


Providing the best medicine: summary of the evidence in support of breast (milk) feeding in neonatal units

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For further information about this publication please contact

Dr Kate Woodman

Email: kate.woodman@nhs.net



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1 South Gyle Crescent
Edinburgh EH12 9EB

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About this briefing

This briefing provides a summary of the best available evidence about breastfeeding/breast milk feeding in neonatal units (NNUs).^{*} It is based on a rapid review of the evidence that was undertaken in 2014/15. It is intended to be of use to practitioners, policy makers and academics.

While there are many types of evidence, in this paper we have drawn on the strongest evidence of the highest quality from reviews/collections of papers published by organisations that have clear, quality assured processes, such as the National Institute for Health and Care Excellence (NICE) or the Health Technology Assessment programme (HTA). In addition, single (mostly qualitative) studies that have been published in peer-reviewed journals about parent and staff experiences of breast (milk) feeding in neonatal units have been included.[†]

^{*} The term neonatal unit (NNU) has been used throughout this summary to refer to all types of unit described above.

[†] Full details of the evidence that has informed this paper are provided in the References.

This evidence briefing should be read in conjunction with the Guide to the Baby Friendly Initiative standards (www.unicef.org.uk/wp-content/uploads/sites/2/2014/02/Baby_Friendly_guidance_2012.pdf, also Appendix 1) and the Family-centred model of care (see Appendix 2).

The Scottish context

Several key issues are highlighted in this review of the published evidence which emphasises the utmost importance of breastfeeding/breast milk feeding in neonatal units. In Scotland change has already been taking place throughout the last decade and there is a clear 'shifting of the curve' towards breast milk usage and a breastfeeding culture in NNUs.

Increasingly, staff awareness and confidence about the benefits of breast milk is palpable to the extent that the evidence presented here is largely reminiscent of where we have come from and the breast milk journey travelled so far. As we continue to challenge traditional practices it is clear that many Scottish Neonatal Units are well underway, or indeed ahead of the curve towards supporting breastfeeding/breast milk feeding.

Historically there has been a commonly held misperception that breast milk can be easily substituted by formula without any serious or lasting harm to sick and premature babies. Previously it was believed that these infants cannot thrive on human breast milk alone and/or that their mothers are too distressed to provide it. As marketing companies have normalised the use of formula milk as a routine and preferred food, particularly in NNUs, breastfeeding has been undermined. However, the health and development of these most vulnerable infants needs to be protected by prolonged human breast milk feeding.

Small changes have started to take place in response to the implementation of the UNICEF Baby Friendly Maternity standards. Increased access to donor

breast milk in all neonatal units has resolved some of the issues of making breast milk equally available to all babies who need it. In support of local efforts, the new UNICEF Neonatal standards provide improved staff training about the important issues of breast milk production, transitioning to breastfeeding and creating an NNU culture that increasingly involves parents in their babies' care. In Scotland, additional support is offered by the recommendations of the 2017 Maternity and Neonatal Services Review and the review of the Maternal and Infant Nutrition Framework.

As society continues to view breastfeeding as problematic, many mothers truly believe that they cannot breastfeed, or they have been so hurt by the negative reactions of others that they stop doing so. Many women choose not to breastfeed for reasonable and pragmatic reasons, but when their baby is unwell, parents are often motivated to provide breast milk for their infant. While it would be inappropriate to expect individual families to feel responsible for what is in fact the systemic failure of our society to protect breastfeeding, NNU staff have a unique opportunity to change the conversation by promoting and protecting the use of breast milk/breastfeeding as part of caring for this group of most vulnerable infants.

Introduction

The positive health benefits of breastfeeding/breast milk feeding as part of caring for premature, sick and vulnerable neonates is well documented in the scientific literature. It provides the 'best medicine', offering protection against hospital-acquired and other serious infections (such as necrotising enterocolitis (NEC) and/or septicaemia). Breastfeeding/breast milk feeding reduces mortality and provides the best nutritional support for such frail babies.

Yet the difficulties experienced by pre-term mothers as they persevere with providing breast milk for their baby are compounded by feelings of loss and anxiety as staff may not have the knowledge, skills or time needed to support parents and their NNU babies in a truly person-centred way because of time pressures, established models of care and limited opportunities for training.

The aim of this paper is to summarise the best available evidence about breastfeeding/breast milk feeding in neonatal units and to understand the experiences of parents of NNU babies and the staff caring for them.

The relevance of the Health Care Quality Strategy ambitions to the experience of breastfeeding/breast milk feeding in neonatal units



The evidence in support of breastfeeding/breast milk feeding in NNUs was considered with reference to the six Quality Ambitions of the Health Care Quality Strategy for NHSScotland* that makes explicit connections between patient priorities and the values of the people working for and within the NHS in Scotland.

The Health Care Quality Strategy includes six (three key**) quality ambitions that are outlined below:

- 1 **Person-centred****: providing care that is responsive to individual personal preferences, needs and values and assuring that patient values guide all clinical decisions.
- 2 **Safe****: avoiding injuries to patients from health care that is intended to help them.

* See www.gov.scot/Resource/Doc/311667/0098354.pdf

- 3 Effective**:** providing services based on scientific knowledge.
- 4 Efficient:** avoiding waste, including waste of equipment, supplies, ideas, and energy.
- 5 Equitable:** providing care that does not vary in quality because of personal characteristics such as gender, ethnicity, geographic location or socioeconomic status.
- 6 Timely:** reducing waits, and sometimes harmful delays, for both those who receive care and those who give care.

The evidence included in the full evidence document* was considered through the 'lens' of each of the six quality ambitions. Of particular interest was the extent to which the dimension of person-centred care featured in the experiences of both parents *and* NNU staff.

Although this key quality ambition specifically refers to the patient/family experience, recent publications about staff experiences of supporting breastfeeding/breast milk feeding in neonatal units are included below. These provide insight into the needs of parents and the pertinent issues for staff working in NNUs.

Identifying the evidence

MEDLINE, Embase, Web of Science and Cochrane databases were searched for systematic reviews published in English between November 2010 and April 2014, including the following keywords: neonatal/intensive care, KMC, low birth weight, premature, breastfeeding and breast milk. Additionally, CINAHL and MIDIRS were searched during the same years, and included the same key words, to identify qualitative papers that explored the infant feeding experiences of parents and NNU staff.

* see: www.healthscotland.scot

In total eight systematic reviews and seventeen publications about qualitative studies were identified. The findings from all these papers are summarised in this document.*

The impact of premature delivery

Family perspectives

Mothers' prevailing sense of being different was heightened because of having a traumatic birth or Caesarean section. They were usually admitted to postnatal wards that they shared with other mothers who had their baby beside them.¹

Being in hospital because of their own health issues, coupled with having their infant in the NNU, was doubly disempowering for mothers as they lost autonomy over their own behaviour and lost autonomy over beginning to establish a close relationship with their new baby.¹

The mother's situation was compounded if they had pregnancy-related complications (such as pre-eclampsia) and side effects of medication reduced their understanding. This had a direct impact on their ability to follow early instructions about expressing breast milk.²

Mothers who were too ill to be with their baby in the NNU reported distress as they grieved for the normality of their pregnancy and the early motherhood that they had anticipated.¹

Separation from their baby provoked feelings of loneliness, especially at night when mothers did not know whether their baby was awake and needing to be fed.³ Often this physical separation, which created a sense of isolation and 'unreality', was only bridged by partners, who were considered to be trustworthy links to the 'other world of the baby'. However, this link was

* Full literature search details are available from Kate Woodman on request.

sometimes of little comfort as mothers, because of dashed expectations about becoming a mother, continued to feel guilty, regretful and anxious.¹

Mothers strongly believed in the importance of bonding with their baby at birth through nurturing and caring for all of their baby's needs. Being involved in feeding and caring for their newborn was a crucial part of becoming familiar with their baby's responses, providing them with reassurance and reducing their distress. However, mothers were unable to provide comfort in this way because of their physical separation, or because they were discouraged from doing so by NNU staff in view of their baby's vulnerability. This heightened mothers' anxiety and fear in response to the fragility of their infant, which in turn challenged their confidence in being able to nurture and care for their baby.

Staff perspectives

As described by Taylor et al⁴, differences in nursing and midwifery practices between the NNU and maternity units resulted in tensions between different units and staff when working toward the implementation of the Baby Friendly Hospital Initiative (BFHI):

'The postnatal ward – they are very baby friendly up there. Very, very baby friendly, and they probably see us [NICU*] as not so baby friendly, but we have a different role to play than they have to play.'

Staff regarded the NICU as 'a different world' compared to the maternity unit in which they had a unique role in caring for sick and/or premature infants who required clinical treatment in a physical environment that was tailored to provide such specialist care.

* Neonatal Intensive Care Unit.

The NNU infants needed more time to initiate and establish breastfeeding and thus the rationale was provided for allowing certain practices that were not supported within the application of the BFHI framework in the maternity unit:

‘We do use dummies down here and they have a place down in neonatal intensive care for sucking and things.’

Staff considered the physical environment of the NNUs as impeding the implementation of some of the BFHI steps. For example, rooming-in (Step 7) was generally not available in the NICUs and was considered to be an ‘insurmountable challenge’ despite staff concern about mothers’ lack of privacy and its impact upon breastfeeding.

The separated hospital spaces of the postnatal ward and NICU meant that mothers were separated from their infants and thus they occupied ‘separate worlds’, being responded to as separate entities rather than as a dyad. The interdependence of their relationship was therefore difficult to maintain and communication difficulties between staff across different wards or units were compounded by a lack of clarity about who cared for the mother and who cared for the infant, making it more difficult for staff to promote and help maintain breastfeeding:

‘Now that mother wanted to breastfeed that baby, and we were boarding the baby here, but it wasn’t going over [to high dependency] every feed for a breastfeed.’

‘Hard work’ was required to overcome the difficulties encountered as staff prepared for and started to implement the BFHI. These difficulties were related to 1) a lack of funding/resources and 2) entrenched staff attitudes.

1. A lack of funding/resources for staffing and managing workloads made it difficult to maintain the mother–infant interdependent relationship when mothers and infants were separated. Therefore, staff felt unable to appropriately support women and thus implement BFHI practices:

‘Sometimes you’ve got four babies, and the mother, you might have three that are due and that mother comes in, she’s in tears, but unfortunately the other babies have to be fed, and you can only give what you can give at that time.’

It was equally ‘hard work’ trying to promote breastfeeding and the BFHI when other essential resources to assist with breastfeeding, such as breast pumps, recliner chairs, and privacy screens were in short supply.

2. The challenges of overcoming ‘entrenched attitudes and practices’ and failure to provide adequate staff support for mothers who wanted to breastfeed resulted in the giving of formula instead of promoting breastfeeding.

Staff resistance was problematic for implementing the BFHI as practices that had previously been considered as acceptable often led to formula being given to infants as part of established practices:

‘I said we’ll start breastfeeding, and it sucked beautifully, but the nurse by the bedside was so afraid. She insisted on giving [a hypoglycaemic baby] a bottle.’

A lack of staff confidence in advocating in favour of breastfeeding as a first option and in line with the BFHI resulted in nursing staff’s reliance on medical decisions about infant feeding and the giving of formula:

‘You need to be able to do things, thinking yourself, without saying, “Oh no, I can’t do that until tomorrow because the doctor won’t be doing rounds until tomorrow, so I need to leave it.” That baby misses a whole 24 hours of feeding.’

‘Quick fixes of formula’ because a mother looked tired or to free up staff time were given as supporting breastfeeding was considered as harder work and more time-consuming for staff in the NICU:

‘You can give them the information to bottle feed really quick and then with breastfeeding they have to spend the time with them.’

Nonetheless, staff believed that the BFHI could be achieved in NICUs despite the limitations posed by its environment and structure. Some had led the way by proactively bringing about change in response to their survey of mothers, which had explored how staff could better support breastfeeding:

‘And I think we do skin-to-skin better with our early, preterm babies ... So in [our intensive care] bays one and two, kangaroo care and skin-to-skin is done exceptionally well.’

Staff considered it positive that infants in the NICU often stayed for a long time compared to infants in the maternity units. This long stay provided greater opportunities for staff to educate mothers about infant feeding:

‘I find that, because our patients are longer term down here, there’s more of an opportunity to speak to the mothers than there is working in postnatal ward, when they’re in there for such a short period of time.’

Education was regarded as key to implementing the BFHI in NICUs and to changing staff attitudes and behaviours and was vital for increasing the confidence of nursing staff in promoting breastfeeding among both mothers and medical personnel. The availability of lactation consultants* and staff attendance at breastfeeding courses provided them with breastfeeding knowledge and knowledge about the BFHI:

* This role is comparable to infant feeding advisors in Scotland.

‘I’ve been here for 20 years and I’ve only just done the lactation consultant [course and exam], and I’m telling you now, not armed with all this knowledge, I would have just said, give the formula.’

Positive ways to manage the implementation of the BFHI in the NICU context included the encouragement of expressing breast milk, the involvement of lactation consultants, and having clear policies/guidelines in place to directly support the feeding regimes of infants with low blood sugars.

Although policies might minimise role confusion between staff in different areas of the hospital, staff expressed caution that these needed to be clear and appropriate, to prevent some staff rigidly applying a policy that was sometimes detrimental to supporting breastfeeding.

Adapting to the neonatal unit environment



Family perspectives

As described by the Poppy Steering Group⁵, mothers and fathers found periods of transitional care – the time of their baby’s birth, their arrival on the neonatal unit, moving between different units and/or different levels of care

and leaving the unit to take the baby home – particularly stressful. At these times parents valued:

- having consistent, clear information about the unit and caring for their baby
- receiving emotional support
- getting practical guidance and encouragement about caring for and feeding their baby, including ongoing support for breastfeeding.

Whenever possible parents needed to be prepared for their time on the neonatal unit (either before their premature birth if expected, or afterwards if there was little warning).

If their baby's premature birth was unexpected, new fathers were often on their own when they first visited the neonatal unit. This they found 'shocking'. Continuity of care was very important to parents, especially during crises, for example when their baby was in transitional care and at the time of hospital discharge when parents assumed total responsibility for their baby's care for the first time.

Immediately after their baby's birth, parents wanted health professionals to talk to them about opportunities to hold their premature baby; to help them to provide KMC/skin-to-skin and to breastfeed. They appreciated being given consistent information about how to care for their newborn and appreciated being encouraged to express breast milk and to breastfeed. However, poor communication, coupled with the availability of adequate privacy and practical help while their baby was in the NNU, prevented parents from developing realistic expectations about breastfeeding.

Parents reported their heightened uncertainty and fear at times when their baby was transferred from one level of care to another. During such transitions, parents appreciated health professionals' continued emotional support and support for breastfeeding/breast milk feeding.

Staff attitudes in relation to valuing and supporting breastfeeding/breast milk feeding, being welcoming, supporting and working in partnership were vitally important to parents' experience of the NNU.⁵

A lack of privacy was a real barrier to breastfeeding/breast milk feeding. A lack of homeliness (for example not having a place to leave some personal belongings, and/or not having a chair next to their infant's cot) and the comings and goings of hospital staff inhibited mothers' efforts to express breast milk.⁶ This heightened their sense of being a visitor to the NNU where strict feeding routines curtailed mothers' efforts to responsively feed and care for their baby.

The importance of breast milk and expressing



Family perspectives

Breastfeeding/breast milk feeding was highly valued by mothers as it was the 'one thing that only the mother can do' to contribute to protecting and improving their baby's health.

Mothers had faith in the healing properties of their breast milk and considered it the most important thing that they could do for their infants. They equated it to providing what their baby needed to gain and maintain health and to thrive.

‘I’m giving him life, medicine, food, and a part of me, all in a feeding every two hours.’⁷

Mothers hoped that their breast milk would militate against the complications associated with their baby’s prematurity, of which they were fully aware. Expressing their breast milk also contributed to mothers’ healing. While they felt guilty and blamed their bodies for delivering early (‘I couldn’t hold her in my uterus long enough’⁷), mothers readily embraced ‘pumping’ as a chance to maintain their baby’s health that had been interrupted by their infant’s premature birth. Providing their breast milk also enabled mothers to renew the ‘connection’ that they felt with their infant during pregnancy.⁷

Mothers were comforted by the ritual of providing breast milk for their baby as this enabled them to continue the unique biological connection that had begun during pregnancy. Expressing breast milk helpfully provided some structure and familiarity during a time of chaos and uncertainty. Some mothers were reassured as ‘pumping’ offered them respite during the day when they could bond with their infant and focus on them, even when they were separated from each other.

Mothers felt rewarded knowing that their breast milk was helping their infants to grow and were therefore motivated to continue so that their infant gained weight. This in turn could make breast milk expression a rewarding experience. However, despite believing in the healing properties of their breast milk and its intrinsic value to their infant’s health, expressing breast milk was profoundly disliked by mothers who found it degrading, time-consuming and tiring.

‘It’s very degrading to sit on a breast pump for hours and hours a day [and] have the horrible thing on your breast.’⁸

'Kind of embarrassing and demeaning almost. Ya know, 'cause you feel like a cow hooked up to a machine ... Gotta do it though.'⁷

Expressing breast milk was hugely paradoxical. Mothers who had anticipated carrying their infant to term became a 'mother interrupted'. It was demanded that she quickly adapt to both the foreign environment of the NNU and the associated profound feelings of both separation and connection as the breast pump represented both a link to and a wedge between the mother and her baby.⁹

The emotional impact of expressing milk was particularly difficult if mothers had previously breastfed older children, as the intimacy of breastfeeding was replaced by the stark clinical/mechanical reality of pumping:

'The pump don't cry... it's not demanding' and 'it's easy to get distracted when I don't have her here at home to cry and let me know that she's hungry.'⁹

While mothers developed coping strategies to address practical issues, such as having more than one set of breast pumps to speed up the process of expressing and/or distracting themselves during the pumping process, expressing breast milk demanded mothers' unprecedented resilience. Having adjusted to the NNU environment, mothers then had to respond to the physical, practical and emotional challenges of continuing to provide breast milk beyond their hospital stay, especially if they had returned to work.⁹

Dependence on others for lifts to and from the hospital posed problems for mothers (with their home-expressed breast milk), who had to accommodate partners, family members or friends who offered them lifts to the neonatal unit. Alternatively, mothers who relied on public transport had to organise their breast milk expression around the bus timetable.²

Being separated from their baby reduced the stimulation that mothers needed to encourage their milk supply. Although returning to work provided distraction for some working mothers, it also contributed to their ongoing exhaustion and stress as they had to accommodate 'pumping' in work places that did not provide time nor appropriate facilities.²

These 'lived experiences' highlight the importance of the recommendations derived from earlier high-quality evidence that breastfeeding/breast milk feeding in neonatal units is promoted by close, continuing skin-to-skin contact between a mother and her infant, effective breast milk expression, peer support in hospital and the community, and appropriate staff training.¹⁰

Mothers' motivation to breastfeed/breast milk feed in the neonatal unit



Family perspectives

Mothers were motivated to breastfeed/provide breast milk because of their understanding of the benefits of their own breast milk for their baby, which encouraged them to develop coping strategies. Breastfeeding/breast milk feeding was viewed by mothers as a way of compensating for their

‘interrupted pregnancy’¹¹ and their baby’s vulnerability¹² by offering their unique nourishment to support their infant’s continued growth¹¹. This commitment allowed them to remain ‘connected’ to their baby, as they had been in utero, and so enabled early bonding.¹¹

Delays in starting to express breast milk and concern that their milk supply would not meet the increasing demands of their growing infants constituted barriers to breastfeeding/breast milk feeding that increased a mother’s anxiety and sense of failure, as they wished for their baby’s more rapid weight gain.^{11 12}

Lack of privacy contributed to the stress of less confident mothers who felt ‘exposed’ and vulnerable because of their sense of being compared to others, as expressed breast milk was left on open racks. This gave rise to feelings of hopelessness and failure. Similarly, mothers who lacked confidence in their milk supply became ‘addicted’ to weighing scales, perceiving their infant’s weight gain ‘as a kind of race’ in which they competed with other mothers.³

The support of nursing staff was pivotal as mothers were keen to learn feeding techniques and to understand their baby’s cues and behaviours.¹¹ Consistently positive reinforcement by staff, who confidently provided accurate information and guidance about breastfeeding and strategies to increase a mother’s milk supply, supported mothers’ early feeding efforts. Conversely, a lack of expert or conflicting advice and inconsistent information given by health professionals and/or staff perceptions about mothers’ and fathers’ needs, which were different from those of parents, constituted barriers to breastfeeding/breast milk feeding in the neonatal unit.¹²

Staff perspectives

As described by McInnes et al¹³, the decision to start oral feeding* was based on staff assessment of a baby's readiness to do so. Feeding decisions were influenced by nursing staff's experience, their sense of 'knowing the baby' and competing demands in the NNU. Parents were not involved in decisions about when to start oral feeds, as this nursing/clinical decision was communicated later to them.

The transition to oral feeding was inconsistent as decisions differed according to staff experience and beliefs, the established practices of the NNU, parents' expectations and the physical constraints within the NNU. Such inconsistencies resulted in infants (and their parents) experiencing a range of practices and management styles from different staff members.

The timing and frequency of feeding also varied depending on whether the NNU adopted a largely structured or baby-led approach and, while some staff would 'save' oral feeding for when parents anticipated being in the NNU, this approach was inconsistently adopted. On the contrary, some staff discouraged parents from being involved in their baby's early or first feeds because of parents' inexperience.

During the transition to oral feeding, an infant's daily milk requirements were prescribed according to the NNU protocol, with the total volume divided into six or eight equal amounts, depending on whether the infant was being fed 3- or 4-hourly. At each feed the baby was encouraged to have the prescribed volume and at the end of the feed any remaining milk would be given via a nasogastric tube as a 'top-up'. However, the information used to calculate feed volumes was unclear and thus staff were concerned about the frequency and volume of feeds, as some infants were overfed, sometimes to the point of being sick.

* This could include breast, cup, spoon or bottle feeding.

The continuous increase in prescribed milk volumes was an added pressure for mothers who were trying to express their breast milk in an already difficult situation. Additionally, supplementing breast milk with (increasingly) large quantities of formula was potentially demoralising for mothers, particularly if they had an 'inadequate' breast milk supply:

'That can be discouraging to some mums when they think the baby's only getting a quarter of her milk and three quarters of something else.'

Because measuring breast milk intake was impossible, an infant's intake and need for a 'top-up' was judged according to whether the staff or the mother thought that the baby had had a 'good' breastfeed. This judgement was based on assessing breastfeeding techniques, mother's breast assessment and/or counting how often the infant was being breastfed. However, staff were unable to clearly or consistently account for how they would work out the volume of a 'top-up' if it was deemed necessary.

Weight gain was considered as an important indicator of successful breastfeeding, although test weighing was unacceptable to staff. Despite nurses favouring a more holistic assessment of the infant's overall wellbeing, growth and particularly weight gain were overarching indicators of successful feeding.

Mothers who wished to breastfeed needed to decide how their infant should be fed when they were not in the NNU. This decision was respected and adhered to. Although cup feeding was advised in infant feeding policies, the actual practice varied within and between NNUs. As the majority of staff disliked cup feeding because it was considered to have no benefit, it was unclear as to how mothers were supported to make an informed choice. While staff felt that mothers were given appropriate information about the use of bottles and cups, others suggested that mothers would likely be encouraged to agree that her infant could be bottle-fed in her absence.

Many contextual factors that hindered or helped breastfeeding/breast milk feeding in neonatal units were identified in the evidence. These are presented below.

Parent-related issues



Identified barriers included:

- Physical separation from their infants¹²
- A lack of role models¹²
- Distance from home¹²
- Exclusion of fathers and other family members, which limited their emotional support¹²
- Lack of privacy¹²
- Competing time demands¹² including the need to keep family and friends updated about their baby's progress², work demands and caring for older children⁸
- Being of low socioeconomic status¹²
- The particular circumstances inherent in multiple births¹⁴
- Previous breastfeeding experiences¹⁴
- Social stress¹⁴
- Tiredness⁸

Identified enablers included:

- Parents' decisions/mutual commitment to breastfeeding/providing breast milk for their infant¹²
- Having good social support¹²
- Having hope that their breast milk supply would be easier once home¹²
- The use of social media to keep others updated about their baby's progress that widened the opportunity for ongoing social support²

Baby-related issues

Identified barriers included:

- Complications associated with prematurity¹⁴
- Specific 'trigger events', indicating the start of breastfeeding difficulties, for example circumcision¹⁴

NNU structural/staff-related issues

Identified barriers included:

- NNU structured feeding routines that discouraged parents from being available for responsive feeding^{8 12 13 14}
- Staff values related to their coping with uncertainty that were counterintuitive to the mother–baby process of breastfeeding¹⁵
- Staff emotional disengagement from parents as they focused on closely monitoring the baby¹⁵
- The perceived 'intrusion' of staff as they supervised parents⁸
- Staff insensitivity to parents' time and other stress, particularly when mothers needed to be at the NNU at specified times to feed their baby^{8 13}
- Inconsistent and inaccurate information about infant feeding given by staff^{8 13 17}

- Staff reliance on NNU peer supporters to emotionally care for parents¹⁷

Identified enablers included:

- The availability, accessibility, perceived interest of and the provision of accurate information by paediatricians, lactation consultants, nurses and obstetricians^{12 14}
- Gradual, well-led organisational change and staff development that is sensitive to existing values and ways of practice^{15 17}

Coping strategies in response to breastfeeding/breast milk feeding in the neonatal unit

Family perspectives

Mothers demonstrated resilience in response to their fears and worries about their frail underdeveloped baby. This was coupled with their sense of shock and trauma at the circumstances surrounding their infant's birth. In response mothers developed a repertoire of coping strategies to help them manage the tension between the value they placed on breastfeeding/breast milk feeding and the mental and physical stamina that it demanded. Mothers, despite being rebuffed by their unresponsive baby, 'weighed worth against uncertain work' by remaining committed to breastfeeding, perceiving it as being central to their nurturing maternal role, and/or valuing the health benefits for themselves and its convenience.

Mothers engaged in trial and error guess work as they tried to identify and overcome their infant's feeding problems. They would try to hold out hope, seeking support from peers and professionals to encourage their efforts to sustain breastfeeding/breast milk feeding.¹⁴

Swanson et al¹ describe how mothers strived to develop a sense of self-efficacy that was derived from four experiences:

1. Mastery or skill – especially in response to feeding difficulties or challenges. This sense of mastery was also influenced by mothers' knowledge, attitudes, beliefs, experience and interactions with others that could be supportive or unhelpful.

2. Modelling (copying others). Mothers drew upon staff support and encouragement as they were shown how to tube feed and how to express breast milk. However, as few mothers actually breastfed in the NNU, there were few successful breastfeeding role models for mothers to emulate. Support from partners was also influential, especially when they helped with tube feeding. This could increase a mother's knowledge and self-efficacy as she modelled her partner's behaviour.

3. Emotional and practical support from health professionals. This was an important 'conduit' for developing self-efficacy, improving autonomy and a sense of control in hospital and/or overcoming feelings of ambivalence about breastfeeding. Some staff persuaded women to continue breastfeeding when they were considering stopping. On the other hand, inconsistent advice was confusing and reduced mothers' self-efficacy.

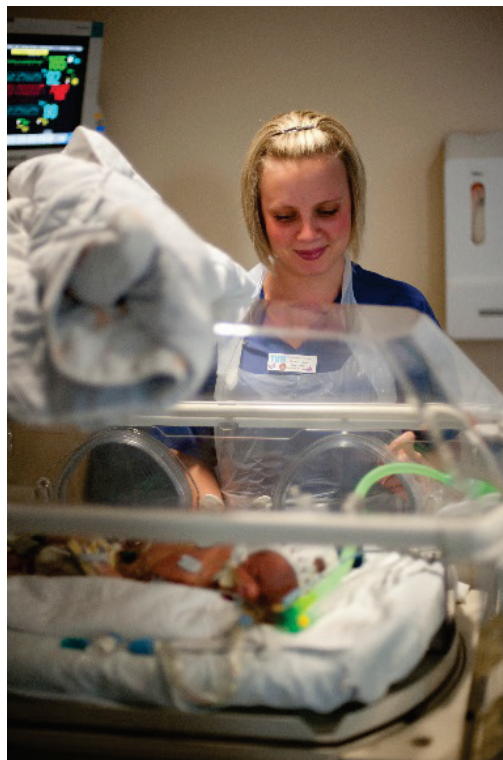
The opportunity for mothers to gain practical support from their wider family was denied as they were excluded from getting to know and care for their new family member while the baby remained in the NNU. This reduced mother's self-efficacy, causing distress and anxiety.

4. Dealing with physiological and emotional states. Mothers described how expressing their breast milk enabled them to re-establish the discontinued relationship with their infant through their breast milk. This was described by the researchers as a special or connecting substance that came from their body:

‘I feel really connected to her and that I’m doing something for her, not just putting something down a tube or changing a nappy, that I’m really providing for her.’

Providing breast milk symbolised mothers’ unique maternal role in the face of disempowerment as it enabled them to redress feelings of failure or guilt following premature birth.

When they were able to provide breast milk for their baby, mothers described positive emotions such as love, pride, contentment and pleasure that contributed to their sense of self-efficacy.



Staff perspectives

As described by Cricco-Lizza¹⁵, nurses were highly motivated to maximise the potential of all NICU babies in the midst of uncertainty. Their work allowed them to ‘do something that is pretty valuable and important’, in keeping with the unit’s goal which was to help NICU babies to ‘go home and be the best that they can be within the family’. Yet as infants with acute care needs were

the 'top priority' for nursing staff, the uncertainty of these infants' outcomes and the unpredictability of their complex care posed significant challenges to nurses, many of whom disliked uncertainty and thus kept a steadfast vigil that provided them with a sense of consistency.

'Relying on the sisterhood of NICU nurses to deal with uncertainty' was part of the staff repertoire of coping skills as nurses helped each other until specific crises were resolved and/or acute problems solved. They would 'spring into action around the bedside' to care for a new admission, fresh post-operative case, or a baby in crisis, with each assuming a specific role in their efforts to stabilise the baby, support the family and maximise the chances for a healthy outcome.

A general spirit of camaraderie and a reciprocal willingness to help out was highly valued and prevailed as less experienced nurses were guided by senior staff during sudden emergencies:

'I feel very close to the girls ... we do so many things in the unit; sometimes it takes two to divide up and conquer it.'

'When it is your turn, you don't want to sink ... we all back each other up here, help each other out.'

Nurses' proactive confrontation of the uncertainty of their care was three-fold as they placed a high value on the following:

1. Taking tight control of their actions. This empowered nurses to proactively manage their daily nursing care so that they could 'make order' of their care of their infant patients, instead of becoming 'overwhelmed' by uncertainty. Nurses talked freely about taking control by being task focused, strictly organised, and meticulous in their goal setting. In addition, they were vigilant, and attended to detail in their everyday work. Nurses valued 'tight control' which they associated with better outcomes for the infants. Their

success in maximising fragile babies' outcomes was related to their personal and deliberate nursing care efforts:

'Day to day, we do so much for them, and if you have a sick kid, you know you pretty much might have just saved her life.'

Because of the 'smaller safety margin' involved when caring for fragile infants compared with sick children or adults, nurses took very 'close control' over all of the details of care:

'Just tighten up things and make the gears work better. I like efficiency. I like productivity. I'm very systematic; that's the way that I work. When I see something that's not efficient it does tug at me. Sometimes little things bug me just a little bit more. It's like if something had just a little bit more attention paid to it; a little bit more detail about it, a little more consideration, then things would have been a little bit smoother.'

Their 'attention to detail and constant monitoring' allowed nurses to pick up on early changes in the health status of the babies. Nursing staff exhibited 'razor-sharp sensitivity' to sudden changes and in many situations their sense of focus that saved lives was appreciated by both families and other NICU staff alike. Nurses were delighted when recovered babies and their parents came back to visit the NICU and when parents specifically asked to see the nurses who had cared for them:

'Knowing that there are good outcomes like that, I think is why we all stay.'

When describing infants with multisystem problems, nurses were acutely aware of the care that was needed to save such young lives:

'We work as a collective force to make babies that didn't live, live ... I'm in a field that we have life and death ... and I'm thinking how to do it better, how to make them better. That is very hard.'

Yet, despite the importance that they placed on controlling care to maximise the health outcomes of babies, nurses also emphasised that uncertainty could not always be overcome:

‘I think organisation is relatively key; it's very important, but you know you can't always be prepared for things that might crop up.’

And thus nurses valued tight control to help decrease their discomfort in the face of uncertainty.

The control that nurses routinely used to cope with uncertainty in the NICU was not easy to integrate with breastfeeding promotion, with some nurses expressing their anxiety about vulnerable babies taking their first breastfeed:

‘Yeah, the first time that they've ever fed, it's a little intimidating just handing the kid to the mom ... Unless it's an easy, stable baby, we don't do that very often ... If you're feeding the baby yourself you have much more control than if you just hand the baby over to the mom if she's nursing.’

And as most nurses acknowledged that managing the transition to breastfeeding in the NICU was not as successful as breast milk feeding, nurses felt this transition needed to be improved.

2. Reliance on technology. This was regarded as a valuable tool that was deeply embedded within all aspects of NICU care and helped to save lives. Technology enabled nurses to take over an infant's vital life functions and to provide continuously recorded data about any slight changes in an infant's condition. Nurses liked the challenge of caring for the sickest babies with the most modern equipment, and they highly valued the use of technology to guide their everyday care:

‘I like the technology ... I'm learning new skills constantly. I'm always working with the latest things that are out there ... I need to keep up my skills.’

Such technical skills improved nurses' ability to respond to the health threats that faced vulnerable infants and, in so doing, nurses could proactively decrease uncertainty and improve the outcomes for the infants in their care. Nurses who had worked in the unit for many years reflected upon how technical demands had replaced traditional nursing care:

‘We had more time for the family ... We are doing a lot more for that patient. There is a lot more testing, a lot more procedures. The care is just more intense.’

Thus, in the course of handover reports, nurses focused on a multitude of technical details about medications, monitor readings, procedures, and physiological parameters that appeared to be of priority:

‘Sometimes the social [information] is usually the last thing that we cover when we're giving a report unless there is something big going on.’

Therefore it could be appreciated that as much as nurses relied on technology to counteract uncertainty, modern technology also made demands on their time and priorities in the NICU.

While enteral feeds, with specialised formulas that were often prescribed by physicians, offered mechanical support to infants who were unable to feed directly by mouth, actual breastfeeding in the NICU was considered to be highly technical and more labour-intensive. Importantly, nurses viewed breast milk as a measured product, as opposed to being vital to building the mother–baby relationship.

Interestingly, breastfeeding support included assessment of the mother's needs, education, placement of privacy screens, positioning of mother and

baby, and emphasis on measurement with pre and post weights with specialised scales. Nurses acknowledged the difficulties with this process:

‘If it's in a bottle it's much easier to know, especially in the beginning, when the moms don't have a lot of milk. It's just kind of we're very number based.’

3. Maximum efficiency in the use of time. Nurses continually grappled with uncertainty and sudden crises associated with fragile infants, valuing time as ‘a precious commodity’. Often they referred to getting routine care ‘done’ as efficiently and quickly as possible so that they could be ready for the unexpected. However, in a ‘hectic’ unit this resulted in stress:

‘It's hard to keep up with everything and make sure you're doing everything right, and a lot of things are very time consuming, when you are trying to take care of the baby, and then you're trying to think of all these other little details.’

Nurses dealt with minute-by-minute changes in care, and their energy and efforts were focused on immediate concerns. Thus, they had a limited appreciation of the wider mother–infant issues beyond that of the specialised acute treatment in the NICU. However, nurses who were mothers and particularly those who had had NICU babies themselves had a greater understanding of the long-term mother–child health concerns.

The nurses’ practice values in the culture of the NICU prioritised time efficiency to control uncertainty. Several referred to the amount of time that it took to counsel women about breastfeeding and to support them. A few nurses believed that both breastfeeding and formula were nutritious options. However, breastfeeding was seen as more time-consuming and difficult when nurses were primarily focused on weight gain and hospital discharge.

Peer support in the neonatal unit

Family perspectives

Rossman et al¹⁶ describe how the sharing of experiences and offer of emotional support by those who had 'walked in their shoes' gave hope and relief and reduced mothers' sense of isolation.

As peers essentially 'mothered the mother', they provided personalised, nurturing and non-judgemental attention to new mothers who were starting to provide breast milk and cope with having an infant in the NNU.

Mothers were inspired by the peer supporters' stories and recounting of their experiences. These gave mothers the strength to continue with expressing their breast milk/breastfeeding.

Peer supporters' 'connection' helped mothers to appraise their situation in favour of persevering with breast milk feeding and developing coping strategies to help them incorporate pumping into their lifestyle. Peer supporters helped mothers to 'normalise' their experiences by providing them with 'accessible' information related to the importance of breast milk and the mechanics of pumping along with offering practical support in relation to accessing equipment.

Mothers felt cared for by the peer supporter, referring to them as family or friends. Some who benefited from such care expressed their wish to become role models for others in similar situations, either by later becoming a peer supporter themselves or by simply relating their story and sharing their experiences with other mothers in the NNU.

Staff perspectives

As described by Rossman et al¹⁷, NICU staff (including nurses, neonatologists, lactation consultants, and dieticians) felt that breastfeeding

peer counsellors (BPCs) enhanced the care of infants and their mothers in the NICU. Staff considered the BPCs as assets who made the work of NNU staff easier as they provided unique support to parents because of their shared experience.

Despite their clinical experiences and/or education and experience in helping mothers of healthy term infants with establishing breastfeeding, NICU nurses lacked the in-depth lactation expertise that was needed by expressing mothers to support infant feeding. They therefore described the breastfeeding peer counsellors on whom they depended as a 'blessing' because they 'lightened the nurses' load'.

As nurses' priority was the health and safety of the infants in their care, often they did not have the time to help mothers with expressing breast milk or breastfeeding and so they valued the BPC as an additional resource and considered their involvement as being in the best interests of the mothers on whom they were focused and to whom they provided empathic emotional support.

The BPCs' lactation expertise was highly valued and nurses took advantage of opportunities to learn from them. This appreciation was shared by other NICU staff members.

Because the BPCs shared the evidence about breast milk and lactation with the infant's family, all staff considered the BPC programme as compatible with the values of family-centred care that was offered in the NICU. Nurses commented on the BPCs' ability to include and support other family members, teaching partners, grandmothers, mothers or sisters how to be of real help to parents. In so doing, the BPCs reached out to and involved other family members in supporting the baby in the NICU. Indeed, the majority of other staff credited the BPCs with the 95% rate of human milk feeding in the NICU.

The BPCs maintained a visible presence among NICU staff and parents alike as they passed through the unit and spent time with mothers. Staff alluded to

the fact that because the BPCs had 'all been through this kind of roller coaster ride' with their own infants, their shared experience helped them 'bond' with new mothers who then asked for help from the BPC rather than from nursing staff. Once again, the high rate of breast milk feeds was attributed to the BPCs' obvious presence:

'As high as 95% of all of our kids ... are receiving breast milk and it's my perception that it's the peer counsellors that should be given a significant degree of credit for that. That's just a remarkable finding in an urban academic centre. Nobody comes close. My understanding is that it's kind of like 50% or 60% in the rest of the world.'

BPCs were considered as being both accessible and consistently responsive. Nurses routinely called upon them for support, either because mothers had asked for them or because the nurse needed help from the BPC to offer emotional support to a family whose baby was in the NICU.

The wider health care staff considered the BPC as integral to the team who were supporting the NICU culture in which mothers' milk was regarded as medicine to reduce the risk of complications that were associated with prematurity.

A multidisciplinary approach to breastfeeding/breast milk feeding support had been embraced in the NICU described by Rossman et al¹⁷, as the BPC collaborated/consulted with the range of NICU specialties about the best use of human milk to optimise infant outcomes:

'I think we work as a team of people who all have different things to do ... The peer counsellors do breastfeeding things and provide that one-of-a-kind perspective that helps families be successful.'

The value of their integrated role was also acknowledged and respected by nursing staff, who preferred to page the BPC rather than risk giving inaccurate information or advice to mothers:

‘I’m not threatened by them (peer counsellors). They’re not taking my role over. They’re just part of the team.’

‘We really have a great respect for each other since we have the same goal of helping the families.’

All health care providers noted that the BPCs provided mothers and families with consistent and accurate messages about the value of human milk, with neonatologists praising the breastfeeding peer counsellors for maintaining mothers’ enthusiasm for long-term breast milk expressing during their NICU stay.

Staff acknowledged the valuable contribution made by the champion of the BPC programme, the nurse director of the clinical research and lactation programme who was described as a visionary and a transformational leader. Seamlessly, the first BPCs had been introduced slowly, ‘like a ripple under the water’, with minimal disruption to prevailing NICU practices and therefore within a short space of time they were perceived as helpful.

In response to the contribution made by the breastfeeding peer supporters, the majority of health care and nursing staff acknowledged that the BPCs were able to truly identify with and understand the emotional turmoil of mothers because of their own experience of having had an infant in the same NICU. Thus, the BPCs conveyed compassion for mothers, helping them to cope:

‘They truly are that bridge where people can say, “I have had the same experience as you.” I think that’s priceless. It just allows parents to get through some really tough times.’

The need to get home



Family perspectives

Getting home was seen as a step toward re-establishing 'life's normality', yet mothers were often ambivalent, experiencing conflict between wanting to take their baby home where they would be 'in control', and lacking confidence or worrying about being able to care for their baby without the support of NNU staff.¹

Mothers needed to feel prepared for going home and such readiness was associated with feelings of having developed a close loving relationship with their infant as their sole care of their baby increased. They felt that they should know their baby better than NNU staff and that they should 'feel like the baby's mother' before going home. Such empowerment necessitated the transfer of responsibility and autonomy from NNU staff to the mother/parents.¹ Yet some mothers described NNU nurses as inappropriately 'owning' their baby:

'She doesn't feel like she belongs to you. You feel like she belongs to them and you're just visiting.' This felt: 'Really awkward as a mother because [it's] your son and you don't know if you can hold him or not.'⁸

In addition, parents perceived staff supervision as interrupting and/or intruding on normal parent–infant bonding:

‘We still weren’t sure whether you were allowed to pick her up ... and the inability to touch them and sit with them and things like that ... You can’t cuddle them.’ It was ‘very stressful to walk out and leave them in the nursery.’⁸



As hospital protocols often stated that babies had to be successfully feeding (independent of tube feeding, able to suck from the bottle or breast and gaining weight), this stipulation presented a particular challenge for parents as breastfeeding and taking their baby home became competing goals.

Moreover, as establishing successful breastfeeding was more difficult among preterm babies this resulted in longer hospital stays. Therefore, when faced with such a dilemma, mothers were pragmatic, deciding to use bottles to feed breast milk or formula to their babies, rather than risk not getting home.¹⁸

The cost-effectiveness of providing breast milk for preterm infants

Breast milk from the biological mother reduces the burden of disease and associated costs of caring for an infant in the neonatal unit.

Recent economic analyses¹⁸ predict that by increasing the current rate of breastfeeding/breast milk feeding at discharge from neonatal units from 35% to 50%, approximately £2.3 million each year could potentially be saved that is currently spent treating necrotising enterocolitis (NEC) in infants in neonatal units. A further increase of breastfeeding to 75% could save up to £6 million per year. If breastfeeding rates at hospital discharge increased to 100%, the cost savings could increase to £10 million per year.

If all babies were breastfed/fed breast milk at discharge from neonatal units, the number of cases of NEC would fall from 798 to 212 per annum, which is the rate that is currently achieved in some neonatal units in Europe and the United States. This analysis does not include the impact of lives lost to NEC, which is considerable.¹⁸

Because the cost of acquiring breast milk is directly related to the mother's expressed milk volume, NNU staff need to prioritise the prevention, diagnosis and management of problems related to expressing breast milk.¹⁹ This concurs with the findings from a UK-based study that indicated that enhanced staff contact may be cost-effective in an NHS context.²⁰

While the current economic environment, with its emphasis on cost containment, provides an impetus for immediate and thorough investigation of strategies to improve the health of VLBW* infants in the NNU, in addition, the health costs to the families of NNU infants cannot be underestimated and thus warrants further investigation.²¹

* Very low birth weight.

A second dimension of cost 'efficiency' is that related to the commitment of NNU staff to encourage breastfeeding/breast milk feeding. Such 'efficiency' depends upon NNU nurses being involved in:

- the development of organisational and human resources to support breastfeeding
- the provision of infant feeding/breastfeeding education
- multidisciplinary representation for breastfeeding on hospital committees and projects
- the limiting of formula marketing practices in the NNU to avoid inconsistent messages about infant feeding
- auditing of breastfeeding and breast milk feeding rates to guide breastfeeding/breast milk promotion efforts.²²

Providing donor human milk in the neonatal unit

The purpose of human milk banking is to provide a human milk supply for preterm infants if a mother's own breast milk is not available and/or in short supply.

Recent high quality evidence emphasises that making donor human milk (DHM) available in neonatal units does not reduce breastfeeding rates at the time of hospital discharge and decreases the use of formula in the first four weeks of life.

Feeding preterm infants with DHM compared to formula is associated with a decreased risk of NEC.²³

DHM may improve feeding tolerance, protect against bronchopulmonary dysplasia, protect against the development of allergies in preterm infants (who are at high risk for allergy) and have a beneficial impact on later cardiovascular risk factors.^{24*}

UNICEF endorses the giving of donor human milk as a viable option when breastfeeding is not possible (see: www.unicef.org.uk/wp-content/uploads/sites/2/2013/09/baby_friendly_evidence_rationale.pdf).

* Although donor human milk has been shown to have no significant long-term benefit to neurodevelopment²⁴ it may be that such improvements can only be identified at a later age and thus this evidence remains lacking.

The benefits of kangaroo mother care in the neonatal unit

Kangaroo mother care (KMC) essentially involves continuous skin-to-skin contact (SSC) between a mother and her newborn. It facilitates frequent and exclusive or nearly exclusive breastfeeding, and early discharge from hospital is an effective and safe alternative to the conventional neonatal care of low birth weight infants, particularly in resource-limited countries.

Compared with conventional neonatal care, KMC at hospital discharge, or 40–41 weeks' postmenstrual age or at latest follow-up, has been found to reduce:

- mortality
- severe infection/sepsis
- nosocomial infection/sepsis
- hypothermia
- severe illness
- lower respiratory tract disease.

There were no benefits to either neurodevelopmental or neurosensory outcomes for babies (at 12 months' corrected age).

KMC resulted in an increase in:

- Body weight, length and head circumference
- Breastfeeding at hospital discharge (and at 1 to 3 months' follow-up)
- Maternal satisfaction with the method of infant care
- Some measures of maternal–infant attachment
- Some measures of the family home environment.^{25*}

* The reader should note that the evidence presented here is from the review that was updated in 2016 by the same authors (that was previously published in 2014).

These findings reflect earlier high quality evidence that indicated that daily kangaroo skin-to-skin contact with mothers (ranging from 10 minutes to 2 hours) for very low birth weight infants (under 1,500g) increased the continuation of any breastfeeding at the time of hospital discharge and up to one month afterwards.²⁶ In addition, the routine use of KMC for all babies under 2000g has been recommended as soon as they are stable.

Up to half a million neonatal deaths due to preterm birth complications could be prevented each year if this intervention were implemented at scale.²⁷



Relevant Scottish and international policy documents



Breast milk/breastfeeding in neonatal units is supported by several policy drivers in Scotland and is the core business of the NHS as highlighted in the following documents:

- The best start: a five-year forward plan for maternity and neonatal care in Scotland (www.gov.scot/Resource/0051/00513175.pdf)
- A route map to the 2020 vision for Health and Social Care (Scottish Government, 2013: www.gov.scot/Resource/0042/00423188.pdf)
- Improving Maternal and Infant Nutrition: A Framework for Action (Scottish Government, 2011: www.gov.scot/resource/doc/337658/0110855.pdf)
- The Health Care Quality Strategy for NHSScotland (Scottish Government, 2010: www.gov.scot/resource/doc/311667/0098354.pdf)

Other key documents include the following:

- Children and Young People's (Scotland) Act 2014: www.legislation.gov.uk/asp/2014/8/contents/enacted

- Guide to the Baby Friendly Initiative standards (UNICEF, December 2012: www.unicef.org.uk/wp-content/uploads/sites/2/2014/02/Baby_Friendly_guidance_2012.pdf)
- Getting it right for every child (GIRFEC), 2008: www.gov.scot/Resource/0049/00498272.pdf
- The United Nations Convention on the Rights of the Child: www.unicef.org.uk/UNICEFs-Work/UN-Convention

Particularly relevant is Article 24 of the UNCRC that refers to health and health services:

‘Children have the right to good quality health care – the best health care possible – to safe drinking water, nutritious food, a clean and safe environment, and information to help them stay healthy. Rich countries should help poorer countries achieve this.’

Other documents that provide the context for this briefing are described in the full evidence paper that underpins this briefing that will soon be available on the NHS Health Scotland website.

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Appendix 1: Guide to the Baby Friendly Initiative standards (UNICEF, December 2012).

These standards incorporate the previous standards as specified in the Ten Steps to Successful Breastfeeding and Seven Point Plan for Sustaining Breastfeeding in the Community, but update and expand them to fully reflect the evidence base on delivering the best outcomes for mothers and babies in the UK: www.unicef.org.uk/wp-content/uploads/sites/2/2014/02/Baby_Friendly_guidance_2012.pdf

In relation to breastfeeding/breast milk feeding in neonatal units, the following standards (reproduced verbatim) will need to be met in order to be successful at Stage 3 [UNICEF, BFI] assessment.

1. Support parents to have a close and loving relationship with their baby

You will know that the facility has met this standard when:

- Parents have a discussion with an appropriate member of staff as soon as possible about the importance of touch, comfort and communication for their baby's health and development.
- Parents are actively encouraged to provide comfort and emotional support for their baby including prolonged skin contact, comforting touch and responsiveness to their baby's behavioural cues.

We will assess this by:

- Verification of the current systems by which:
 - Parents have a discussion about touch, comfort and responding to behavioural cues as soon as possible.
- Reviewing:

- Information provided for parents on the importance of touch, comfort and responding to behavioural cues and skin-to-skin contact.
- Internal audit results that relate to this standard.
- Listening to mothers and asking them about their experiences of:
 - Encouragement to touch, comfort and respond to their baby.
 - Skin-to-skin contact and kangaroo care.

Guidance

The aim of this standard is to ensure that a positive parent/baby relationship is recognised as being crucial to the wellbeing and development of babies. In order for this to happen, parents should be encouraged to be with their baby for as long as, and as often as, they wish. They should be supported to comfort and respond to their baby's needs by communicating with and touching their baby as appropriate to their condition.

It is expected that skin-to-skin contact and/or kangaroo care will be encouraged as part of the developmental care package, and that local guidelines to ensure best practice regarding frequency and duration of skin contact will be available.

It is suggested that parents are provided with a personal log or diary to record their daily observations and interactions with their baby including touch, comfort holding and skin-to-skin contact.

- [Read UNICEF UK's advice on their skin-to-skin contact page](#)
- [Find out about Best Beginnings' Small Wonders DVD](#)
- [Order Bliss' free Skin-to-Skin booklet](#)
- [Order Bliss' free booklet on watching and understanding your premature baby](#)

If a mother chooses to bottle feed, skin contact/kangaroo care is important for them to develop close and loving bonds with the baby. When their baby is developmentally ready to bottle feed they should be taught to hold their baby close and offer feeds in a responsive way that follows the baby's lead.

Premature babies can sometimes find bottle feeding stressful, as they have little control over the milk flow, and can struggle to protect their airway if the flow is too rapid. Parents should be supported to recognise the cues for a need for pacing, such as by removing the teat at frequent intervals to allow the baby to rest during feeds.

See UNICEF's webpage on bottle feeding for further information.

2. Enable babies to receive breast milk and to breastfeed when possible

You will know that the facility has met this standard when:

- A mother's own breastmilk is always the first choice of feed for her baby.
- Mothers have a discussion regarding the importance of their breastmilk for their preterm or ill babies as soon as is appropriate.
- Mothers are enabled to express breastmilk for their baby, including support to:
 - express as early as possible after birth (ideally within six hours).
 - learn how to express effectively, including hand expression, use of breast pump equipment and storing milk safely.
 - express frequently, especially in the first two to three weeks following delivery, in order to optimise long-term milk supply.
 - stay close to their baby when expressing milk.
 - access effective breast pump equipment.
 - access further help with expressing if milk supplies are inadequate, or if less than 750 ml in 24 hours by day 10.

- use their milk for mouth care when their baby is not tolerating oral feeds, and later to tempt their baby to feed.
- In the unit there is evidence that:
 - a suitable environment conducive to effective expression is created.
 - a formal review of expressing is undertaken a minimum of four times in the first two weeks to support optimum expressing and milk supply.
 - appropriate interventions are implemented to overcome breastfeeding/expressing difficulties where necessary.
- Mothers receive care that supports the transition to breastfeeding, including:
 - being able to be close to their baby as often as possible so that they can respond to feeding cues.
 - use of skin-to-skin contact to encourage instinctive feeding behaviour.
 - information about positioning for feeding and how to recognise effective feeding.
 - additional support to help with breastfeeding/expressing challenges when needed.
- Mothers are prepared to feed and care for their baby after discharge from hospital, including:
 - having the opportunity to stay overnight or for extended periods to support development of the mother's confidence and modified responsive feeding
 - information about how to access support in the community.
- There is no advertising for breast milk substitutes, bottles, teats or dummies anywhere in the service or by any of the staff.

We will assess this by:

- Verification of the current systems by which:
 - mothers are informed about the importance of their breast milk.

- mothers are encouraged to express, including availability of equipment, how milk is stored and information about expressing (including frequency of expressing, night time expressing and enabling mothers to be close to their baby when expressing their breast milk).
- a formal expressing assessment is carried out a minimum of four times in the first two weeks.
- mothers receive care that supports the transition to breastfeeding.
- additional support with breastfeeding is provided when needed.
- mothers are prepared for discharge home with their baby, including facilities available for staying overnight/for extended periods.
- mothers are informed about local support available after discharge.
- Reviewing:
 - Information provided for parents.
 - Internal audit results about parents' experiences of care.
 - Internal processes for loaning/hiring expressing equipment.
 - Breast milk storage standards.
 - Breastfeeding statistics including use of mothers' own breast milk, use of all breast milk, use of breast milk on discharge and rates of exclusive/any breastfeeding on discharge.
 - The hospital environment to ensure that there is no advertising of breast milk substitutes, bottles, teats or dummies.
- Listening to mothers with babies who have been discharged from the unit to find out about their experiences of:
 - expressing breast milk.
 - establishing breastfeeding.
 - preparing to go home with their baby.

Guidance

The aim of this standard is to ensure that mothers of sick and preterm babies are supported to initiate and maintain lactation so that they can provide breast

milk for their baby and make a successful transition to breastfeeding. It is important that, where possible, a mother's own breast milk is the first choice of feed for her baby. Where a mother's breast milk is not available, appropriate use of donor milk should be considered as the second choice.

For sick and preterm babies the importance of breast milk cannot be overestimated. Human milk supports growth, provides protection from infection and is linked to reductions in mortality and morbidity. In particular, evidence suggests that the use of breast milk decreases the incidence and severity of the life threatening disease necrotising enterocolitis. It is therefore important that mothers, partners and their family understand this to allow informed decision making in the best interests of the baby.

Expressing breast milk

Mothers should be shown how to express their breast milk as soon as possible and certainly within six hours of birth. Thereafter they should be supported to express a minimum of eight times in 24 hours, including once during the night. Early and frequent expressing is vital if the immature glandular tissue is to be effectively programmed so that the mother has the potential to produce enough milk for her baby. Hand expressing is effective for obtaining colostrum, but mothers should be taught how to use an electric breast pump as the volume of milk increases to 5–7 ml per expression. Hand expressing can still be used in conjunction with pumping if the mother wishes. Good liaison between staff in the maternity and neonatal unit is important to ensure that mothers are supported to express early, frequently and effectively.

It is recommended that an individual expressing log is provided to all mothers to help them record frequency of expression and increases in volumes of milk expressed. In recognition of the challenges faced by mothers to sustain frequent expressions, it is expected that staff will review expressing progress at least four times during the first two weeks to ensure an effective technique and to monitor milk volumes. See UNICEF's document for the assessment of

breastmilk expression (www.unicef.org.uk/babyfriendly/baby-friendly-resources/guidance-for-health-professionals/tools-and-forms-for-health-professionals/checklist-for-assessment-of-breastmilk-expression) for more information.

With effective expression a mother can aim to achieve an approximate daily volume of 750 ml of breast milk at two weeks. Mothers do not need to adhere to a strict regime when expressing, but should be advised not to leave gaps longer than four hours in the day and six hours at night between expressions. Skin-to-skin contact should be encouraged to help boost milk-producing hormones and to encourage pre-feeding behaviour, such as licking and nuzzling at the breast.

Transition to breastfeeding

Mothers should be supported to make the transition to breastfeeding when the baby shows signs of developmental readiness. However, staff can encourage mothers to practice the principles of positioning at any time, so that they develop confidence and are alert to early feeding cues and signs of readiness. Where possible, avoidance of teats and dummies while the baby is learning to breastfeed may assist with a smoother transition. See Best Beginnings' information on their Small Wonders DVD and the Yorkshire and Humber Health Innovation and Education Cluster.

It is expected that all breastfeeding mothers will have access to specialist support with expression and breastfeeding at all times during their stay in the unit. They should also be provided with details of voluntary support for breastfeeding which they can choose to access at any time during their baby's stay.

Preparation for discharge should begin at admission, and parents should be supported to provide increasing amounts of care for their baby at the earliest opportunity. Parents should also have the opportunity to stay overnight and

care for their baby independently prior to discharge home. At this time it is important that parents are encouraged to respond to their baby's needs for feeding and comfort and, as part of the preparation for discharge, discussions should be had on the importance of moving towards a less regimented feeding plan.

It is expected that the unit will collect breastfeeding rates on discharge in an effort to demonstrate ongoing improvements in care and support provided. (See the Department of Health's Toolkit for High Quality Neonatal Services at webarchive.nationalarchives.gov.uk/20130103004816/http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/@ps/@sta/@perf/documents/digitalasset/dh_108435.pdf)

The prospect of caring for their baby at home after a long period in a neonatal unit can be a major cause of anxiety in parents. It is therefore important to provide them with details of where they can access support within the community. If an outreach service is not provided, staff in the unit should liaise with other health professionals such as the health visiting team to ensure that parents are supported after discharge.

Information on specific support groups (such as Bliss) should also be provided.

3. Value parents as partners in care

You will know that the facility has met this standard when:

- All parents have unrestricted access to their baby unless individual restrictions can be justified in the baby's best interest.
- The unit makes being with their baby as comfortable as possible for parents (for example, by creating a welcoming atmosphere, putting comfortable chairs by the side of each cot, giving privacy when needed or providing facilities for parents to stay overnight).
- Staff enable parents to be fully involved in their baby's care.

- Every effort is made to ensure effective communication between the family and the health care team (including listening to parents' feelings, wishes and observations).

We will assess this by:

- Verification of the current systems by which:
 - parents have unrestricted access to their baby.
 - staff enable parents to be involved in the care of their baby.
 - effective communication is supported throughout the unit.
 - parents' emotional needs are addressed.
- Reviewing:
 - The facilities on the unit for making parents comfortable.
 - Internal audit results about parents' experiences of care.
- Listening to mothers to find out about their experiences of care, including:
 - access to their baby.
 - how they were involved in their baby's care.
 - what methods staff used to communicate with them.
 - the facilities on the unit to make their stay comfortable.
 - whether mothers who formula feed received information about how to clean/sterilise equipment, make up a bottle of formula milk and feed this to their baby using a safe technique.

Guidance

The aim of this standard is to enable staff working within neonatal units to create an environment whereby parents are valued for their contribution to the wellbeing of their baby.

Hospital routines should not be deemed as more important than parents for babies' wellbeing; parents should only ever be denied access to their baby on occasions where it is judged to be in the baby's best interest.

Staff training and unit guidelines should outline ways in which parents are made to feel welcome, needed and safe when they are on the unit.

Good communication is essential if parents are to be fully engaged with their baby's progress, and staff should ensure that they provide clear, regular updates for parents. Families may be in the neonatal unit for weeks or even months; the relationship they build with the staff who care for their baby is therefore important to them, and has been shown to help alleviate stress. Staff caring for a baby should keep in mind that the baby is part of a wider family, and that supporting family-centred care will result in better outcomes for all. Ensuring that staff take time to talk to parents about the impact on their lives of having a baby in the unit is important.

See the Department of Health's Toolkit for High Quality Neonatal Services:
webarchive.nationalarchives.gov.uk/20130103004816/http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/@ps/@sta/@perf/documents/digitalasset/dh_108435.pdf

See the Bliss Baby Charter Standards:
www.noronet.org.uk/resources/Documents/BLISS%20Baby%20Charter%20Standards.pdf

The provision of comfortable chairs close to their baby will encourage parents to spend more time with the baby, and enable them to rest during their time in the unit. The unit should provide simple facilities where parents can go to meet with other parents, or take time out to have something to eat or drink – this has been recognised as important for parents.

Supporting parents in care-giving activities from the very start is recognised as best practice, and has a positive impact on confidence and family

relationships. Parents will have the baby's best interest at heart and will often be the most vigilant when it comes to picking up on subtle changes in their baby's condition. It is therefore essential that they are respected, listened to and valued as partners in working to achieve the very best outcomes possible for the baby.

For the reader's convenience, please also see the following:

- UNICEF Baby Friendly conference: Taking neonatal care to the next level (London, May 2015):
www.unicef.org.uk/babyfriendly/baby-friendly-neonatal-special-qa-dr-nils-bergman
- The UNICEF Neonatal Standards:
www.unicef.org.uk/BabyFriendly/Resources/Guidance-for-Health-Professionals/Writing-policies-and-guidelines/guide-to-the-baby-friendly-initiative-standards
- In addition, the evidence that underpins the neonatal standards can be found in Chapter 5 of 'The evidence and rationale for the UNICEF UK Baby Friendly Initiative standards': www.unicef.org.uk/wp-content/uploads/sites/2/2013/09/baby_friendly_evidence_rationale.pdf

Appendix 2: Support for family-centred care



As defined in the Poppy Steering Group Report (2009)⁵, the family-centred model emphasises that the relationship between parents and health care professionals should be one of equals, with staff respecting parents' unique role as the baby's family and aiming to enable them to be fully involved with their baby's care.

Some clinical decisions will be made when there is no time for explanations or discussion, or when the parents are not present, but every effort should be made to keep parents informed and to consult them.

It should be remembered that the baby is born into a family and the neonatal unit is working for the baby's health and wellbeing and for the wellbeing of the whole family. Practical support and involving parents in their baby's care assists confidence-building in the early days and can give some measure of control when a parent may be feeling powerless.

As babies grow and milk feeding is established, opportunities for parents to care for their baby increase and begin to prepare for going home.

Practical support is particularly important during times of transition and when parents are expected to take increasing responsibility in caring for their still small and vulnerable baby.

Parents' closeness to and involvement with their baby can be supported through encouraging:

- positive reassuring touch
- comfort or containment holding
- skin-to-skin or 'kangaroo' care
- nappy changing and providing other care
- expressing breast milk
- giving milk feeds.

Key elements of family-centred care

Key elements of family-centred care in response to premature babies and their families are listed as follows:

- Recognising and valuing the roles of parents, siblings and other family members.
- Developing awareness of parents' needs, the emotional impact of preterm birth and individual differences in parental responses and needs.
- Recognising critical steps for parents on the care pathway.
- Maximising opportunities for communication with parents and local community groups.
- Providing practical help with infant care and parent interaction, including behavioural cues.
- Increasing confidence in role as a parent and supporting the parent–infant relationship.
- Providing psychosocial support.
- Valuing and supporting mothers' ability to nurture their baby through expressing breast milk and breastfeeding.

- Providing appropriate family-friendly facilities.

Family-friendly facilities in neonatal care

Appropriate facilities for parents and families in or near the neonatal unit will enable parents to visit, stay during the day and to feel welcome in doing so.

It is important for mothers to have good facilities to enable them to express breast milk frequently and feed their baby. These should be available both in a comfortable, private room but also by their baby's incubator or cot, as they may want to stay close to their babies as close proximity enhances the let-down reflex.

Availability of milk from a human milk bank is important, especially for families with twins or more babies, for mothers who are too ill to express or babies undergoing surgery and likely to need expressed milk.

Responsibility for family-centred neonatal care

Those responsible for enabling family-centred neonatal care include:

- All health care professionals working in neonatal care and those working with babies and their families after discharge home.
- Individual practitioners, with specific roles and duties such as breastfeeding support, home visiting, and bereavement care.
- The organisation (PCT, board, hospital trust and individual unit)* responsible for providing care, with parent and family-oriented policies, training and education.
- Neonatal networks and other organisations or groups commissioning and planning the provision and organisation of care.

* In Scotland the organisation would refer to Health Boards.

In addition to this definition, a link to the presentation at the UNICEF Neonatal Conference held in London on 19 May 2015 is provided here:

www.unicef.org.uk/babyfriendly/wp-content/uploads/sites/2/2014/10/Shoo_Lee_FIC_conf_2015.pdf

