the natural instincts of the infant when skin-to-skin and the 9 instinctive stages of newborn behaviour when it is encouraged;
- how the mother may feel immediately after the birth, noting this will vary;
- the benefits of early initiation of breastfeeding;
- why initiation may be delayed, the effect this has on breastfeeding outcome and how this situation can be managed;
- the differences between colostrum, transition milk and mature milk – their amounts, their colour, etc.;
- the breast changes in the early postnatal days.

You may like to use the information and the flow chart in Module 2 to enhance your description. In addition there are breastfeeding DVDs that can be used to supplement your input so refer to Module 6 for suggestions. Complete the activity with a discussion of the role of the mother, the infant, the staff and partner in breastfeeding. Emphasise the importance of physical and emotional support in the postnatal period and give participants a list of resources they may like to access. A list is provided in Module 8.

Predicted Outcome
Although this is a more didactic approach to those described previously, you can use visual aids or the video to supplement your descriptions and maintain interest in the topic.
Activity 4.4: Infant’s stomach size – how large is that?

Aim of the Activity

To give participants an understanding of the size of a newborn’s stomach at birth, and how it changes in size quickly in the first days and weeks.

Materials Required

- Collection of various sized polished stones, household objects or food items to represent the capacity of the stomach at different stages.

Time Allocation

5 minutes

Method

Group the objects into 4 different sizes and show the group the size of the infant’s stomach at 1 day, 3 days, 10 days and adult. Explain that with the first few breastfeeds their infant will only get ½ teaspoon of milk per feed.

<table>
<thead>
<tr>
<th>Age</th>
<th>Size of stomach</th>
<th>Comparable object</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 day</td>
<td>5-7 ml</td>
<td>Marble, hazelnut, thimble</td>
</tr>
<tr>
<td>3 days</td>
<td>22-27 ml</td>
<td>Malted milk ball, tablespoon</td>
</tr>
<tr>
<td>10 days</td>
<td>45-60 ml</td>
<td>Golf ball, walnut</td>
</tr>
<tr>
<td>Adult</td>
<td>900 ml</td>
<td>Grapefruit, softball</td>
</tr>
</tbody>
</table>

Predicted Outcome

Participants will be amazed to see the size of a newborn’s stomach and will be helped to understand why an infant requires frequent feeds.
Activity 4.5: Breastfeeding according to need

Aim of the Activity
To give the participants an understanding of the meaning and importance of breastfeeding according to need.

Time Allocation
15 minutes

Method
Briefly explain:

- the feeding patterns of a newborn infant compared with those of a slightly older infant and how the pattern changes as the infant grows;
- that infants can’t read clocks and that the practice of 4-hourly feeding of newborns in the 1960s hampered effective breastfeeding;
- the meaning of ‘rooming in’ and the benefits of feeding according to need;
- what is meant by demand = supply and how milk supply responds to the growing infant;
- the breast changes in the early postnatal weeks. For example on day 3 they may be heavy and uncomfortable and by about week 3 they are settling and softer;
- tender nipples, cracked nipples, engorgement and mastitis – prevention and management of breastfeeding problems.

Complete the activity with a discussion of the role of the mother, the infant, the partner and the postnatal support services in the early postnatal period. Emphasise the importance of physical and emotional support in the postnatal period and give participants a list of resources they may like to access. A list is provided in Module 8. In Module 8 you will also find a Fact Sheet on breastfeeding in the first week.

Predicted Outcome
As your participants may be concerned as to whether they will be able to breastfeed, it is helpful to explain what will happen to their breasts and the infant’s feeding in the early postnatal weeks.
Activity 4.6: Infant sleep and newborn behavior

Aim of the Activity
To provide parents with an understanding of infant behaviour and in particular the
difference between infant sleep cycles and those of an adult.

Time Allocation
10 minutes

Method
Using the Infant Behaviour Fact Sheet and Infant Sleep Fact Sheet in Module 8:

- describe the six defined behavioural states of an infant and how parents can tell the
difference between each state;
- explain the different sleep states and the difference between infant and adult sleep
cycles, and how to tell which their infant is in;
- outline an average sleep pattern of a newborn but reassure that every infant is
different and that the pattern will change as the weeks and months progress.

This discussion could be extended with the showing of an Infant Communication DVD of
which there are several available – refer to Module 6

Predicted Outcome
Expectant parents are often unaware of the difference between infant and adult sleep
cycles and in particular how infants move from wake to light sleep whereas an adult goes
straight to deep sleep, so this activity, with or without DVD, should interest them and help
prepare them for their infant.
Activity 4.7: Breastfeeding how, where, why and when

Aim of Activity:
To facilitate discussion amongst expectant parents as to where and when it is acceptable to breastfeed their infant. This activity also addresses the physiology of breastfeeding and the advantages of breastfeeding.

Materials Required:
- Paper and pens

Time Allocation:
Small group discussion = 10 minutes
Large group feedback and discussion = 15 minutes

Method:
Divide the large group into four groups. Give each group some paper and a pen. Ask them to discuss the following triggers according to the group they are in and write their responses on the paper.

Triggers:
- How do you breastfeed?
- Where do you breastfeed?
- Why do you breastfeed?
- When do you breastfeed?

Allow 10 minutes for discussion. Close the discussions with a spokesperson from each group presenting the responses to the large group. Follow the presentations with a discussion surrounding the anatomy and physiology of breastfeeding and its advantages, but also importantly where they would feel comfortable breastfeeding in the first few days and then later, and how they feel about visitors. Emphasise the importance of postnatal support and give participants a list of resources they may like to access.

Predicted Outcome:
This activity should stimulate an active discussion about breastfeeding and in particular how participants feel about breastfeeding in public places. As noted earlier, participants should be advised that they have a legal right to breastfeed in public. The role of the partner is also included.
Activity 5.1: The reality of breastfeeding

Aim of the Activity
To give the participants an understanding of what it is like to breastfeed an infant in the early postnatal weeks.

Materials Required
- Two sets of new parents who are willing to discuss their postnatal experience

Time Allocation
- 45–60 minutes

Method One
Invite one or two sets of new parents to the antenatal session to discuss their postnatal experience. The simplest way to acquire the parents is to recruit them from a previous antenatal program, such as at their reunion and confirm their availability and interest through a telephone call 3–4 days prior to the session.

Note: The time spent on this activity will depend upon the focus that you place upon it. Adults can learn a great deal from their peers, indeed this has been a preferred learning activity for parents, so allow at least half an hour for the birth and ½ – ¾ hour for the postnatal experience.

Your role as facilitator will vary depending upon the spontaneity of the participants. You may need to guide the discussion through the use of questions that trigger responses, such as those below, or you may need to refocus an active discussion to keep it relevant. As one of your aims is to give participants an understanding of the reality of breastfeeding, make sure that some time is spent discussing their experience. Complete the activity with a summary of the issues discussed.

Trigger Questions for the new parents:
- How would you describe the first six weeks as a parent?
- What did you enjoy?
- What have you found hard?
- Has the experience been anything like you expected?
- How would you describe your breastfeeding experience at the beginning? How would you describe it now?
- What has helped you with breastfeeding? What have you found hard?
- What handouts, books, person, people or resources, if any, have you found particularly helpful?

Method Two
Begin the activity as described above and after one hour have a break. Divide the large
group into single-gender groups with the women and partners, with or without female and male educators, facilitating the small group discussions with the visiting parents talking further about their experience. This can allow a more intimate discussion to occur. Complete the activity with a summary of the issues discussed.

**Predicted Outcome**

- This activity should stimulate an active question and answer session as it brings a sense of reality to the expectant parents. You may need to trigger the initial discussion, but once the level of trust within the group increases, you should find that the questioning becomes spontaneous.
**Activity 5.2: What if cards**

**Aim of the Activity**
To show participants they have the problem solving skills required by a new parent.

**Materials Required**
- Small cards with one scenario written on each card. On the next page you will find a template that you can photocopy for your cards.
- One copy of the ‘Key Issues’ fact sheet
- Paper and pen for each small group

**Time Allocation**
30–45 minutes depending on the number of scenarios used.

**Method**
Divide the large group into sub groups of 4–6 people. Give each group a scenario card, some paper and a pen. Ask them to discuss the scenario and summarise their answers to the problem on the paper. Allow 10–15 minutes for the discussion.

Close the discussions with a spokesperson from each group presenting the answers to the large group. Follow each presentation with a discussion about the key issues in the scenario. We have provided the key issues that need to be addressed on a fact sheet for your reference. Emphasise the importance of clarifying incomplete or inconsistent information and advice they receive and, to complete the activity, give participants a list of resources they may like to access. A list is provided in [Module 8](#).

**Notes:** The total time allocated to this activity will depend upon the number of scenarios to be discussed. As a guide allow one hour for the activity if you use 4 or 5 scenarios. Scenarios are an excellent way to begin a session if your program is ongoing. You can distribute the cards to those that are present at the beginning of the session and latecomers can join a group as they arrive. After 15 minutes of discussion they form into the large group and you can cover a multitude of information in the discussion that ensues.

The scenarios provided below cover a range of breastfeeding issues. Adapt them or create your own to meet the specific needs of your group. The experiences women and partners describe at an antenatal program reunion can be modified for use and are generally more effective because they are real situations. You need, however, to give fictitious names to prevent identification of the people involved.
Breastfeeding Scenarios

1. Cassie and infant Ben have been dozing and sleeping for the first day and now Ben has woken and seemingly wants to breastfeed continuously. Cassie is in tears and doesn’t know what to do. What do you think is happening to Ben and how could Cassie deal with this situation?

2. Mary Louise complains to her midwife that her nipples are tender and they have blisters on them. Why do you think they are tender and blistered and how could Mary Louise deal with this situation?

3. Towards the end of the day Rula feels a bit achy and generally unwell. She has a temperature and one of her breasts has a red area that is tender and hot to touch. What do you think is happening here and what should Rula do?

4. Judith and Thomas are sailing along with breastfeeding. At five weeks Thomas becomes very unsettled and wants to feed frequently for a few days. Someone tells Judith to give Thomas a bottle, as he ‘must still be hungry’. What do you think is happening and what should Judith do?

5. Elizabeth has a three-week-old infant who is breastfeeding and sleeping well. Elizabeth, however, feels tired, run down and is skipping meals. What should Elizabeth do?

6. Baby Louise is now ready for her first breastfeed. Angela, her mother, feels overwhelmed as her caesarean section was not planned and she is tired, sore and unsure of how to manage Louise and this breastfeed. What do you think Angela and Louise should do?

7. Prudence has premature twins, babies Josh and Sara. They are in the Special Care Nursery and are both being fed by a ‘drip’. Prudence wants to breastfeed. What should she do?

8. Skye is breastfeeding three-week-old Cameron. Cameron is settled after taking just one breast each feed. Skye has been told that she should be offering Cameron 20 minutes from both breasts at each feed. How do you think Skye feels and what should she do?

9. Yvonne is 36 weeks pregnant and her family lives overseas. She wants to breastfeed but is wondering how she will cope alone. What should she do?

10. Tehera is a university student from Bengal who has just had her first infant. While all her friends at home breastfed, she is unsure of how she will manage to breastfeed her new infant with her university commitments and without the support of her family.
Key Issues Fact sheet

Scenario One:
This is normal behaviour for a newborn – see Module 2. Telling parents that this is a normal 'time limited' behaviour prevents tears, distress and unnecessary concern regarding milk supply. Women should plan for this by sleeping when their infant sleeps and controlling visitors.

Scenario Two:
Encourage mothers to tune into and interpret the sensations of the infant feeding. Checking nipple shape at end of a feed will help them to work out if the infant was correctly attached. Nipple tenderness peaks around day 5–6 and then diminishes. This is a normal stretching of the muscle fibres and skin. Damage to the skin of the nipple is caused by incorrect attachment. Learning to breastfeed is a skill and sometimes during the learning process small blisters and grazes occur but they heal quickly. This situation can be managed with support and reassurance, fresh air, applying breast milk to the nipple and wearing non-restrictive clothing.

Scenario Three:
Mastitis can be quickly resolved by applying warmth to the area before a breastfeed, optimising the infant's attachment and applying cold compresses or cabbage leaves after the feed. Antibiotics should be used if there is no improvement after 24 hours. Plenty of rest and fluids are required. This situation can be prevented by encouraging new mothers to check their breasts after feeds and gently hand express for comfort if necessary. Regular breast self-examination lays the foundation for good breast health.

Scenario Four:
Thomas is probably having a frequency day or growth spurt. These usually occur at 10–14 days, 4–6 weeks and 3–4 months. Introducing a bottle at this stage will commence the weaning process and undermine the mother's trust in the ability of her breast to produce the milk required to nurture her infant. Bottle feeding is more work for the mother.

Scenario Five:
Breastfeeding mothers need to be aware of their own needs. They should eat when hungry and drink when thirsty. Plan quick meals, healthy snacks and blender drinks. Enlist help from family and friends with cooking. There is no need for fancy supplements. Support for the mother is required, not 'help with the feeding'.

Scenario Six:
The infant's feeding cues must be identified and confirmed. Angela could be assisted into a comfortable position either upright, lying down or supported on her side. Pain relief should be provided. Reassurance should be given because Angela may lack a sense of confidence in her body due to the Caesarean section. The shape of the nipple should be checked at the end of the feed, as Angela will be unable to 'feel' the feed due to the pain relief.

Scenario Seven:
Regular breast massage and expression of the breast milk, by hand or an electric pump, is required. The frequency should gradually increase to 6–8 times in 24 hours. Visiting the
nursery regularly, establishing a relationship with the staff and caring for the infants will aid the attachment process. Skin-to-skin contact and kangaroo care are important. Separate diaries could be kept for the infants to keep track of their progress. Support can be obtained from the Australian Multiple Birth Association and the ABA.

Scenario Eight:
'Telling' mothers what to do undermines their self-confidence. Timing feeds disempowers mothers as it focuses their attention away from the infant's cues to a fixed, clock-driven time frame. Women's breasts are individual. Some mothers may need to offer both breasts, some may not. Mothers and infants need to work it out for themselves. The indicators of 'enough milk' are 6–8 wet nappies per day, an alert, active infant and weight increase over time.

Scenario Nine:
Women often unconsciously seek the direct support of their mothers at this time. Acknowledging the presence or absence of the mother as role model can be a useful discussion point for parents. Identify community resources such as ABA, playgroups etc. Initiate a discussion regarding realistic support from friends.

Scenario Ten:
- Breastfeeding in public in Australia is not very common, so newcomers or visitors may presume that Australian women do not breastfeed and may not wish to challenge the host society's norms themselves. Working and breastfeeding is possible, and becoming more common; you can refer to and read the ABA booklets. Identify local, culturally specific, community support groups – both lay and professional. Note: Mothers have a legal right to breastfeed anywhere. A good resource is available on the ABA website.

Predicted Outcome
The degree to which the participants will be able to solve the problems will vary, but you will find that this activity will stimulate many questions. It is a reality-based activity that should help them prepare for their own experience.
6. Becoming a Parent

Activity 6.1: The 24 hour clock

Aim of the Activity

- To make expectant parents aware of the demands that an infant places on their time and how their lifestyle will change when they become parents.

Materials Required

- Two copies of the 24-hour clock activity for each participant, and pens

Time Allocation

15 minutes

Method One

Give each participant a sheet of paper with two circles drawn on it – each circle represents a 24-hour clock.

Ask them to allocate portions of the first ‘clock’ to the activities that occupy their typical 24-hour weekday as it is at present. Ask them to categorise the activities e.g. paid work, sleep, domestic chores, leisure time activities etc., such as shown on the 24-hour clock on the next page.

When they have completed the first clock, ask them to divide the second ‘clock’ into how they believe their time will be allocated when they have their infant at home.

Complete the activity with participants comparing their clocks. Discuss how and why the ‘clocks’ are different and identify any major differences between those of the women and those of their partners. Give an example of a clock you have prepared yourself and emphasise the unique nature of every parenting experience. Reinforce the need for support in the postnatal period and give participants a list of resources they may like to access. A list is provided in Module 6.

Method Two

This activity can be presented as a homework activity.

Predicted Outcome

The time allocated to daily activities will vary within the group, particularly between the women and the men. Use this activity to stimulate a discussion about the roles of the individuals involved and emphasise the need for support in the postnatal period.
Activity 6.2: My needs are...

Aim of the Activity

To give the participants an understanding of the physical and emotional needs of the parents and their infant in the early postnatal weeks.

Materials required

- Paper and pen for each small group

Time Allocation

Small group discussion = 10 minutes
- Large group feedback and discussion = 10 minutes

Method

Divide the large group into 3 groups – group 1 is the mother, group 2 is the father and group 3 is the infant. Give each group some paper and a pen. Ask them to list on the paper the physical and emotional changes that they will experience in the early postnatal weeks and the needs they will have as the mother, father and the infant. That is the mothers look at the needs of the mother, the fathers at the needs of the fathers and the infants at the needs of the infant prompted by these triggers.

Triggers:

- As a new mother / father / infant I will need...
- I have these needs because...
- To meet these needs I ...

Allow 10 minutes for the discussion.

Close the discussions with a spokesperson from each group presenting the responses to the large group. Follow the presentations with a general discussion about the changes and needs of the parents and the infant in the early postnatal weeks. Emphasise the importance of support in the postnatal period and, to complete the activity, give participants a list of resources they may like to access. A list is provided in Module 8.

Predicted Outcome

Incorporating the infant in this activity will provide interest and it will bring a sense of reality to the expectant parents.
Activity 6.3: Parents’ hopes and worries

Aim of the Activity
To enable parents to share their hopes and feel reassured about their worries.

Materials Required
- Blank cards in two different colours and pens

Time Allocation
15 minutes

Method
Make two post boxes, one with ‘What I hope for is…….’ written on it, and the other with ‘What I worry about is…….’ written on it.

Give each participant 2 different coloured cards and ask them to write down all their hopes on the cards of one colour and all their worries on cards of the other colour. As the educator you can add some that you have heard from parents before if you like. Encourage participants to post as many cards as they like.

Once they have all of their cards in the post boxes, pass them around and tell each person to pick one or two cards from each box for them to then read out to the group.

Stimulate discussion by asking questions such as:
- ‘What would you say if your friend told you this worry?’
- ‘This is a lovely hope, what could help make it happen?’
- ‘How does this worry make you feel?’

Predicted Outcome
Allows an expression of hopes and worries in a supportive environment without having to express them personally – it de-identifies them.

Activity 6.4: Community resources

Aim of the Activity
To increase the participants’ awareness of community resources available to new parents.

Materials Required
- Paper and pens

Time Allocation
- This can be a homework exercise. Allow 5 minutes to describe the exercise in one session and 10 minutes for feedback in a subsequent session.

Method
At the end of a session tell participants they have a homework activity to do prior to the next session. Each pair is given the name of one community resource that is available to new parents. Ask them to investigate the resource and answer the questions listed below. They are to present the answers to the group during a subsequent session.

The questions:
- Where in your local area is the resource located?
- What services does the resource provide?
- Who operates the resource?
- How do you access it?
- Do you have to pay for the service?
- Does it provide other services?
- What online resources are available and which are trustworthy?

Note: Due to regional and state variation in the community resources available to new parents, the list provided below is only to use as a guide. Please adapt the list to suit the needs of your participants and your local area.

Community resources the participants could investigate are:
- Maternal and Child Health Centres
- Family Care Cottages
- Mothercraft Facilities
- Poisons Information Line
- The Australian Breastfeeding Association
- The Australian Multiple Birth Association
- The Family Planning Association
- Their General Practitioner
- Women’s Health Clinics/Centres
Predicted Outcome

Many participants will not be familiar with the resources available in their local area. This activity will stimulate their interest.
7. Conclusion

Congratulations, you have now completed Module 7 – Activities for Programs. In this module we have explored:

- activities that you could incorporate in your programs and sessions;
- how the activities could be implemented; and
- the likely outcome of the activities.

As we mentioned in Module 3, adults enjoy variety but quality is far more important than quantity. So be flexible, be realistic with the time allowed for each activity and take note and respond to the group’s reaction to each one.
Module 8: Handouts for parents

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1. Introduction

Participants in a group see what they want to see, hear what they want to hear, and pay attention to whatever is relevant, interesting and meets their specific learning needs. In this handbook we have suggested many strategies by which you can enhance learning in your sessions. One strategy which is frequently wasted, or inappropriately used, is the distribution of printed material.

As mentioned in Module 3, the amount of information available to expectant and new parents is extensive and can be overwhelming. As an educator you should not perpetuate the problem but rather assist women and their partners through the information gathering process.

Learning outcomes

Upon completion of this module you should be able to:

- identify the material that would be of interest to your target audience; and
- describe how the material could be distributed.

2. How to use Reference Material

Reference material, such as handouts and brochures, can be used to reinforce and increase the retention of important information, as well as address issues you have been unable to cover during a session or program. To maximise its impact, reference material should be distributed at a relevant time in the session and the important points should be explained or summarised. If the material is complex or it covers an issue that has not been dealt with in the session, then a more detailed description may need to be given.

Reference material can be expensive to reproduce and it may have a limited life span, so prior to distribution make sure that it is accurate, concise, up-to-date and relevant to the issues being addressed. Be aware that product marketing targets new parents and can put undue pressure on them to believe that product X is necessary so ensure handouts do contain unacceptable advertisements.

3. Handouts for your Participants

In this second edition of the handbook we have suggested, in several modules, pages that you may like to copy and distribute in your sessions and programs. These pages are:

- Module 2: Influences on breastfeeding initiation and maintenance
- Module 2: Effective and ineffective attachment
- Module 7: Family feeding tree
- Module 7: 24 hour clock
- Module 8: Resources for parents

With today so many Fact Sheets available on the internet and those from organisations listed in Module 6, the decision was made to only include those not readily available, but more importantly, those that expectant parents have asked for in recent clinical experience. These are:

- The first week with a newborn;
- Infant behaviour;
• Infant sleep.

For those working with families that speak languages other than English, you can purchase from the ABA a CD entitled ‘Multilingual Breastfeeding Fact Sheets’. Another source of translated literate is Multicultural Health Communication.

4. Resources for Parents

The number of resources available to parents is constantly increasing and can be quite confusing. It can, therefore, be helpful to provide a suggested reading list and list of useful websites to them during your program. Over the page we have this list which you may like to distribute.

5. Conclusion

Congratulations, you have now completed Module 8 – Handouts for parents. In this module we have explored:

• the material that would be of interest to your target audience; and
• how the material could be distributed.
## Resources for Parents

### Useful websites

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<td>Tresillian</td>
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<td>Karitane (24 hour telephone advisory service)</td>
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<td>The Royal Women’s Hospital, Victoria</td>
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### Useful books

- Australian Breastfeeding Association Books.
- Chilton, H. Baby on Board. 3rd edition.
- Cox, S. Breastfeeding with Confidence. 2006
The first week Breastfeeding a Newborn

Postnatal Day 1-2: The mother and infant are quite sleepy and they need to rest and recover from the labour and birth.

- The time taken by the infant when it is breastfeeding will be minimal, as the protein and kilojoule-rich colostrum will meet its needs. The amount of colostrum an infant receives at each feed is approximately ½ a teaspoon.
- The infant is well hydrated from being in the amniotic fluid with continual feeding from the placenta, so it may not require frequent feeds. Feeds may only be needed every 3-3½ hours. If the infant does not want to feed after about 5 hours, he or she should be roused and put to the breast.
- In the first 2 days, urine produced by the infant is concentrated and frequently contains chemicals called urates, which can turn the nappy orange or pink.
- The first bowel motion is a sticky greenish black substance called meconium. Every baby should pass meconium within the first 24 hours after birth.

Postnatal Days 2-3: The infant will become wakeful and want to feed more frequently.

- The infant’s thirst intensifies a few days after birth and this triggers the need to breastfeed more frequently.
- The mother’s breast milk will begin to change from colostrum to transitional milk with the volume of the milk slowly responding to the infant’s needs.
- The mother’s breasts may feel heavier with the veins being more obvious.
- As the infant feeds more frequently its stools and urine output will increase.

Postnatal Days 3-4: The infant may become unsettled, feeding more frequently and not wishing to be separated from its mother. The mother is often emotional with day 3 blues and in need of sleep and rest.

- The breasts become firm as the milk volume increases.
- The infant can be unsettled, requiring frequent feeds and cuddles.
- Once the mature milk begins to flow, the infant tends to have bigger feeds and then a long sleep. This may cause temporary over-fullness in the breasts.
- Infant’s stools change to transitional stools as the mature milk begins to be absorbed.

Postnatal Days 4-5: The infant settles with somewhat more predictable feeding.

- The breasts are softer after feeds as they start to synchronise with the infant.
- The infant’s stools change to breast milk stools, which are yellow and soft. The infant has 6-8 wet nappies per day.

It should be emphasised that this is a typical pattern for a newborn infant and mother but there is individual variation on this pattern, for example when caesareans and/or analgesia in labour delay lactogenesis.

Mothers should be encouraged to feed their infants when they show signs of hunger. Infant feeding cues can include:

- opening of the mouth and sucking movements and sounds;
- rapid eye movements;
- soft cooing or sighing sounds;
• restlessness and turning head from side to side searching for the breast;
• opening the mouth and sucking hands;
• eyebrows furrowing and tension in the face; and
• finally crying.

(Refer to the Queensland Government Department of Health website for photos of these cues.) It is often easier to breastfeed an infant who is a little hungry than one who is very hungry.

Overall, as breastfeeding establishes in the early postnatal weeks:

• it is common for infants to breastfeed 8-12 times in 24 hours;
• some infants will breastfeed every 3 hours day and night, whereas other infants will cluster-feed, every hour or less for 4-6 feeds then sleep 4-6 hours;
• night feeds are important for making milk;
• infants indicate when they are hungry before crying by putting hand to mouth, rapid eye movements, soft cooing or sighing sounds. It is often easier to breastfeed an infant who is a little hungry than one who is very hungry.

Signs of an infant getting enough milk are:

• 6-8 wet cloth nappies or 4-5 heavy disposable nappies per day;
• soft, regular bowel motions;
• infant’s arms and hands relaxed when feeding;
• infant is alert, acts hungry at times, is fussy at certain times of the day and acts satisfied after feeds;
• the mother’s breasts become softer and lighter during a feed
• you can hear the infant swallowing when feeding;
• infant gains weight and grows in length and head circumference.

For the mother, the signs of a functioning milk-ejection reflex are:

• their infant swallowing and establishing a suck-swallow rhyme;
• tingling or prickling pins and needles which may take several weeks to develop;
• a sudden feeling of fullness;
• an increase in skin temperature;
• a feeling of wellbeing or relaxation;
• for some mothers pain or nausea;
• dripping, leaking or spurting from the unsucked breast
• for some mothers an intense thirst
• uterine contractions accompanied by a gush of lochia in the immediate postpartum period.

(From: Breastfeeding and You: A handbook for antenatal educators, Commonwealth of Australia, 2015)
Infant Behaviour

An infant state is indicated by a group of behaviours that occur together, including degree and nature of body movement, eye movement, breathing and responsiveness. Understanding an infant’s states and how and why they move through these states can help parents. There are six defined infant behavioural states as listed below. While every infant is different the following general guide may be useful while you are getting to know your infant.

Crying
- Crying infants have jerky movements, facial colour changes, muscle tension and rapid breathing
- Newborns do not shed tears. Tear ducts blocked until between 2 and 4 months of age
- Crying infant may be unresponsive to caregiver’s effort to calm down initially.

Active alert
- These infants have moderate to frequent body and facial movements, irregular breathing and open eyes.
- Sometimes fussy and sensitive to stimuli in the environment
- The alert state is common before feeding.

Quiet alert
- Infants in this stage have little body movements, their eyes are open, and steady, regular breathing
- They are highly responsive and this is the best state for interaction and play
- Maintenance of this state can be tiring for an infant.

Drowsy infant
- Variable body movement, irregular breathing, glazed eyes and delayed reaction time
- May close and open eyes
- Limited interest in interaction.

Active sleep
- Rapid eye movement, body and facial twitches, and irregular breathing
- Infants dream during active sleep and whilst dreaming can be easily wakened.

Quiet sleep
- Very little body or facial movement except for occasional bursts of sucking
- May startle with movement or loud noises but typically do not awake.

Infants gain increasing ability to regulate their behavioral states over the first few months of life.

(From: Breastfeeding and You: A handbook for antenatal educators, Commonwealth of Australia, 2015)
**Infant Sleep Cycles**

Two primary states:

- Active sleep
- Quiet sleep

**Active sleep**

- Dreaming occurs in active sleep, resulting in rapid eye movements beneath eyelids, body and facial twitches, and irregular breathing.
- Blood flow to brain increased and neural cells stimulated, contributing to brain growth and development.
- Infant easily awakened.

**Quiet sleep**

- Little body or facial movement other than short bursts of sucking and startle responses
- Breathing is regular and hard to rouse.
- Sleep deeply and resist environmental stimuli.
- This is restorative sleep.

**Infant sleep patterns**

- Sleep cycles differ from adults.
- Adult sleep cycles are 90 minutes whereas infant sleep cycles are 60 minutes long.
- Newborns fall asleep into active sleep, and after 20-30 minutes cycle to quiet sleep.
- Adults fall into quiet sleep first.
- Newborns sleep on average 16-17 hours per 24 hour period.
- Sleep patterns change as get older. Between 12 and 16 weeks, infants begin sleep in quiet sleep as adults do.


(From: Breastfeeding and You: A handbook for antenatal educators, Commonwealth of Australia, 2015)
# Module 9: Appendices

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Appendix 1: Abbreviations Used in this Handbook

ABA  Australian Breastfeeding Association
BFHI  Baby Friendly Health Initiative
CAPEA  Childbirth And Parenting Educators of Australia
IBCLC  IBLCE®, or the International Board of Lactation Consultant Examiners®, is the independent international certification body conferring the International Board Certified Lactation Consultant® (IBCLC®) credential.
LCANZ  Lactation Consultants of Australia and New Zealand
Appendix 2: Consultation

Listed alphabetically by association/organisation/specialty, are those consulted for and contributed to this edition of the handbook.

- Australian Breastfeeding Association NSW Branch: Louise Duursma, Leila Forde
- Australian College of Midwives NT Branch: Sheryl Alexander, Catherine Hatcher
- Baby Friendly Health Initiative Australia
- Child and Family Health Nurses: Nora Crotty, Elizabeth Russell
- Child and Family Health Nurses Association
- Childbirth And Early Parenting Educators of Australia: Mary-Ann Baker, Sue Cheney, Sally Gregor, Jane Knight, Lisa Robertson
- Childbirth And Early Parenting Educators of Australia and LCANZ members: Robyn Davies, Dianne Haworth, Sarah Moulton
- Childbirth and Antenatal Education Consultants: Bronny Handfield, Trish Holding, Helen Weinel
- Department of Health, Canberra
- Early Parenting Program, Women’s Health and Community Partnerships, South Eastern Sydney Local Health District: Helen Rogers
- International Board Certified Lactation Consultants®: Joy Heads OAM, Sue Cox AM.
- NSW Pregnancy, Birth & Early Parenting Education Coordinators Network: Susan Spencer
- Private International Board Certified Lactation Consultant: Linda Smith (USA)
- Perinatal Education Consultant, University of Worcester, UK: Professor Mary Nolan.
- The Royal Australian and New Zealand College of Obstetricians and Gynaecologists
- The Royal Australian College of General Practitioners
- UNICEF UK Baby Friendly Initiative
Appendix 3: The infant feeding decision – an historical perspective

Pregnancy heralds a significant life change for women, their partners and their families. It is an amazing and unique ‘journey’, as best described by the women, bringing experiences that are comfortable and enjoyable for some, difficult and complex for others. As an antenatal educator you have the opportunity to accompany many women and their partners as they traverse this noteworthy time in their lives, when the foundations of future life are laid down.

For centuries, infant feeding has been influenced by prevailing cultural attitudes and the availability of viable alternatives.[116] In pre-industrial societies most women breastfed or their infants were wet-nursed, although alternatives such as gruel, paps, rice or barley water were available. The alternatives, however, generally had a deleterious effect on the infant.[173]

The industrial revolution, with its associated urbanisation, brought a major change to this situation. The prospect of employment in the emerging industries meant families moved from rural areas to the cities.[174] Women entered an uncaring workforce, traditional family networks disintegrated, wet nurses became scarce and “foundling hospitals” were established to care for the large number of abandoned infants. This created a need to find a viable alternative to human milk. As Physician William Cadogan wrote in a letter to one of the Governors of the Foundling Hospitals in 1749:

‘It is with great Pleasure I see at last the Preservation of Children become the Care of Men of Sense: It is certainly a Matter that deserves well their Attention, and, I doubt not, the Publick will soon find the good and great Effects of it. The Foundling Hospital may be of more Use to the World, than perhaps at first imagin’d by the Promotors of it; it will be a Means not only of preventing the Murder of many, but of saving more, by introducing a more reasonable and more natural Method of Nursing. In my Opinion, this Business has been too long fatally left to the Management of Women, who cannot be supposed to have proper Knowledge to fit them for such a Task, notwithstanding they look upon to be their own Province.’[175]

The first marketed cow’s milk-based formula was patented in 1867 by the German chemist Von Leibig.[176] The commercial success of this formula spawned a host of other human milk substitutes. In the early 1900s a Swiss merchant, Henri Nestlé, marketed a ‘scientifically prepared’ substitute by combining sugar and wheat flour cooked in malt with cow’s milk. Nestlé advertised his product as ‘scientifically correct so as to leave nothing to be desired’ and he directed his marketing at mothers as he insisted ‘mothers will do my publicity for me’.[177]

A thriving dairy industry in Australia, New Zealand, Europe and North America post World War II led to the next phase in the development of a commercial alternative method of infant feeding. The excess cow’s milk was used to make infant formula. Multinational corporations, ranging from food to pharmaceutical companies, became involved and by the mid-1950s infant formulas, bottles and teats were freely available from the corner store, supermarkets and pharmacies.[178] Formula feeding symbolised the modern world of progress.
The modernisation of infant feeding paralleled rigid hospital practices at this time. The combination of separation of mother and infant in the immediate postnatal period, and hospital feeding regimes, dictated that feeds should be meticulously and rigidly controlled in terms of frequency of feeds and time at the breast. This then led to the infant being deprived of the rich, fat hind milk resulting in a hungry dissatisfied infant and frequently a negative experience for the mother. These influences, coupled with the loss of traditional family networks, resulted in a worldwide decline in breastfeeding rates and during the 20th century an all-time historical low was reached.

A dramatic reversal of the trend to formula feeding started in the 1960s when a movement began for women to regain control of their childbirth and parenting experiences. Women were not happy with the medical control of breastfeeding and were frustrated by the lack of support and encouragement given to women wishing to breastfeed. Peer support networks began to emerge and gained support and recognition within the community. It was at this time that the Nursing Mothers’ Association of Australia (NMAA), a community, socially oriented movement was founded in 1964 and grew from a dedicated group of four women to become a 17,000 strong grass roots group by 1988. Now titled the Australian Breastfeeding Association (ABA), it is Australia’s largest breastfeeding information and support service. Breastfeeding is a practical, learned skill and the ABA helps more than 80,000 mothers to acquire it each year. ABA’s approach is one of mother-to-mother support, with volunteers as role models rather than experts. Their intention is to increase women’s confidence in breastfeeding and their capacity to make decisions based on their own sense of what is best for their infant. It could be argued that this woman-to-woman support helped reverse the breastfeeding decline and compensated for the lack of health system support for breastfeeding at that time. Whilst these groups were initially treated with some suspicion by the medical and midwifery professions, women’s confidence in learning about breastfeeding was, and still is, positively enhanced by mother-to-mother support outside the hospital.

The specialty group of lactation consultants in the 1980s was originally developed to support women and infants beyond the newborn period where there were infant or maternal complex feeding problems, such as prematurity, multiple births, cleft palate, tongue tie, or medical issues, medications, breast surgery or anomalies, potential situations that might impact on the establishment and maintenance of breastfeeding. Today, however, lactation consultants are sometimes called upon to support and advise on breastfeeding even when there are no problems or concerns for mother or infant.

Today many factors influence the decision of a mother and her family as to whether and for how long she will breast or formula feed her infant. Breastfeeding may be viewed by many as the ‘natural’ way to feed an infant, but it is a learned skill that requires support and cannot be understood in isolation from the social and cultural environment within which a woman makes her decision.
Appendix 4: The Baby Friendly Health Initiative and the Ten Steps to Successful Breastfeeding

A 1989 joint WHO/UNICEF Statement on ‘Protecting, Promoting and Supporting Breastfeeding: The Special Role of Maternity Services’ stated:

WHO and UNICEF believe that, of the many factors that affect the normal initiation and establishment of breastfeeding, health care practices, particularly those related to the care of mothers and newborn infants, stand out as one of the most promising means of increasing the prevalence and duration of breastfeeding. [185]

- The principles described in this joint statement were synthesised into the Ten Steps to Successful Breastfeeding which are the basis for the global criteria against which hospitals and maternity facilities can be assessed and formally accredited as ‘Baby Friendly’. Launched by WHO and UNICEF in 1991, following the Innocenti Declaration of 1990, the BFHI has brought profound changes to maternity practices. Since its launch BFHI has grown, with more than 152 countries around the world implementing the initiative. The initiative has had measurable and proven impact in some countries, in particular increasing the likelihood of infants being exclusively breastfed on discharge from hospital and in the early postnatal weeks. [186, 187]

- The Ten Steps:

  • Every facility providing maternity services and care for newborn infants should:

    Step One: Have a written breastfeeding policy that is routinely communicated to all health care staff.

    The policy should be available so that all staff that care for mothers and infants can refer to it. The policy which covers the Ten Steps should be displayed in community languages. No posters or material promoting breast milk substitutes should be displayed. Health facilities should not accept free or low-cost supplies of breast milk substitutes and should not allow gift packs to contain the same.

    Step Two: Train all health care staff in the skills necessary to implement this policy.

    All staff who have contact with pregnant women, mothers, infants and/or young children have received orientation to and education on the breastfeeding and infant feeding policy and the skills necessary to implement the policy. Staff have also been educated on providing support for non-breastfeeding mothers. Then staff with up-to-date skills must be available to assist breastfeeding mothers. Managers of health facilities and their staff should be able to provide documentation of breastfeeding refresher training annually.

    Step Three: Inform all pregnant women about the benefits and management of breastfeeding.

    If the facility provides any antenatal service, breastfeeding education is given to pregnant women using those services. A written description of the breastfeeding component of antenatal education programs or sessions should be accessible to all staff. The input provided in the antenatal period should include the importance of exclusive breastfeeding for the first six months, the benefits of breastfeeding and basic breastfeeding management. Mothers interviewed should confirm they were not given group education or written
promotional material on the use of infant formula. Prenatal education for those mothers who want information on formula preparation should take place on an individual basis.

**Step Four: Place infants in skin-to-skin contact with their mothers immediately following birth for at least an hour and encourage mothers to recognise when their infants are ready to breastfeed, offering help if needed.**

The facility has procedures which keep mothers and infants together in skin-to-skin contact for at least an hour after a vaginal or caesarean birth. The infant, following a vaginal birth, is allowed to follow the normal sequence of innate feeding behaviours and initiates breastfeeding when ready. When a caesarean section is required, skin-to-skin contact should preferably be initiated in the theatre suite.

**Step Five: Show mothers how to breastfeed, and how to maintain lactation even if they should be separated from their infants.**

Staff assisting mothers, and the mothers themselves, should be able to demonstrate good positioning and attachment of mother and infant during a breastfeed and how to express and store expressed breast milk.

**Step Six: Give newborn infants of breastfeeding mothers no food or drink other than breast milk unless medically indicated.**

An acceptable medical reason should be recorded, and a written informed consent obtained, before a newborn infant is offered a supplementary or complementary feed of anything other than the mother’s own breast milk.

**Step Seven: Practice rooming-in-allow mothers and infants to remain together 24 hours a day.**

Rooming-in has beneficial effects both on breastfeeding and the mother-infant relationship. This should begin within one hour after birth, or with a caesarean section mother one hour of being able to respond. After that separation can be for up to one hour for a hospital procedure or at the mother’s request.

**Step Eight: Encourage breastfeeding on demand.**

There should be no restrictions placed on the frequency or length of infants’ breastfeeds. Mothers should be advised to feed their infants whenever they are hungry, or as often as their infant wants. They should wake their infants if they sleep for too long or the mother’s breasts are overfull. This flexible feeding is also referred to as ‘baby-led feeding’ or ‘feeding according to need.’

**Step Nine: Give no artificial teats or dummies, also called pacifiers or soothers, to breastfeeding infants.**

There is growing evidence that the use of artificial teats and pacifiers is associated with early cessation of breastfeeding. The alternate method for feeding infants who cannot breastfeed is by cup or spoon. Hospitals should actively discourage the use of pacifiers while breastfeeding is being established, however, the mother’s choice should always be respected.
Step Ten: Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from hospital.

Mothers should be referred to community breastfeeding support services on discharge from hospital. This can be Early Childhood/Maternal and Child Health Centres, telephone counseling or the hospital follow-up clinics. It should also include the local ABA group.

Adapted from:

**Baby Friendly - 10 Steps to Successful Breastfeeding**

BFHI accreditation is aspired to, and has been achieved by many Australian Maternity Hospitals over recent years. The limited research which has been undertaken on the impact of BFHI on breastfeeding initiation and duration has yielded mixed results, suggesting that more research is needed. Schmied et al.[188] in their work warn that the ‘top down’, performance driven manner in which BFHI is implemented may result in rigid practices that are unlikely to meet the needs of women and their families. It appeared that there was a genuine commitment from midwives to help women understand and gain knowledge about breastfeeding, however, the prescriptive approach of information delivered in an oversimplified and standardised way was not favoured by the women.[188] Conversely, Brodribb et al stated that BFHI accreditation can play an important role as a quality-improvement strategy, especially in areas where breastfeeding initiation rates are low.[189] Compliance with BFHI practices among BFHI-accredited facilities is not always optimal, and thus needs to be monitored, as greater compliance may have an even larger impact on breastfeeding rates and potentially reduce socio-economic disparities in breast feeding.[190]
Appendix 5: The International Baby Food Action Network (IFBAN) Statement

The key points from the IFBAN Statement are:

- Every human body is estimated to contain up to 200 man-made chemicals. They are persistent and accumulate in organisms as they move higher up the food chain.
- Both men and women carry this body burden to exposure to chemical substances. Many of these are fat soluble and their levels can be measured in body tissue an fluids, including blood, serum, urine, sperm, human umbilical cord and breast milk.
- Infants and young children are particularly vulnerable to the effects of exposure to chemicals, with prenatal exposure of greater concern than postnatal exposure.
- Breast milk contains protective agents and helps the child develop a strong immune system. Breastfeeding can mitigate the effects of chemical exposure in the womb, whereas formula feeding does not afford any protection or mitigation.

To summarise the IFBAN Statement ‘breast milk is sometimes cited as a source of dioxins and other chemical residues. This is because breast milk has a high proportion of fat and because fat soluble contaminants are relatively easily measured in it. It is not because breast milk is any more contaminated than other parts of the body or because residues in breast milk cause more harm than those in other parts of the body. In fact, most researchers agree that exposure to chemical residues via the placenta is much more dangerous for the health of the newborn than exposure via breast milk. For example, a high level of contamination by pesticides, PCBs or dioxins during pregnancy can lead to the impairment of foetal and child growth and interfere with the correct development of many tissues and organs, mainly of the psycho-neuroendocrine and immune systems. However, breastfeeding has been shown to mitigate or minimise the effects of some of the damage caused by exposure to these substances during foetal life. Formula feeding has no protective or mitigating effect. Breastfeeding, even in a contaminated environment and after adjusting for varying levels of exposure to chemicals during pregnancy, has such a positive impact on nutrition, health and development of children that most health authorities recommend that it should be protected, promoted and supported.’[191]
Appendix 6: Stages of Group Development

Educational groups have a life cycle which influences their ability to function. Several models have been developed to describe this phenomenon. The Tuckman and Jensen model divide it into 5 stages:
- Forming
- Storming
- Norming
- Performing
- Adjourning

Let us consider each of these stages.

**Forming**

In this stage of group development, a collection of individuals comes together usually with a common goal or interest. Very often there is a cautious period when individuals explore how the group will function and how each of them will fit into the situation. Anxiety levels can be high and each member of the group is silently questioning their decision to become involved. The educator needs to realise that this anxiety does not necessarily reflect on his/her leadership.

**Strategies for an educator**

- Offer refreshments, such as tea, coffee and biscuits to members as they arrive.
- Encourage them to introduce themselves to others in small informal groups while they are waiting for latecomers. Music can provide a sense of calmness in the room.
- Introductions can be undertaken in a range of ways; asking participants to state their name, due date and hobbies and interests is a well-accepted method.
- Give the group an overview of the session, establish group agreements and involve them in an agenda setting activity.

To give the group a sense of purpose the educator normally provides direction and input during this stage of group development.

**Storming**

This stage provides a time when individuals express their concerns, question their goals and people often become bolder in their expressions. Conflicts may arise between individual participants or between participant and the educator. Members of the group may adopt various roles during this stage. Conflict needs to be approached in a positive way so the group can work together. Looking at things objectively during this period is more helpful than a subjective approach.

**Strategies for an educator**

- Be a non-judgemental, supportive listener.
- Reinforce the group agreements if necessary.
- Deal with conflict if it occurs so that the issues can be clarified and hopefully resolved.
- Be observant. You may need to step in and help if an individual is feeling attacked or excluded.
Norming

This is a more settled period for the group, where cooperation between members develops. The group moves toward its goal, accepting the rules and policies which have formed. In some groups, particularly with larger numbers, subgroups may form providing support and friendship.

Strategies for an educator

- Encourage interaction with appropriate activities to increase group participation.
- Decrease the amount of formal input you provide.
- Allow the group to have some time to themselves during the refreshment break.
- If you need to you can deal with any unresolved conflict issues/interpersonal conflict during the refreshment break.

Performing

Group members are focussed on the tasks and goals to be achieved in this stage of the group’s life. This will be the most productive stage as many of the goals previously set are likely to be achieved and others may be formulated. Participants are supportive and caring toward each other.

Strategies for an educator

- Give guidance, encouragement and feedback to the group.
- Provide a range of teaching strategies so that all the participants have an opportunity to participate.
- Nurture relationships.
- Allow participants the freedom to contribute to the decision making process.

Adjourning

As the group draws to completion, relationships between participants will begin to change. For some this time will be one characterised by feelings of insecurity and apprehension.

Strategies for an educator

- Prepare the group for closure.
- Foster their independence and their assertiveness.
- Offer follow up support options and encourage the group to continue with a new purpose.
- Close the session with an appropriate activity.

Appendix 7: Managing Problem Behaviours

Participants can occasionally behave in ways that are detrimental to the functioning of a group. A basic understanding of the reasons behind the behaviour can help you develop strategies to address the issues.

Talker–Monopoliser

Possible causes:
- Anxiety
- Seeking attention
- Seeking approval
- May be very enthusiastic, over eager.

Strategies:
- Limit eye contact.
- Reward only relevant and useful contributions.
- Give them a job to do. For example helping to organise coffee.
- Sit beside.
- Ask the person to summarise the main points of their contribution.
- Useful for initiating discussion.
- Useful for “breaking the ice.”

What to say if the person’s input becomes a problem - some examples:
- “Thanks Bill, I really hate to cut you off but I feel it’s important for us to hear from everyone here.”
- “That is a very interesting and a potentially valuable idea. We only have a short time to meet today, however, so I think it best if we move on. Who else would like to comment on...”.
- “I’m having difficulty getting through what is planned for today’s session. Would you be willing to save your comments till we’ve finished this topic?”
- “We’ve heard from a couple of people quite frequently. What do the rest of you think?”
- “Other people haven’t had much of an opportunity to comment on this topic. Would anyone else like to say something?”

“Know all”

Possible causes:
- Wants recognition as an adult who brings a wealth of experience to the group.
- May be quite informed.
Can be informative but can stifle discussion. Sometimes not interested in others’ opinions.

**Strategies:**
- Identify one or two relevant points made by the person, thank him or her and ask others for their opinion.
- Encourage others in the group not to feel dominated by focusing your attention on their participation and contributions.

**What to say - some examples:**
- “That’s a good point. What do others think about that issue?”
- “It’s interesting to hear how different ideas work for different people. What has worked for other people here?”
- “Are there any different thoughts on that?”

**Person who is wrong**

**Possible causes:**
- Lack of knowledge
- Incorrect information
- Spoke impulsively without thinking through his opinion
- Responded before all the information was given

No one likes to be wrong. How you treat this individual will determine the group’s trust to take risks later.

**Strategies:**
- Rescue before irretrievable embarrassment takes place.
- Pick out and build on any correct points made - disregard the rest.
- Avoid direct criticism. Give additional information then the opportunity for the participant to speak again.
- Model more appropriate response.

**What to say – some examples:**
- “That’s interesting. My own experience has been....My understanding was that.....”
- “Everyone has different experiences of this. What have other people experienced or done about this?”

**Shy person**

**Possible causes:**
- Feels inadequate
- Not used to learning in groups
• Doesn’t feel has anything to say of value
• Has trouble formulating ideas quickly enough to be able to contribute
• Is socially reticent.

Strategies
➢ Ask easy questions.
➢ Provide non-threatening activities so they can contribute.
➢ Value contributions by rewarding with a nod, thanks.
➢ Build on their contributions with further comments to reward and show value of them.
➢ Help them meet others by using small group activities.
➢ Join them for coffee during the break.
➢ Encourage participation and include in the group using your eyes.

Talks to Neighbour

Possible Causes:
• Bored
• Can’t hear
• Can’t understand
• Distracted by outside noise
• Needs opportunity to discuss an issue with someone.

Strategies:
➢ Decide the cause.
➢ Refer to group rule that one person speaks at a time.
➢ Vary activity in the group.
➢ Draw their attention back to the group by asking their opinions.
➢ Use group exercise to change the composition of the various subgroups.
➢ Remove or acknowledge the external distraction.
➢ Clarify or rephrase the point.
➢ Coffee break.

What to say:

△ “It might be best if we have one point at a time. Now, what were you saying?”
One who uses the group for sympathy

Possible Causes:

• Needs sympathy
• Has had a genuinely hard time
• Wants attention
• Has unresolved feelings about a personal problem
• Is in need of specialized help

Strategies

➢ Watch out for group reactions to one person being the centre of attention for a prolonged time.
➢ Try some reflective listening responses.
➢ Sacrifice some group time to listening – once.
➢ Acknowledge experiences by giving attention to the participant at coffee break.
➢ Use further private conversation with the participant to check out whether extra help is needed and suggest some sources.

What to say:

↘ “That’s really difficult. You’ve had a hard time”.

Distractor

Possible Causes:

• Misses the point
• Distracted by personal problems
• Poor learning / social skills
• Gap between content and own needs
• Likes to discuss minor points at length
• Actually thinking ahead of the group and curious about issues that will not evolve till later.

Strategies:

➢ Identify relevant points and bring discussion back to the group.
➢ Don’t get sidetracked.
➢ Check out personal expectations with the group.
➢ Redirect to group needs.
➢ Suggest other options that may better meet personal needs

What to say – Some examples
“That’s a good idea. Can we keep that in mind till later?”

“We seem to have got off the track here. Now, let’s get back to …..”

**Argumentative**

*Possible causes:*

- Disagrees with concepts and information
- Feels self, values, attitudes and beliefs are under threat
- Has attended under pressure from spouse
- Wants attention
- Wants status

*Strategies:*

- Try to relieve tension.
- Treat as a genuine and real effort to explore both sides of an issue.
- Open the discussion to the group for comments.
- Quote other sources of information that might be credible to the participant.

Adapted from: Everingham, F. & McCleer, C. Basic Community Educator Training Manual. SHARE Western Health Inc.
Appendix 8: Assessing Need and Program Planning Fact Sheet

Planning and designing an education program does not have to be a slow, tedious process if it is done systematically and you enlist the help of your colleagues. The steps outlined below are provided to help you create an innovative program incorporating a range of learning strategies.

Step 1: Gather information from your target audience and your key informants through a needs assessment.

A needs assessment is a process that identifies the reported needs of an individual or group. It can focus on a particular strategy, such as an educational program, but also sees the program within its wider social context. It provides a logical starting point for program development and it can be used as an ongoing process for keeping strategies on track. The main advantage of needs assessment is that it enables activities, such as educational programs, to be guided by realistic data or information gathered from the people who participate.

The data required for a needs assessment come from a number of sources. This is because human needs are ever changing and, as Bradshaw identified in 1972, there are four different dimensions or types of need. [192]

- normative needs are the needs of a community as defined by an expert or a professional;
- felt needs are what the community says it wants, for instance through a community survey;
- expressed needs are those needs that have been expressed by the community. For example, names on a waiting list; and
- comparative needs arise when one community lacks services that are available in another, similar community.

Ideally data should be collected from:

- the target group or the learners;
- key informants or subject experts;
- demographic and statistical data;
- literature review.

The data collection methods in a needs assessment can include surveys, in-depth interviews, focus groups and computerised record keeping. The aim is to provide a comprehensive picture of the target audience and an understanding of the gaps that exist in current services or programs. It is from these gaps that topic lists and identification of suggested learning strategies occur.

Step 2: When you have a list of topics to be included in the program, write each topic on a small coloured card, with one topic per card. For this activity select four different coloured cards, with each colour representing how the topic will be covered, that is the type of learning activity recommended, such as mini lecture, group discussion, practical activity.
Through the use of coloured cards you should ultimately be able to develop a program that has a variety of learning activities, with a balance so as to maintain participant interest in the session. For example you may have a mini lecture followed by a practical activity, with then a large group discussion. Notes on the card colours are provided near the end of this fact sheet.

**Step 3**: Decide how long the program will be and number heading cards accordingly, that is you will have a card for session 1, session 2, session 3 and onwards to the total number of sessions. Then place these numbered heading cards in a line on the floor or table.

**Step 4**: Place the topic cards in a line down from the heading cards deciding the order of topics in each session. Add additional topic cards as necessary.

**Step 5**: When all your topic cards are in place, check that the colours are balanced through each sessions and in the program and adjust as needed so as to give a session that will maintain interest through a range of learning activities.

When you have completed this stage ask yourself the following questions:

- Are the coloured cards distributed through the program?
- Do the topics and learning strategies flow?
- Have I been realistic with the number of topics I want to include in a session?

The only way to answer the third question is to proceed to the next stage – **writing your session plans**. Session plans are the tool from which an educator should work as they contain the topics being covered, the learning strategies and resources to be used, and the time allocated for each activity. They should be concise and yet written so others can understand them and use them if need be.

In completing your planning you need to think of pragmatic issues such as the resources required, the environment you will use and how your program will be marketed.

The overall aim of a program should be to meet the needs of the clients by providing a logical progression of the topics they believe are relevant, with a good balance of learning strategies. Problems can arise if more than one educator facilitates a program. Clients’ desires and needs may be forgotten and topics are slotted in to suit the facilitator’s time, availability and their area of expertise. This is a particular problem with the use of guest speakers.

When the program has been designed pin the cards to a board or keep them in sequence in a box / container. They are useful for future reference and are useful for keeping track of where you are up to in a program. For example, if you cover something out of sequence, simply move the relevant cards and adjust the order of your topics.

**Using coloured cards**

**Green cards = Practical sessions**

These cards are for topics that will involve the group in a **physical activity**, for example, breastfeeding positions and infant attachment at the breast and infant massage. Practical sessions can even include a quick break to get up and stretch. Plan to have the group doing something at least once in each session. If they sit for too long they will lose concentration.
Blue cards = Discussions

Anything which could be described as a discussion starter can be included. For example, beliefs about breastfeeding and changing roles, and gains and losses related to breastfeeding.

Yellow cards = Small group activities

Include all topics that will be covered by games/small group activities on these cards. For example, the myths and half-truths about breastfeeding, and the use of oranges to demonstrate infant suckling.

Red cards = Information

If you write these cards last you will probably find that a considerable amount of information has already been covered in discussions and small group activities. These cards are for topics that need to present as a mini lecture. For example, normal newborn behaviour and the anatomy of the breast.

Points to remember

• Aim to have a mixture of colours in each session.
• Aim for a logical progression of topics.
• Allow time for participants to unwind at the beginning of each session.
• Include at least one opportunity for participants to move around during each session.
• Refreshment breaks are good for socialising and they give you a chance to talk to participants who may need assistance or guidance.
• Avoid ending a session on a “flat” topic.
• As the group progresses through its lifecycle decrease the amount of formal input you provide.
• Be flexible and creative.

Note: The antenatal program outlines (pages 74-75) and all of the strategies and activities provided in this handbook are based on the results of:

• a comprehensive needs assessment conducted over 18 months in 1998/9 by the author as part of her doctoral studies, which involved over 200 expectant and new parents and 40 health professionals from many disciplines;
• consultation for this handbook;
• breastfeeding, health education and adult learning literature;
• documentation, books, fact sheets and brochures and DVDs collected and reviewed from sources including the Australian Department of Health, BFHI and UNICEF.
A productive group discussion or information session requires the attention of the participants. Gaining and maintaining attention can sometimes be a challenge.

**When starting a group, you can gain their attention by:**

- making eye contact with everyone as they settle into the group;
- giving a signal that indicates it is time to start. For example, you could shut the door and then stand/sit in an alert manner in front of the group;
- making an introductory comment, such as ‘Welcome to the “Breastfeeding a Skill to Learn” workshop.’ You may need to speak loudly initially, but don’t continue in a loud voice. People will make the effort to listen; and
- creating interest in the group early.

Ways to stimulate and excite curiosity include:

- showing an object or picture, which may seem at first to bear no relationship to the topic, but can bring focus again to the group;
- stating the main topics for the session and how the group will tackle them;
- asking a key question. It can be rhetorical and may not need an immediate response; and
- presenting a challenging statement.

Once the attention of the group has been captured, you should be able to maintain it by:

- being animated. Use your eyes and appropriate gestures to enhance your presentation.
- varying the volume and speed of your voice. Pauses and silence can enhance a presentation as they allow time for reflection and absorption of information.
- using visual aids. Make the session visually exciting and varied with a range of posters, articles, objects, worksheets.
- varying the learning strategies. Constant listening can make participants bored. Change the way the group is participating in their learning by having group discussions, activities and demonstrations.

As the session progresses there may be occasions when you lose the concentration of the group. If this happens you could:

- refocus the attention on the topic. Any of the suggestions above should help, and as you gain confidence you will develop attention-getting tricks that suit your style of presentation;
- take a break. If people begin talking among themselves during an explanation or discussion, don’t talk over the top of them. You will find it exhausting and the group will become restless and distracted. If you have lost their attention and feel out of control, have a refreshment break and then start afresh!


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