The following paper has not been published. The paper was written for what was NSW Kids and Families and is now Health and Social Policy Branch, NSW Ministry of Health. Whilst, in Australia, there is widespread awareness and acceptance of the benefits of breastfeeding, the proportion of women who sustain exclusive breastfeeding to 6 months is low. This paper provides a historical context for breastfeeding in Australia and investigates the role of policies and programs in meeting the information and support needs of hard-to-reach women experiencing early feeding problems.
BREASTFEEDING
ISSUES PAPER

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Initiating and sustaining breastfeeding: a literature summary
## Contents

**Executive Summary** .................................................................................................................. iii

**Background** ................................................................................................................................. 4

- Australian Breastfeeding Association (ABA) ................................................................................. 4
- International policy ......................................................................................................................... 5
- National policy ................................................................................................................................. 5
- NSW policy ........................................................................................................................................ 6
- NSW Aboriginal Maternal and Infant Health Strategy (AMIHS) ...................................................... 7

**Who is more or less likely to breastfeed?** .................................................................................... 8

- Demographic characteristics .......................................................................................................... 8
- Birth characteristics .......................................................................................................................... 9

**Reasons why women choose to breastfeed or not** ...................................................................... 10

**Enablers and barriers to breastfeeding** ........................................................................................ 10

- Intention to breastfeed ...................................................................................................................... 10
- Self-efficacy ....................................................................................................................................... 11
- Postnatal environment ...................................................................................................................... 11
- Communication - being informed .................................................................................................... 12
- Social and environmental factors .................................................................................................... 12

**Health system efforts to support breastfeeding** .......................................................................... 13

- Supporting women .......................................................................................................................... 14
- Hospital practices ............................................................................................................................. 14
- Baby Friendly Health Initiative (BFHI) ............................................................................................ 15
- Removal of infant formula milk samples in hospitals ..................................................................... 16
- Breastfeeding education for midwives ............................................................................................ 16
- Professionalisation of breastfeeding - Lactation Consultants .......................................................... 16

**Supporting women who do not breastfeed** .................................................................................. 16

**Conclusions and future directions** ............................................................................................... 17

**References** .................................................................................................................................... 19
Executive Summary

The evidence for the benefits of breastfeeding over other feeding options for newborn infants’ health and development is clear. The WHO and UNICEF have recommended a global target that all infants should be exclusively breastfed up to 6 months. In Australia, policies and strategies have been developed and implemented to promote and support breastfeeding. Evidence indicates that almost all Australian women (~96%) initiate breastfeeding. This suggests an awareness and acceptance of the benefits of breastfeeding. However, the proportion of women who sustain exclusive breastfeeding to 6 months is low, in Australia and internationally.

Research has shown that specific maternal and birth characteristics can help identify women who are more or less likely to initiate and sustain breastfeeding. Such evidence could help inform future strategies aimed at specific target groups. The evaluation of existing strategies can also help determine best options for further implementation. For example, research tells us the majority of women make infant feeding decisions prior to and irrespective of, contact with health professionals, suggesting the importance of familial, social and community factors. Information and support provided in the first days after birth by Lactation Consultants and midwives appears to contribute to women initiating breastfeeding, but not sustaining it.

Breastfeeding problems are most likely to present once the mother has left hospital; such problems are well known predictors for early formula supplementation and breastfeeding cessation. Policies and programs should therefore give increased focus to this period. Research shows that professional, partner and family support positively influence the continuation of breastfeeding beyond a woman’s stay in hospital, so further efforts may be needed to engage with women and those closest to them. Further research is needed to understand the information and support needs of women, including potentially hidden and hard-to-reach groups, if we are to progress the global goal of exclusive breastfeeding to 6 months.

Finally, women who make an informed choice not to breastfeed or who experience early feeding problems report feelings of guilt, failure and being judged. The extent to which current policies and programs meet these women’s needs, or indeed contribute to these negative feelings, also needs further investigation.
Background

Breastfeeding is important for infant nutrition, growth and healthy development, but also has benefits for mothers. It aids women's physical recovery after birth and, in the longer term, appears protective against some cancers, osteoporosis and spinal and hip fracture after menopause (Allen & Hector, 2005; Beral, Bull et al., 2002; Labbok, 2001; NHMRC, 2003). For infants, breast milk contains important antibodies which build a baby's immune system and help protect it from a range of illnesses and diseases including diarrhoea, respiratory and ear infections. Breastfeeding may even help to prevent allergies, particularly if continued for more than six months. Breastfeeding is promoted as a pre-requisite for secure bonding between mother and baby (Murphy, 1999; Schmied & Lupton, 2002), and there is also evidence that breastfeeding is associated with later psychological and developmental advantages (Allen & Hector, 2005; Faircloth, 2010; Victora, Bahl et al., 2016; WHO, 2007). Longer term benefits into childhood and adulthood include lower rates of blood pressure, cholesterol, overweight, obesity and type 2 diabetes (Chung, Raman et al., 2008; Ip, Chung et al., 2009; Scott & Binns, 2011). A recent UK study estimated that supporting mothers to exclusively breastfeed to 4 months could reduce the incidence of three childhood infectious diseases and save at least £11 million annually (Pokhrel, Quigley et al., 2014).

Internationally and in Australia, exclusive breastfeeding is recommended for babies up to 6 months of age, and for breastfeeding to continue after 6 months with suitable complementary foods (NHMRC, 2003; NSW Health, 2011; WHO, 2011). However, available data indicate that all developed countries fall well short of this target. For example, exclusive breastfeeding at 6 months is as low as 2% in Ireland, 2-10% in Norway, around 14% in Australia and 25% in NZ (NHMRC, 2011).

Comparing breastfeeding patterns across and within countries over time is made difficult by important definitional differences. For example, the NSW Health 2014 Chief Health Officer’s report states that 29% of babies were exclusively breastfed to 6 months (Centre for Epidemiology and Evidence, 2014a). The term ‘exclusively’ breastfed accords with the WHO standards however, inconsistency in definitions of ‘exclusive’ and ‘non-exclusive’ have prevented accurate measurement of breastfeeding trends and infant health outcomes (Brodribb & Miller, 2014).

Australian Breastfeeding Association (ABA)

In 1964, the Nursing Mothers’ Association Australia (NMAA) was established by six Melbourne mothers, with the aim of supporting women to breastfeed. This coincided with local and international trends that saw the natural childbirth movement rise in prominence, and breastfeeding promoted as the “natural” (rather than “artificial”) way to feed infants. Practices such as newborns ‘rooming-in’ with mothers and ‘skin-to-skin’ contact were introduced, and in the United States, the

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1 An exclusively breastfed infant receives only breastmilk with no other liquids or solids (except vitamins, mineral supplements, or medicines). A predominantly breastfed infant receives breastmilk as the main source of nourishment but also drinks water, water-based drinks, fruit juice, or oral rehydration salts but not breastmilk substitute or solids (Webb, Marks et al., 2001). The term “fully breastfed” includes both ‘exclusively’ breastfed and ‘predominantly breastfed.”
formation of the Le Leche League encouraged and supported women to breastfeed (Wright & Schanler, 2001).

In 2001, NMAA was renamed the Australian Breastfeeding Association (ABA), and is now an organisation of 1,100 women (mothers themselves) who volunteer as counsellors and educators accredited in breastfeeding education. It positions itself as ‘...the recognised Australian authority for breastfeeding information and support’ (Australian Breastfeeding Association). In addition to providing information and support to women wishing to breastfeed, ABA also plays an advocacy role educating the wider community about the benefits of breastfeeding.

International policy

Recommendations from WHO and UNICEF in 1991 culminated in the Innocenti Declaration on the Protection, Promotion and Support of Breastfeeding. The WHO/UNICEF Global Strategy for Infant and Young Child Feeding (2003) defined optimal infant feeding as exclusive breastfeeding from birth through to 4-6 months of age, continued breastfeeding into the second year, and the introduction of appropriate weaning foods at 6 months.

A primary strategy intended to support this goal was the Baby Friendly Hospital Initiative (BFHI). This has been a global campaign that provides guidelines to hospitals to promote and support breastfeeding in maternity health services. Hospitals adopting the BFHI seek accreditation based on compliance with best practice as defined by the ‘ten steps to successful breastfeeding’ (Bartington, Griffiths et al., 2006). The Global Strategy for Infant and Young Child Feeding included promotion of the BFHI and recommended the development of tools and approaches for expanding BFHI into the community and making Baby Friendly Health Care system wide including clinics, health centres and paediatric hospitals (WHO & UNICEF, 2003). By 2011 20,000 health facilities worldwide had received BFHI accreditation (Sheehan & Schmied, 2011).

National policy

Despite the work of the WHO and UNICEF cited above, by 2006 only 77 of the then 394 maternity facilities in Australia (19%) were Baby Friendly accredited hospitals (Bartington, Griffiths et al., 2006). That same year the Australian Government launched the Breastfeeding Inquiry which subsequently recommended that the federal Department of Health and Ageing fund the Australian College of Midwives to run the Baby Friendly Hospital Initiative in Australia, to facilitate the accreditation of all maternity hospitals (Sheehan & Schmied, 2011). It also recommended that the government work with the Australian Council on Healthcare Standards (and/or equivalent accreditation organisations) towards including Baby Friendly Hospital status as part of the overall hospital accreditation process (Sheehan & Schmied, 2011).
In 2009, the Australian Health Ministers endorsed the Australian National Breastfeeding Strategy 2010-2015. The Strategy provides a framework for priorities and action for all State and Territory governments to address the protection, promotion, support and monitoring of breastfeeding. The primary aims of the strategy are:

- to shift attitudes so that breastfeeding is viewed as the biological and social norm for infant and young child feeding
- to raise awareness and advocate the benefits of breastfeeding so that mothers, families, health professionals and other caregivers are fully informed about the value of breastfeeding
- to increase the percentage of babies who are fully breastfed (see page 3 for definition of ‘fully’ breastfed) from birth to six months of age, with continued breastfeeding and complementary foods to twelve months and beyond (Australian Department of Health)

At that time it was recognised that there was a lack of reliable data to support national monitoring of breastfeeding. For example:

> Reliable national level time trend data and even comparisons between jurisdictions for Australian breastfeeding rates are not available due to the inconsistent use of definitions and methodological differences between surveys (Barclay, Longman et al., 2012).

As a result, in 2010 the Australia Institute of Health and Welfare (AIHW) developed draft national indicators, definitions, calculations and metrics to address inconsistencies in definitions and methodologies. Despite this work, there “…remains no national monitoring of breastfeeding, and therefore continued taxonomic challenges in tracking trends over time (and difficulties in appraising the impact of policy and increasing professional support for breastfeeding)” (Barclay, Longman et al., 2012).

**NSW policy**

In 2002, the NSW Childhood Obesity Summit, hosted by NSW Health, identified the promotion of breastfeeding as one of the antidotes to the obesity pandemic. NSW Health launched a 3-year breastfeeding project culminating, in 2006, in the first state-based health policy advocating breastfeeding: *Breastfeeding in NSW: Protection, Promotion and Support* (Hector, Hyde et al., 2008). The policy provided a framework for action across the NSW health system aimed at:

- maintaining the current proportion of infants who are ‘ever breastfed’
- increasing the proportion of infants ‘exclusively’\(^2\) breastfed to six months
- increasing the duration of breastfeeding (NSW Health, 2011).

The policy advocated increased training for midwives and nurses to better support women to initiate and maintain breastfeeding, and encouraged implementation of the BFHI across all area health

\(^2\) It is important to note here that this differs from the Australian Breastfeeding Strategy which aims to increase the proportion of mothers ‘fully’ breastfeeding (see definitions p.1).
services. Associated with this was a proposal to link public funding of maternity hospitals to BFHI accreditation by 2014 (Sheehan & Schmied, 2011).

A revised NSW breastfeeding policy was released by the then Department of Health in 2011 with the same three aims stated in the 2006 policy (NSW Health, 2011). The new policy again highlighted the integral role of midwives and child and family health nurses in effectively delivering on these aims, and included the following wide range of initiatives:

- Health professionals’ education and training
- Dietary guidelines and growth charts
- Breastfeeding friendly environments (workplaces and childcare settings)
- Support for breastfeeding in health care settings
- Revisiting Australia’s response to the World Health Organization’s International Code of Marketing of Breast-milk Substitutes and related World Health Assembly resolutions
- Exploring the evidence, quality assurance, and cost-effectiveness associated with the establishment and operation of milk banks
- Breastfeeding support for priority groups
- Continuity of care, referral pathways and support networks
- Education and awareness, including antenatal education
- Monitoring and surveillance (NSW Health, 2011)

Whilst the majority of these action areas are within the mandate of NSW Health personnel, the policy recognises that some are more appropriately progressed at a national level (NSW Health, 2011).

Implementation of the policy has been supported by a state-wide Breastfeeding and Infant Nutrition Reference Group (now called the NSW Breastfeeding Working Group) and the Baby Friendly Health Initiative (BFHI) NSW Committee. Whilst the implementation of BFHI throughout NSW is advocated, additional funds to support initiatives associated with the BFHI (for example, ongoing breastfeeding training for midwives and nurses) has been limited. Currently only eight hospitals in NSW have BFHI accreditation.

NSW Aboriginal Maternal and Infant Health Strategy (AMIHS)

The Aboriginal Maternal and Infant Health Strategy (AMIHS) is a NSW Health initiative which was implemented in 2001. The overall aim is to improve the health of Aboriginal women during pregnancy and decrease perinatal morbidity and mortality (Murphy & Best, 2012). In 2007, joint state funding between NSW Health and the former Department of Community Services enabled expansion of the AMIHS from 7 to 30 programs that extended beyond health services to include referral pathways between the AMIHS and the Brighter Futures early intervention program targeting vulnerable families with young children. The AMIHS aligns with mainstream maternity and child health strategies, including supporting Aboriginal women to initiate and continue breastfeeding to 6 months.
Who is more or less likely to breastfeed?

Demographic characteristics

The Australian National Infant Feeding Survey (NIFS), conducted with almost 30,000 mothers in 2010–11, was the first national survey of infant feeding practices and related attitudes and behaviours. It provided baseline data on estimates of the prevalence and duration of breastfeeding and other feeding practices. The survey found that breastfeeding was initiated for 96% of children. However, only 56% of children continued to be exclusively breastfed to 1 month (<2 months); 39% to 3 months (<4 months); and only 15% to 5 months (<6 months) (AIHW, 2011).

Compared to the overall breastfeeding initiation rate of 96%, lower initiation rates were found among mothers who were daily smokers (88%) and those whose level of education was up to Year 11 (88%). Higher initiation rates were found in high income families (98%). When looking at sustained breastfeeding, the rate of exclusive breastfeeding to 4 months was 3 times higher in older mothers compared with younger ones (24 years or younger), and tended to be higher among multiparous women, women with a university degree or higher, and women who did not smoke (AIHW, 2011). More recent NSW Health data, in a report entitled *Children and Families in NSW - A Health Profile* (Centre for Epidemiology and Evidence and NSW Kids and Families, 2014) also showed that women 20 years and over are more likely than their younger counterparts to breastfeed at the time of hospital discharge (see Table 1). Another NSW study found that women with a lower level of education were at increased risk of both not initiating breastfeeding and, if they did breastfeed in the first few days, stopping in the first 24 weeks (Torvaldsen & Roberts, 2011).

<table>
<thead>
<tr>
<th>Maternal Age</th>
<th>&lt;20 yrs</th>
<th>20-34 yrs</th>
<th>≥35 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breastfeeding at discharge from care after birth (%)</td>
<td>68.4</td>
<td>82.9</td>
<td>82.3</td>
</tr>
</tbody>
</table>

Table 1: Breastfeeding at hospital discharge after birth by maternal age (%) (Centre for Epidemiology and Evidence and NSW Kids and Families, 2014)

Trend data indicate little fluctuation in in exclusive breastfeeding rates in NSW at hospital discharge: 80% in 2007 and 82% in 2012 (Drayton, Patterson et al., 2016; Taylor, Lim et al., 2010). Since breastfeeding initiation rates are over 90%, these data suggest very quick changes are occurring in women’s breastfeeding practices in the short time they spend in hospital after birth.

Aboriginal women appear to have lower breastfeeding rates although information about feeding practices is limited. According to the 2012-13 Australian Aboriginal and Torres Strait Islander Health Survey (AATSIHS), 83% of Indigenous children aged 0–3 years had been breastfed, compared with 93% of non-Indigenous children (Edith Cowan University, 2016). An early evaluation of the AMIHS reported that breastfeeding among Aboriginal mothers had improved but was still lower than the
rates among non-Aboriginal mothers: in 2003, 67% initiated breastfeeding and 59% still breastfed at 6 weeks, and in 2004 70% initiated breastfeeding and 62% still breastfed at 6 weeks (Murphy & Best, 2012).

In 2009, the NSW Ministry of Health commissioned qualitative research to investigate personal and social factors influencing breastfeeding in Aboriginal communities (CIRCA, 2010). Key research findings included:
- women who were exposed to a “culture of breastfeeding” were more likely to express positive attitudes towards breastfeeding
- the most significant factor influencing whether women continued to breastfeed outside the hospital environment was the degree to which female family members encouraged and supported sustained breastfeeding
- there was discord between beliefs about breastfeeding being the optimal method of infant feeding and the difficulties experienced in reality, especially with regard to breastfeeding exclusively or for longer periods, which resulted in an overriding belief that breastfeeding was less convenient when compared to formula
- there was a lack of awareness among Aboriginal mothers (especially younger mums) about the impact of smoking while breastfeeding and strategies to minimise harm to the baby
- a communication strategy involving face-to-face interventions targeting both mothers of newborns (antenatally) and trusted sources (such as family/key influencers) would be most effective in impacting Aboriginal women’s choices around infant feeding.

Birth characteristics

In addition to the demographic differences between women who are more likely to breastfeed and those who are not, there are obstetric and newborn characteristics associated with breastfeeding patterns. Women who have had induction of labour (IOL) (Jordan, Emery et al., 2009), caesarean section (Carlander, Edman et al., 2010; Chung, Kim et al., 2008; Karlström, Rådestad et al., 2010; Perez-Rios, Ramos-Valencia et al., 2008) or epidural analgesia (Torvaldsen, Roberts et al., 2006) are more likely to experience difficulties breastfeeding than women who have had a vaginal birth without intervention (Forde & Miller, 2010). In NSW, approximately one-third of all births take place in private hospitals where the rates of these obstetric interventions are generally high (Centre for Epidemiology and Evidence, 2014b). Women birthing in private hospitals may be a somewhat hidden group who might benefit from additional breastfeeding support, particularly once they return home.

Skin-to-skin contact (SSC) immediately after birth is associated with a longer duration of breastfeeding (Moore, Bergman et al., 2012). Conversely, prevention of SSC following a caesarean section is a barrier to breastfeeding (Forde & Miller, 2010). Women who have had a baby admitted to a Special Care Nursery or Neonatal Intensive Care Unit (NICU) are also less likely to breastfeed. In these various situations medical care for mother and child is often prioritised over the imperative to initiate breastfeeding (Benoit & Semenic, 2014). Other birth-related factors found to be barriers to breastfeeding include multiple births and low birthweight babies (Forde & Miller, 2010). Babies who
experience oral aversion and/or poor sucking reflexes present further challenges for women wanting to breastfeed (Benoit & Semenic, 2014).

Postoperative pain and limited mobility during recovery have been shown to further compromise breastfeeding initiation and duration. Karlstrom and colleagues (2007) found postoperative pain negatively affected breastfeeding and infant care for women experiencing both a planned or intrapartum caesarean section (Karlstrom, Engstrom-Olofsson et al., 2007).

### Reasons why women choose to breastfeed or not

The Australian National Infant Feeding Survey (2010) discussed above included an investigation of the factors influencing breastfeeding practices and identified the following most common reasons women gave their child breast milk: ‘healthier for child’ (94%), ‘convenient’ (64%), and ‘helps with mother–infant bonding’ (64%). The reasons most cited for not breastfeeding were ‘previously unsuccessful experience’ (38%), ‘so my partner can share feeding’ (29%), and ‘infant formula as good as breast milk’ (26%) (AIHW, 2011).

The survey showed that breastfeeding discontinuation rates are higher in the first month postpartum than at any other time (Brodribb & Miller, 2014). Amongst those who had initiated breastfeeding, the most frequent reasons for not continuing to breastfeed during the first 6 months were ‘not enough breast milk for child’ (56%), ‘child was not attaching properly’ (25%), ‘child was unsettled’ (24%), ‘breastfeeding was too painful’ (18%), and ‘expressing milk was too hard’ (14%) (AIHW, 2011). Although women commonly report insufficient milk supply as a reason for giving up breastfeeding, evidence suggests only about 5% have physiologic and real insufficient milk supply (Hector & King, 2005).

### Enablers and barriers to breastfeeding

#### Intention to breastfeed

Research suggests that the majority of women make infant feeding decisions prior to and irrespective of, any contact with health professionals such as doctors, midwives or health visitors (Earle, 2002). There is widespread evidence that breastfeeding intention predicts behaviour with women interviewed in the antenatal stage who expressed a commitment to breastfeed more likely to initiate breastfeeding (Lawton, Ashely et al., 2012; Shahla, Fahy et al., 2010; York & Hoban, 2013). One study found the strongest predictors of intention were ‘emotional reactions to breastfeeding’ and ‘moral norms’ - beliefs about whether breastfeeding is right or wrong (Lawton, Ashely et al., 2012).

Echoing global health promotion messages, women committed to breastfeeding often base their decision on the perception that breast milk is the ‘best’ and ‘most natural’ feeding method for mother and baby (Faircloth, 2010; Sheehan & Schmied, 2011). Rates of breastfeeding initiation have
increased over time in Australia: from 87% in 2001 to ~96% in 2010, reflecting the fact that the vast majority of women attempt to breastfeed (AIHW, 2011).

In NSW, the new 2015 BHI Maternity Satisfaction Survey (a state wide hospital survey) includes a question on ‘intention to breastfeed’, providing an opportunity to collect baseline data on the correlation between intention and initiation of breastfeeding. This will enable both researchers and policymakers to monitor shifts in the proportion of women in NSW intending to breastfeed, those actually breastfeeding, and those who, despite their intentions, do not breastfeed.

Self-efficacy

Perceived self-efficacy is defined as a belief in one’s ability to influence events that affect one’s life (Bandura, 1987). Factors known to influence self-efficacy include perceptions of social support, and physiologic and emotional states such as pain, anxiety and stress (Gallegos, Russell-Bennett et al., 2014). Women’s breastfeeding self-efficacy can be influenced by a range of factors including exposure to breastfeeding; perception of being supported; past breastfeeding experiences; and physical/mental status (Forde & Miller, 2010). There is strong evidence that supporting mothers to breastfeed through professional and peer support is likely to enhance mothers’ self-efficacy and confidence with respect to breastfeeding (Hector, Hebden et al., 2010).

The Breastfeeding Self-efficacy Scale (BSES-SF) was designed for use with mothers at high risk of not initiating breastfeeding, to assess behaviours and perceptions, and to develop and evaluate confidence-building strategies (Dennis, 2002).

Postnatal environment

In the days following the birth of a baby, the new mother is preoccupied with the best outcomes for her baby but is also confronted by the need to support her own health and well-being: in some circumstances these may be in conflict. In this period, many women feel overwhelmed and infant feeding decisions are not always based on knowledge and rational thought:

... [women] respond with extremely strong reactions to the actual embodied experience that have little to do with ‘rationality’ but more to do with deeply-felt emotions and sensations ... they feel a sense of failure and a loss of control for not conforming to the ideal of the contented and fulfilled mother suckling her baby ... unsuccessful attempts at breastfeeding ... are susceptible to disappointment and feelings of failure (Schmied & Lupton, 2002).

Qualitative studies have shown that when midwives approach women as active partners in their care, integrating principles inherent in the ‘continuity of care’ model, women are more likely to feel satisfied with the care they receive (Schmied, Beake et al., 2011). On the other hand, when women feel they are being told what to do by an ‘expert’, for example with breastfeeding, they disconnect from the process and deflect key messages, highlighting the need for an approach based on listening and sharing rather than ‘presuming and telling’ (Schmied, Beake et al., 2011).
Creating an environment conducive to breastfeeding is conditional upon midwives having the capacity to deliver high quality services (Australian College of Midwives & Nursing and Midwifery Board of Australia, 2006; Dykes, 2005). The National Competency Standards for Midwives emphasise the importance of the relationship between midwives and women in maternity services. Core competencies include communication skills that require midwives to be active listeners and form a partnership with the women in their care, encouraging women to participate equally in all decisions about their own care and that of their baby. A key outcome of this equal relationship is that decisions favour the woman’s choice even where this choice may be contrary to medical evidence or clinical best practice. This includes the woman’s choice regarding infant feeding (Australian College of Midwives & Nursing and Midwifery Board of Australia, 2006). A new mother who decides not to breastfeed or who is incapable of breastfeeding needs to feel supported by midwives in the postnatal ward and not made to feel that her status as a ‘good mother’ is being undermined (Sheehan & Schmied, 2011).

Some have suggested that the increasing role of midwives and lactation consultants in providing breastfeeding support and advice has been at the expense of women’s innate, intuitive, traditional wisdom around breastfeeding passed on from woman to woman. This has resulted in the devaluing of the ‘intimate and unique wisdom’ of breastfeeding mothers in both the media and general community (Barclay, Longman et al., 2012).

At the same time, women themselves believe they need expert advice in order to successfully breastfeed. A recent survey with NSW mothers found that some reported receiving insufficient breastfeeding instruction and support during their postnatal hospital stay, and others reported inconsistent and conflicting advice both in hospital and at home (CPPHR, 2014).

**Communication - being informed**

Infant feeding information provided to women is skewed toward the option of breastfeeding: whilst breastfeeding is offered as a choice, it is set up as a ‘right’ choice, with formula milk portrayed as an inferior second option (Fenwick, Burns et al., 2013; York & Hoban, 2013). Health professionals also feel obliged to adhere closely to health service policies and practices that promote breastfeeding and breast milk as optimal for infant health and development (Fenwick, Burns et al., 2013).

Women receiving postnatal care are often emotionally vulnerable and can feel compromised in their ability to process information and function effectively on a cognitive level, particularly in the first days and weeks following birth. Women perceive the health professionals in the postnatal ward as trusted sources of information and, as a consequence, become quickly disillusioned and overwhelmed when the information they receive about breastfeeding is contradictory (Lee, 2014).

**Social and environmental factors**

Supportive social networks including partner, family and friends have a positive influence on initiating and sustaining breastfeeding (York & Hoban, 2013). Partner support can positively influence intention to breastfeed and be predictive of maternal confidence in breastfeeding.
The practices and experiences of a woman’s female relatives are also particular significant in breastfeeding behaviour (Rollins, Bhandari et al., 2016). Evidence shows the important role played by grandparents in a woman initiating breastfeeding (Hector, Hebden et al., 2010) and the capacity of grandmothers to influence exclusive breastfeeding as well (Negin, Coffman et al., 2016).

A Cochrane review found that women who received any form of support were less likely to stop exclusive breastfeeding before five months than women who did not (Britton, McCormick et al., 2007). More recent studies have similarly endorsed the positive impact of emotional support. For example, studies have shown that the level of support provided by partners and families of origin influence whether women continue to breastfeed beyond their stay in hospital (Shahla, Fahy et al., 2010; York & Hoban, 2013).

Parental leave ‘buys’ the mother or father time to care for the newborn child (with or without pay). Labour force participation data indicate that 56% of all women in NSW with children aged 0-4 years are in paid work (ABS, 2013a). However, levels of access to paid maternity and paternity leave in Australia are lower than other OECD countries such as Norway and Sweden (Forde & Miller, 2010). Without such support, women who would otherwise choose to continue breastfeeding can feel forced to stop because of the need to return to work. The age of the mother also influences the length of maternity leave taken: mothers aged 35 and over take, on average, almost twice as many weeks (20 weeks) of paid leave than mothers aged 15-29 years (11 weeks) (ABS, 2013b).

Community attitudes towards breastfeeding, and particularly breastfeeding in public that can present practical difficulties and feelings of embarrassment, are common issues raised by women (Forster & Mclachlan, 2010; Rollins, Bhandari et al., 2016). Other social factors that have been suggested as negatively influencing sustained breastfeeding include working in environments which do not facilitate expressing breast milk; being busy with other children; and family disruption or dysfunction (Hector, King et al., 2005).

Health system efforts to support breastfeeding

National and state-based breastfeeding policies have been supported by a number of interventions. Reviews of the effectiveness of such interventions suggest varying degrees of success in increasing short- and long-term breastfeeding rates, and that combining pre- and postnatal interventions appears to be more effective than using either type alone (Chung, Raman et al., 2008). Breastfeeding interventions can be grouped into one of three types: those providing support to breastfeeding mothers including personal skills development; those aimed at hospital practices (including the Baby Friendly Health Initiative); and those addressing health professional education (Hector, Hebden et al., 2010). Recent literature has highlighted the need for an increased focus on a fourth type of intervention – community postpartum care (Brodribb and Miller, 2014). However, there are currently no Australian guidelines for community post-partum care to support breastfeeding (Brodribb & Miller, 2014), and step 10 of the BFHI, which does emphasise community

\[\text{Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or clinic}\]
support, has not been well implemented or evaluated. This has resulted in a paucity of evaluation data to inform strategic direction.

**Supporting women**

To date, interventions targeting breastfeeding mothers have favoured face-to-face in-hospital support (Fu, Fong et al., 2014). However, recent interventions involving professional telephone support have called in to question the primacy of face-to-face support (Fu, Fong et al., 2014; Gallegos, Russell-Bennett et al., 2014). For example, in a recent multicentre randomised controlled trial, professional breastfeeding telephone support that was provided early and continued throughout the first month, increased the likelihood that first-time mothers initiated breastfeeding by 60%, and increased the likelihood that they breastfed exclusively by almost 50% (Fu, Fong et al., 2014). Another study endorsed these findings, concluding that postnatal telephone support can significantly improve the duration of any and exclusive breastfeeding among postpartum mothers (Tarrant, Fong et al., 2014).

A recent Australian study, called Mumbubconnect (MBC), tested a text messaging service with automated responses delivered to new mothers once a week for 8 weeks. The study found that “...pro-active telephone support does improve breastfeeding duration and exclusivity” (Gallegos, Russell-Bennett et al., 2014). The evaluation of the MBC highlighted its potential impact among women with lower identified self-efficacy levels by increasing their ‘active coping strategies’ (Gallegos, Russell-Bennett et al., 2014). Another advantage of telephone support is that it reaches women less likely to seek help and more likely to be socially isolated (Gallegos, Russell-Bennett et al., 2014).

**Hospitals practices**

Hospitals have increasingly adopted integrated service models for the delivery of care, including maternity care. In NSW, continuity of care models in maternity care are based on women having access to the same individual or team of carers throughout pregnancy and the early postnatal period. These models were designed to ameliorate the problems of ‘disconnected’ encounters in a hospital system where midwives are unable to provide effective support for women initiating breastfeeding (Schmied, Beake et al., 2011). However, whilst women in continuity of care models have been shown to do better on some indicators including breastfeeding initiation (Hatem, Sandall et al., 2008), access to such care models is limited, albeit slowly increasing (Barclay, Longman et al., 2012).

Despite the professional undertaking by midwives in NSW to deliver woman-centred care, when it comes to support for breastfeeding in the postnatal environment, there is evidence of a lack of engagement on the part of some health carers. At least some of the shortfall in the midwives’ delivery of woman-centred care, including infant feeding support, can be attributed to resourcing issues. The postnatal ward has become an environment in which there is an over focus on routines and procedures and a preoccupation with completing tasks and ticking boxes: “it is the personal aspect of the service that is usually sacrificed” (Dykes, 2005).
Service providers in rural and remote locations are faced with an additional range of resource and capacity constraints and a proportion of high risk/high need client groups (for example, very young women and Aboriginal women). These challenges, combined with the closure of many maternity services in rural and remote locations, have led to complex issues around access to services, family support and emergency care options. Maternal and neonatal transfers result in dislocation, compounding the pressure on services, so that providing woman-centred care and appropriate breastfeeding support can be challenging (Wyndow & Jackiewicz, 2014).

**Baby Friendly Health Initiative (BFHI)**

As discussed above (see pages 2-4), the Baby Friendly Hospital Initiative (BFHI) aims to provide guidelines to hospitals to promote and support breastfeeding in maternity health services. Research suggests the BFHI is effective in increasing breastfeeding initiation rates (Hector, Hebben et al., 2010; WHO & UNICEF, 2003). By 2011 20,000 health facilities worldwide had received BFHI accreditation (Sheehan & Schmied, 2011). Informing all childbearing women of the benefits of breastfeeding is part of the Baby Friendly Health Initiative (step 3) and as such is considered a key strategy in improving breastfeeding rates.

The literature indicates many maternity care staff support the BFHI, at least in principle. However, implementing the initiative in the Australian context has proved challenging. Barriers to implementation include lack of available resources required for change management, inconsistency in the way policies have been communicated, difficulties in educating staff and the onerous nature of accreditation (Schmied, Gribble et al., 2011). Further, while the majority of maternity care providers supported the BFHI and its alignment with underlying beliefs about breastfeeding, they view some of the ten steps as rules that are too rigid and not supportive of meeting individual women’s needs.

Although the BFHI has been associated with improved breastfeeding initiation, there is a lack of evidence that it is has a positive influence on the duration of breastfeeding at 3 or 6 months (Bartington, Griffiths et al., 2006). One recent European study found that infants born in a hospital with a program modelled on the BFHI were 7 times more likely to be exclusively breastfed at 3 months (43.3% vs. 6.4%). However, by 6 months sustained exclusive breastfeeding rates in both groups were low (7.9% vs. 0.6%) (Patel, Oken et al., 2014).

It is also important to note that implementation of the BFHI has focussed solely on the period while the mother is still in hospital (Escamilla, Martinez et al., 2016). In the majority of cases, a woman’s milk supply is not well established until day 3 or 4 and common breastfeeding problems are most likely to present once the woman has left hospital and returned home (Fu, Fong et al., 2014). Such problems are well known predictors for early formula supplementation and breastfeeding cessation. The Universal Health Home Visiting initiative and other programs offered by individual health services⁴ aim to provide physical and psychological support and comfort to women following childbirth, including helping women struggling with breastfeeding.

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⁴ Virginia Schmied, University of Western Sydney, is currently working with a Child and Family Health nurse in the Western Sydney LHD on an action research project looking at the impact of a breastfeeding support group on rates of breastfeeding.
Removal of infant formula milk samples in hospitals

A code of conduct known as the MAIF agreement (Trade Practices Act 1974) was signed between manufacturers and importers of infant formula and the Australian Government reflecting Australia’s commitment to the WHO’s International Code of Marketing of Breast Milk Substitutes. Although the MAIF agreement is voluntary and self-regulatory, and therefore not legally binding, an Advisory Panel on the Marketing of Infant Formula (APMAIF) was established to monitor compliance with the agreement (Sheehan & Schmied, 2011). Breaches of the agreement are published in the annual report of the APMAIF and tabled in parliament (Sheehan & Schmied, 2011).

Step six of the BFHI’s ten step program states: ‘give newborn infants no food or drink other than breast milk, unless medically indicated’. Awareness and implementing of the BFHI has been a factor influencing the systematic removal of direct marketing of infant formula to women in hospitals in NSW (Bartington, Griffiths et al., 2006; Forde & Miller, 2010).

Breastfeeding education for midwives

Breastfeeding education for health professionals has been shown to play a key role in the provision of instruction and support to women before, during and after birth. Encouragement by health professionals has been identified as crucial to breastfeeding success. However, many factors influence the effectiveness of this support, for example, communication style and approach (see page 10. Further research is required to determine which types of health professional interventions work best (Schmied, Beake et al., 2011).

Professionalisation of breastfeeding - Lactation Consultants

Increasingly the mother-to-mother support for breastfeeding that characterised previous generations is being made obsolete by a system that promotes breastfeeding as an expert skill passed on by professionals with appropriate credentials. An increase in the numbers of Lactation Consultants in Australia has been associated with a perception among women that breastfeeding is technically challenging and, for some women, an impossible task without professional assistance (Barclay, Longman et al., 2012). The other negative impact of referral to Lactation Consultants in hospital or on discharge is that it leads to the deskilling and or undervaluing of the midwife or the Child and Family Health Nurse who are usually not qualified as Lactation Consultants (Barclay, Longman et al., 2012; Schmied, Beake et al., 2011).

Supporting women who do not breastfeed

Adherence to the ideology that ‘breast is best’ and advocating breast milk as the optimal feeding method over infant formula has resulted in the alienation of women who have either made a conscious decision not to breastfeed or who experience problems breastfeeding (Schmied & Lupton, 2002). These women can experience guilt and feelings of failure (Earle, 2002), and perceive themselves as ‘bad mothers’ inadequately providing for their babies (Lee, 2014; Murphy, 1999). These reactions have a negative effect on women’s experiences of infant feeding as they feel judged
and judge themselves (Murphy, 1999), and can be a source of considerable anxiety (for example, women who have had problems breastfeeding in the past or those who have had difficult births):...if only the positives of breast feeding are talked about, promoted and idealised, then women who do not achieve this ... are susceptible to disappointment and feelings of failure and a sense that somehow they are ‘bad mothers’ (Schmied & Lupton, 2002).

It must be recognised that a small proportion of women will not initiate breastfeeding, either because they cannot breastfeed, or they make a choice not to. Similarly, among women who try to breastfeed, some will decide to supplement or replace breastfeeding with infant formula feeding at various time points in the early weeks and months of their baby’s life. While various health care policies and procedure documents contain statements about the importance of supporting such women in their infant feeding decisions, this is too frequently not the case: too often they feel abandoned and/or judged.

Given the distress often associated with the early postnatal stage and the negative stigma associated with the decision to use infant formula (which may or may not be a preferred choice), future breastfeeding policies and programs need to address the needs of these women and provide information and midwifery education for this group. For example Having a Baby, p.102-103 (NSW Health, 2012) contains a section advising new mothers of how to safely use infant formula.

Conclusions and future directions

Australia supports the global target of increasing exclusive breastfeeding of all infants up to 6 months of age. Various initiatives, introduced as long ago as the 1960s and more recently, have helped to promote and support breastfeeding, and have culminated in a significant population health achievement: the vast majority of Australian women initiate breastfeeding. However, only a relatively small proportion of women sustain exclusive breastfeeding to 6 months (AIFS, 2002; AIHW, 2011).

Recent literature highlights the need for an “enabling policy environment” including labour laws and maternity leave (Hansen, 2016) and an increased focus on community post-partum care. In particular, future policies and programs with an emphasis on supporting sustained breastfeeding and strategies that reach women in the first days and weeks after they have left hospital, a ‘window’ when women are especially vulnerable to both physical and psychological problems that impact on their commitment and resolve to continue breastfeeding (Dennis, 2002). A recent systematic review highlighted the need for “increasing investments in structured programs at the community level” defined as programs that include multifaceted approaches targeting change at organisational, service delivery and individual behaviour levels (Escamilla, Martinez et al., 2016). Professional, partner and family support positively influence the continuation of breastfeeding beyond a woman’s stay in hospital (Britton, McCormick et al., 2007; Shahla, Fahy et al., 2010), so further efforts may be needed to engage with women and those closest to them.
Younger women, women from socially disadvantaged backgrounds, women who smoke, Aboriginal women and women experiencing a range of birth interventions including caesarean section, are at higher risk of not initiating and sustaining breastfeeding. These women require targeted strategies and additional support especially when transitioning from hospital to home. Recent cost-effective telephone-based interventions may offer some promise (Fu, Fong et al., 2014; Gallegos, Russell-Bennett et al., 2014). Nonetheless, further research is needed to better understand the barriers to breastfeeding among these high risk women, and to evaluate the effectiveness of interventions intended to support them.

Further research is also needed to critically evaluate the effectiveness of existing strategies within the health system intended to serve and promote breastfeeding, and the goal of exclusive breastfeeding of infants to 6 months (Escamilla, Martinez et al., 2016). Potential evaluation questions might include:

- How are current policies working now? Where are the gaps?
- What can the health system do to better support women to continue to breastfeed once they leave hospital?
- Why has the uptake of BFHI accreditation across hospitals been so low? What lessons can be learnt from hospitals that have implemented BFHI?
- What strategies would best assist women at greatest risk of not initiating or maintaining breastfeeding?

Finally, it is imperative to encapsulate the woman’s perspective in future research. For example, what is defined as ‘breastfeeding support’ at a health system or policy level may not be experienced as such by women:

A key methodological problem with some research on effectiveness of support interventions (generally) is that many studies do not assess properly whether intended support is perceived as supportive by recipients themselves (Schmied, Beake et al., 2011).

Investigation of the underlying influences on women’s infant feeding behaviour, including those who make an informed choice not to breastfeed, would identify the information and communication needs of women, including potentially hidden and hard-to-reach groups, who may be most at risk.
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