Evidence into Practice: Breastfeeding and kangaroo skin-to-skin care for babies & families in neonatal units

Scottish Improvement Science Collaborating Centre
SISCC would like to acknowledge the contribution from colleagues across NHSScotland and third sector organisations involved in neonatal care and thank them for their ongoing engagement with the project.

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Executive Summary

Outcomes for preterm and sick newborns have progressed significantly over the last 20 years with innovative medical advancements in care delivered in the neonatal units across Scotland. As well as technological developments, there is a growing evidence base recognising the benefits of breastfeeding and breastmilk in reducing morbidity and mortality. In addition, there is increasing evidence that kangaroo skin-to-skin care plays an integral part in ensuring positive clinical and psycho-social outcomes for both babies and their families in this highly specialised clinical environment.

The Scottish Government report, Best Start – A Five Year Forward Plan for Maternity and Neonatal care in Scotland (2017), highlights the importance of “encouraging kangaroo skin-to-skin care and early support for breastfeeding” as key interventions to support family-centred care within neonatal units.

Guided by the HIEC work, the Scottish Improvement Science Collaborating Centre (SISCC) has been working with neonatal units across NHS boards, Scottish Government, UNICEF and NHS Health Scotland to implement and evaluate the EiP approach within a Scottish context.

This work aims to:
- co-produce unit implementation plans to improve breastfeeding and kangaroo skin-to-skin care using an evidence-based approach
- evaluate the EiP approach to enable large-scale sustainable change

This report outlines the EiP project to date (March 2018) and summarises the findings from online and workshop consultations undertaken with neonatal staff, third sector organisations and academic institutes across Scotland. The results include a summary of the barriers and strategies in relation to embedding the evidence-based statements, and current practice examples provided by those involved in the consultations.

It is anticipated that this report will provide a foundation for change, support policy drivers and enable neonatal units to prioritise and develop action plans, which will strengthen evidence-based practices in support of breastfeeding and kangaroo skin-to-skin care.
The Evidence Base

Benefits of breastfeeding and kangaroo skin-to-skin care

According to the World Health Organisation (WHO), preterm and low birth weight babies are at increased risk of mortality and long-term morbidities. In addition to medical and technological advances in neonatal units, there is compelling evidence that access to breastmilk and the reliable implementation of early support for breastfeeding and kangaroo skin-to-skin care can have a significant positive impact on reducing these risks for the most vulnerable babies.

As well as providing the best nutritional support, there is evidence that breastmilk reduces hospitalisation for diarrhoea and invasive infection (i.e. respiratory tract infection), supports neurodevelopment, and provides protective benefits against other serious conditions, (i.e. necrotising enterocolitis (NEC)). When a mother’s own milk is unavailable, WHO endorses the practice of using human donor milk. In Scotland, the routine use of donor milk, is promoted and supported through the Scotland-wide Donor Milk Bank Service.

Skin-to-skin care, also known as kangaroo care (where the baby is held skin-to-skin against the parents or family/friend’s chest), has been demonstrated to have a positive impact on morbidity and mortality rates. It also provides protection from infection, hypothermia, hypoglycaemia and is associated with reduced hospital readmission rates, especially for very low birth weight babies. Kangaroo skin-to-skin care has also been shown to support the establishment of early breastfeeding and increase mother and baby attachment.

A recent study examining the long-term benefits of kangaroo skin-to-skin care suggested that the intervention not only promoted more parental involvement in neonatal care, but also led to a more protective and nurturing home environment, providing a long-lasting social and protective effect twenty years after the intervention.
**Context**

### Scottish Government Policy

There are a number of Scottish Government policies aimed at supporting breastfeeding and kangaroo skin-to-skin care, and promoting equitable care across Scotland.

The Best Start – A Five Year Forward Plan for Maternity and Neonatal Care in Scotland (2017)\(^1\), builds on the ambitions within The Healthcare Quality Strategy \(^4\), to deliver equitable and consistent care across NHSScotland. This plan utilises the evidence base, best practice, and feedback from families and staff, to refresh the model of care and support the planning and safe delivery of high-quality maternity and neonatal services.

The SISCC EiP project will complement current implementation work and directly contribute to recommendation #43:

> Parents should be involved in decision-making throughout and involved in practical aspects of care as much as possible. This includes the provision of facilities for overnight accommodation, encouraging kangaroo skin-to-skin care and early support for breastfeeding #43.

The Improving Maternal and Infant Nutrition: A Framework for Action (2011)\(^{15}\), is another key policy document. Integral to this framework is the achievement of the UNICEF Baby Friendly (BFI) neonatal standards\(^{16}\), which promotes breastfeeding and kangaroo skin-to-skin care.

The neonatal workstream of the Maternity and Children Quality Improvement Collaborative (MCQIC)\(^{17}\) supports NHS boards to improve the quality and safety of neonatal healthcare through increasing quality improvement capacity and capability.

### Organisation of neonatal services

In 2016, 54,488 births were registered in Scotland\(^{18}\). Approximately 10% of babies born need neonatal care, and around a quarter of those require the highest level of intensive care\(^{1}\).

Neonatal care in Scotland is organised through three regional Neonatal Managed Clinical Networks across NHS boards (see Appendix 1). The intensity of care provided within units varies and is categorised by population and level of care provided:

- **Level One** – special care units (local population/special care and some high dependency care)
- **Level Two** – local neonatal units (local population/special care, high dependency and restricted volume of intensive care)
- **Level Three** – neonatal intensive care units (local population/full range of medical and sometimes surgical neonatal care)

Due to the distribution of Scotland’s population, not all boards deliver neonatal care at all three levels. Whilst the aim is to provide care as close to home as possible\(^{1}\), there is a recognition that transfers to another unit or health board for specialist or a higher level of care may be required. In 2017, the Scottish Neonatal Transport Service, undertook 1,377 transfers\(^{19}\).

Many babies are admitted to more than one unit and have a lengthy admission. In addition to the stress of having a pre-term or sick baby, families often have to overcome geographical separation and/or other family demands.

A consistent approach across all units in Scotland would help to mitigate the challenges that families face in providing kangaroo skin-to-skin care and establishing breastfeeding.
Evidence into Practice (EiP) approach

It is increasingly recognised that the translation of research into practice is often “ineffective and inefficient” and there is a need to examine different methods of supporting implementation. Despite the evidence demonstrating the short and long-term benefits of breastfeeding and kangaroo skin-to-skin care, the initial scoping for this project suggests practices vary across and within units, thus reducing the benefit for babies and families.

The Yorkshire and Humber Health Innovation and Education Cluster (HIEC) successfully used the EiP approach to increase the number of babies receiving kangaroo skin-to-skin care and being breastfed on discharge from neonatal units.

The EiP approach is a synthesis of research and quality improvement. It presents a robust research generated evidence base to practitioners around an area of practice and encourages reflection of the impact and feasibility of implementing evidence-based practices within their own context. The approach also facilitates an opportunity to explore barriers and enablers to practice change, and to develop local action plans.

There are four phases to the EiP approach:

• Phase One – Evidence Synthesis
• Phase Two – Online Consultation
• Phase Three – Facilitated Consultation
• Phase Four – Analysis & Dissemination

The methods and findings from the first three phases are outlined below and the purpose of this report is to facilitate Phase Four, disseminating the analysis of the first three phases.

Parental Engagement

A focus group of mothers, with experience of neonatal care, was organised early in the project to establish how best to meaningfully engage parents.

Through feedback from this focus group and further discussion with a multi-disciplinary project advisory group (convened to oversee the project), it was agreed that utilising third sector organisations would be the most effective channel to further parent engagement. A range of third sector organisations have been engaged throughout the EiP approach.

Evaluation

SISCC’s research aim is to explore whether the EiP approach works within a Scottish context to facilitate practice change at scale. SISCC is working with units across Scotland to understand different approaches to embedding evidence into practice, and examine local influences, in order to understand what works, for who, how and in what context.
PHASE 1: Evidence Synthesis

An initial literature review, relating to practices of kangaroo skin-to-skin care and breastfeeding in neonatal units, was undertaken by NHS Health Scotland to develop a summary document of the best evidence to support breastfeeding in neonatal units. Building on this initial search, SISCC worked in partnership with NHS Health Scotland to identify and synthesise systematic review level evidence. Full details of the search strategy are available on request.

A team of three reviewers (two researchers and a neonatal practitioner) independently quality assessed 17 papers using GRADE (Grading of Recommendations, Assessment, Development and Evaluations). Table 1 provides descriptors for each of these categories.

From this assessment, 20 evidence-based practice statements were extracted and categorised by the quality of the review evidence into:

- effective actions supported by high quality evidence (five statements)
- promising actions supported by moderate quality evidence (six statements)
- promising actions where there is a weak evidence base (six statements)
- actions that are likely to be ineffective (three statements).

Table 1 - Quality assessment criteria and descriptors for practice based assessments

<table>
<thead>
<tr>
<th>Outcomes: What effect does the action have?</th>
<th>Evidence: What is the strength of the evidence behind the statement?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive</td>
<td>Does the action in the statement result in a positive outcome?</td>
</tr>
<tr>
<td>Ineffective</td>
<td>Does the action in the statement have no effect?</td>
</tr>
<tr>
<td>Negative</td>
<td>Does the action in the statement have a negative effect or outcome?</td>
</tr>
</tbody>
</table>

The above were determined according to GRADE.

The evidence-based practice statements were incorporated into an online survey (developed for Phase Two).
PHASE 2: Online Consultation

The online survey consultation was designed to capture views and feedback from a wide range of practitioners involved in neonatal care across Scotland. The content and design of the survey was piloted through the cross-sector, multi-disciplinary project advisory group.

The survey was electronically distributed via key contacts in all neonatal units and through networks of clinicians, professional groups, managers and academics. These contacts were asked to circulate the link through their relevant networks. This cascade distribution approach was used to maximise responses, however it prevented the calculation of a response rate.

In addition to emails and phone calls, unit visits were carried out to raise awareness of the project and encourage participation in the online survey.

Respondents were asked to rate each statement in terms of impact and feasibility within their own practice area, as described below.

Where an action was likely to be ineffective and the evidence was limited, or of weaker quality, respondents were asked about the impact of abandoning this practice (data available on request).

Open-ended questions on current practice were also included. Respondents were asked to consider barriers and enablers to changing practice and provide practice examples that supported the evidence-based statements.

There were also questions on promotion of breastfeeding and attachment with particular reference to vulnerable groups.


**Impact:** how likely is this action to have a positive impact in the settings with which you are familiar?

- Most impact if implemented: 5 >> 4 >> 3 >> 2 >> 1
- Least impact

**Feasibility:** how practical would it be to implement this action?

- Most feasible to implement: 5 >> 4 >> 3 >> 2 >> 1
- Least feasible
Analysis - online consultation

The survey data were transferred into SPSS (Version 22) and frequencies were produced for each statement in terms of impact and feasibility.

The open ended questions were thematically analysed independently by two project team members. The results were then discussed with a third project team member to reach consensus on the themes. Examples of current practice in relation to breastfeeding and kangaroo skin-to-skin care were also extracted. These data are described along with the phase three workshop consultation data on pages 17-18.

Findings - online consultation

A total of 75 participants responded to the online survey. Respondents were from a variety of settings and professional backgrounds including neonatal nurses, neonatologists and infant feeding advisors (see Appendix 2 for full respondent details).

Tables 2-4 show the proportion of respondents rating each statement as high impact (4 or 5 on a 5 point scale), high feasibility (4 or 5 on a 5 point scale) and indicating whether the action was currently practiced.

The majority of respondents rated the evidence-based practice statements as high impact (regardless of the quality of the evidence) and highly feasible (although there was more variation in these ratings).

Despite a number of statements with a strong evidence base being rated highly in terms of both impact and feasibility, these practices were not universally being implemented in practice.
## Table 2 - Practice statements derived from high quality evidence and likely to be effective

<table>
<thead>
<tr>
<th>Actions likely to be effective</th>
<th>High impact</th>
<th>High feasibility</th>
<th>Current practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Daily kangaroo skin-to-skin contact with mothers (ranging from 10 mins. up to 2 hours) for clinically stable very low birthweight infants (under 1,500g) increases the duration of any breastfeeding at discharge and up to one month after.</td>
<td>95</td>
<td>70</td>
<td>64</td>
</tr>
<tr>
<td>2. Any intermittent kangaroo skin-to-skin contact with mothers (of variable duration and frequency) is associated with an increase in any breastfeeding from discharge from NICU until 1-2 months follow-up in stabilised infants born under 2,500g.</td>
<td>94</td>
<td>89</td>
<td>85</td>
</tr>
<tr>
<td>3. Any duration of daily kangaroo skin-to-skin contact with mothers that promotes mother-infant interaction and touch results in mothers showing better adaptation to infant cues, better perception of their infant, less anxiety, a greater sense of competence with their infant and more sensitivity towards the infant.</td>
<td>98</td>
<td>92</td>
<td>75</td>
</tr>
<tr>
<td>4. Intermittent kangaroo skin-to-skin contact with mothers is associated with an increase in mother-infant parent-baby attachment at 3 months follow-up.</td>
<td>95</td>
<td>90</td>
<td>76</td>
</tr>
<tr>
<td>5. “Baby Friendly” accreditation of the associated maternity hospital results in improvements in several breastfeeding-related outcomes for infants in neonatal units.</td>
<td>87</td>
<td>88</td>
<td>72</td>
</tr>
</tbody>
</table>

The majority (≥87%) of respondents scored the statements derived from high quality evidence as being high impact and ≥70% scored them as being highly feasible. The first four statements referred to kangaroo skin-to-skin care but varied in terms of factors related to the babies' birth weight (for example, very low birth weight, under 1500g, in statement 1 and low birth weight, under 2500g, in statement 2), the frequency of contact (intermittent or daily) and varying durations from 10 minutes to 2 hours to any duration. These figures indicate that kangaroo skin-to-skin contact is perceived as being both high impact and highly feasible by the majority of respondents but scores are moderated by the birth weight of the baby and the frequency and duration of contact.
Table 3 - Practice statements derived from moderate quality evidence and likely to be promising

<table>
<thead>
<tr>
<th>Promising actions</th>
<th>High impact</th>
<th>High feasibility</th>
<th>Current practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Making donor human milk available in neonatal units has no negative impact on breastfeeding rates at discharge.</td>
<td>79</td>
<td>81</td>
<td>78</td>
</tr>
<tr>
<td>2. Making donor human milk available in neonatal units decreases formula use during the first four weeks of life.</td>
<td>92</td>
<td>80</td>
<td>71</td>
</tr>
<tr>
<td>3. Breastfeeding support increases breastfeeding rates and duration when parents are given a combination of the following messages: accurate information about the contribution of breast milk to the infants growth and well-being; opportunities for physical contact with the infant; accurate information regarding breast milk supply and breastfeeding techniques; and information about general infant behaviour.</td>
<td>99</td>
<td>93</td>
<td>82</td>
</tr>
<tr>
<td>4. An individualised discharge plan for breastfeeding mothers with follow-up telephone calls maintains mothers confidence in breastfeeding and provides reassurance.</td>
<td>93</td>
<td>56</td>
<td>18</td>
</tr>
<tr>
<td>5. Positive, consistent and continuous feedback and reinforcement stimulates mothers motivation, and educational programmes provided in the context of ongoing personal contact with a health professional are effective in promoting the initiation and prevalence of breastfeeding.</td>
<td>95</td>
<td>80</td>
<td>49</td>
</tr>
<tr>
<td>6. Staff training and education on breastfeeding delivered to a multi-professional workforce improves staff knowledge and generates increased use of expressed breast milk, and initiation and duration of breastfeeding in neonatal units</td>
<td>99</td>
<td>96</td>
<td>75</td>
</tr>
</tbody>
</table>

There was variability in the scores for both impact and feasibility for the statements derived from moderate quality evidence. Those actions which were rated as high impact and highly feasible were: providing breastfeeding support combined with specific messages (statement 3), and providing staff training and education (statement 6).
Table 4 - Practice statements derived from weaker quality evidence, which have shown some promise

<table>
<thead>
<tr>
<th>Potentially promising actions</th>
<th>High impact</th>
<th>High feasibility</th>
<th>Current practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Techniques (relaxation, warmth, massage, early initiation of pumping and increased frequency of pumping) significantly increase the quantity of milk obtained.</td>
<td>97</td>
<td>85</td>
<td>79</td>
</tr>
<tr>
<td>2. Improving the neonatal unit environment (privacy, increased contact with infants, less emphasis on feeding routines) and staff support for parents (information, education and positive, consistent reinforcement and feedback) may enhance milk expression and supply during hospitalisation in the neonatal unit.</td>
<td>93</td>
<td>85</td>
<td>53</td>
</tr>
<tr>
<td>3. Parents receiving breastfeeding support at the neonatal unit in the form of counselling, information (handouts and videos), practical help and group breastfeeding clinics are more likely to continue breastfeeding up to a month after discharge.</td>
<td>92</td>
<td>76</td>
<td>46</td>
</tr>
<tr>
<td>4. Chat or social talk between nurses and parents has a positive influence on mothers confidence, their sense of control and their feeling of connection (parent-baby attachment) with their baby.</td>
<td>90</td>
<td>96</td>
<td>81</td>
</tr>
<tr>
<td>5. Giving parents a photograph of their preterm infant in preparation for seeing the infant for the first time has a positive effect on improving parent-baby attachment with their infant.</td>
<td>91</td>
<td>88</td>
<td>70</td>
</tr>
<tr>
<td>6. Interventions are likely to be less effective if implemented individually, instead interventions to support breastfeeding should be multi-faceted and should span both the antenatal and postnatal period.</td>
<td>96</td>
<td>73</td>
<td>36</td>
</tr>
</tbody>
</table>

Most of the evidence statements in this section were rated as high impact (by the majority of respondents) and highly feasible. Reported current practice varied across respondents.
Findings - vulnerable groups

The online consultation also asked for examples of actions that might be effective in promoting breastfeeding and kangaroo skin-to-skin care within vulnerable groups, e.g. teenagers, families with complex social problems and non-English speaking parents.

The diagrams below summarise the actions suggested by respondents that could be used to support vulnerable babies and families within neonatal units.

Figure 1 - Actions to support vulnerable families to breastfeed

- Support for travel costs
- National positive social images i.e. popstars feeding in public
- Availability of support staff as possibly less intimidating
- Literature and media in a variety of languages
- Peer supporters who speak different languages
- Work in partnership with families
- Knowledgeable interpreters

Figure 2 - Actions to support vulnerable families to provide kangaroo skin-to-skin care

- Peer support from different backgrounds & age groups
- Teen-friendly info and training for staff on these resources
- Diary with photos
- Young adult support workers to visit wards
- Volunteers who speak the woman's language
- Use of language line
- Discussion of benefits for baby long-term, mental health emphasis
- Use of family to interpret
- Visual aids & picture cards
- Support group, flexibility of family members
Three regional workshops were held in each of the Neonatal Managed Clinical Network areas. The aim of the workshops was to present the evidence base, and provide delegates with the opportunity to reflect on current practice, consider how to make changes, and share experiences and challenges.

Invitations were emailed to key contacts to distribute across their networks.

All workshops had cross-sectoral representation, including a wide range of neonatal staff, third sector groups and academics in the field of infant feeding and neonatal care.

All workshops followed a similar format. The EiP approach was introduced within the current policy context, i.e. the Best Start Review, Maternal and Infant Nutritional Framework, MCQIC and the UNICEF Baby Friendly Initiative. This was supplemented with a range of presentations emphasising the evidence of the benefits of breastfeeding and kangaroo skin-to-skin care, cultural change in a neonatal unit and the role of context to support the implementation of change.

To encourage dialogue and facilitate the opportunity to share knowledge and practices, delegates were allocated to groups to ensure a representative mix of skills and professions within each group. Each group had a designated facilitator and scribe to support the exercises and capture relevant discussion points.

During the workshops there were three progressive exercises which built on a presentation of the summary results from the online consultation:

1. individual reflection and facilitated group discussions assessing the impact and feasibility of the evidence-based practice statements within current care contexts. Each group was asked to collectively categorise the impact and feasibility of each statement as high, medium or low.

2. exploration of barriers and enablers around the evidence statements – capturing examples of practice and ‘bright ideas’ to support implementation.

3. reflection on the workshop to identify actions.

The workshops employed a range of means to capture views and discussion points. A graphic illustrator was used in the one of the regional workshops to provide a visual record of the key elements highlighted during the day and another workshop was filmed. Key actions from the workshops were captured and are highlighted in Figure 3. These methods had the added advantage of creating resources which could be shared with colleagues who were unable to attend the workshops.

Agendas, presentations and the films can be accessed here: https://siscc.dundee.ac.uk/maternal-child-health-workshops/.
PHASE 4: Analysis and Dissemination

Analysis - impact and feasibility

Over the three regional workshops, 12 groups discussed the impact and feasibility of implementing the evidence-based practice statements. Each group was asked to collectively categorise the impact and feasibility of implementing each of the evidence-based practice statements as high, medium or low. Data from all 12 groups were collated to provide a summary categorisation for each statement.

Analysis - barriers and enablers

The qualitative data relating to barriers and enablers, and bright ideas from both the online survey consultation and the workshops were analysed thematically. Coding was carried out by two researchers independently and reviewed by a third researcher, to ensure consensus in the major themes. NVIVO 10 software was used to manage the data during analysis.

Findings - impact and feasibility

A total of 70 delegates participated in the three workshops and a breakdown of participant roles are detailed in Appendix 3.

Tables 5-7 summarise the data from all three workshops and provide a ranking of high, medium or low for the impact and feasibility of embedding each evidence-based statement into practice.
### Table 5 - Practice statements derived from high quality evidence and likely to be effective

<table>
<thead>
<tr>
<th>Actions likely to be effective</th>
<th>Impact</th>
<th>Feasability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Daily kangaroo skin-to-skin contact with mothers (ranging from 10 mins up to 2 hours) for very low birth weight infants (under 1,500g) increases the duration of any breastfeeding at discharge and up to one month after.</td>
<td>High</td>
<td>Medium</td>
</tr>
<tr>
<td>2. Any intermittent kangaroo skin-to-skin contact with mothers (of variable duration and frequency) is associated with an increase in any breastfeeding from discharge from NICU until 1-2 months follow up in stabilised infants born under 2,500g.</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>3. Any duration of daily kangaroo skin-to-skin contact with mothers that promotes mother-infant interaction and touch results in mothers showing better adaptation to infant cues, better perception of their infant, less anxiety, a greater sense of competence with their infant and more sensitivity towards the infant.</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>4. Intermittent kangaroo skin-to-skin contact with mothers is associated with an increase in mother-infant parent-baby attachment at 3 months follow-up.</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>5. &quot;Baby Friendly&quot; accreditation of the associated maternity hospital results in improvements in several breastfeeding-related outcomes for infants in neonatal units.</td>
<td>High</td>
<td>Medium</td>
</tr>
</tbody>
</table>

All of the statements derived from high quality evidence were rated as being high impact, three were rated as having high feasibility and two as medium feasibility. Consistent with the results from the online survey consultation, kangaroo skin-to-skin contact was perceived as being both high impact and highly feasible. However, feasibility rankings were moderated by the birth weight of the baby; giving kangaroo skin-to-skin care to very low birth babies was ranked as having medium feasibility.
### Table 6 - Practice statements derived from moderate quality evidence and likely to be promising

<table>
<thead>
<tr>
<th>Promising actions</th>
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</tr>
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<tbody>
<tr>
<td>1. Making donor human milk available in neonatal units has no negative impact on breastfeeding rates at discharge.</td>
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<td>High</td>
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<td>2. Making donor human milk available in neonatal units decreases formula use during the first four weeks of life.</td>
<td>High</td>
<td>High</td>
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<tr>
<td>3. Breastfeeding support increases breastfeeding rates and duration when parents are given a combination of the following messages: accurate information about the contribution of breast milk to the infant's growth and well-being; opportunities for physical contact with the infant; accurate information regarding breast milk supply and breastfeeding techniques; and information about general infant behaviour.</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>4. An individualised discharge plan for breastfeeding mothers with follow-up telephone calls maintains mothers confidence in breastfeeding and provides reassurance.</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>5. Positive, consistent and continuous feedback and reinforcement stimulates mothers motivation, and educational programmes provided in the context of ongoing personal contact with a health professional are effective in promoting the initiation and prevalence of breastfeeding.</td>
<td>High</td>
<td>Medium</td>
</tr>
<tr>
<td>6. Staff training and education on breastfeeding delivered to a multi-professional workforce improves staff knowledge and generates increased use of expressed breast milk, and initiation and duration of breastfeeding in neonatal units</td>
<td>High</td>
<td>Medium</td>
</tr>
</tbody>
</table>

All of the evidence statements derived from moderate quality evidence were ranked as being high impact. Three statements were ranked as high impact and highly feasible: two related to making donor milk available in neonatal units and one related to the provision of breastfeeding support. The remaining three statements were all ranked as high impact but were perceived as less feasible. The provision of positive feedback and reinforcement, and education about breastfeeding was ranked as medium in terms of feasibility, as was the provision of staff training and education about breastfeeding. The provision of an individualised discharge plan for breastfeeding mothers with follow-up was ranked as having high impact but low feasibility.
Table 7 presents the actions supported by weaker evidence. Again, all statements were ranked as having a high impact, with more variability in the feasibility rankings. Workshop participants ranked social and informal interaction between staff and parents, and giving parents a photograph of their baby as both high impact and highly feasible.

<table>
<thead>
<tr>
<th>Potentially promising actions</th>
<th>Impact</th>
<th>Feasability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Techniques (relaxation, warmth, massage, early initiation of pumping and increased frequency of pumping) significantly increase the quantity of milk obtained.</td>
<td>High</td>
<td>Medium</td>
</tr>
<tr>
<td>2. Improving the neonatal unit environment (privacy, increased contact with infants, less emphasis on feeding routines) and staff support for parents (information, education and positive, consistent reinforcement and feedback) may enhance milk expression and supply during hospitalisation in the neonatal unit.</td>
<td>High</td>
<td>Medium</td>
</tr>
<tr>
<td>3. Parents receiving breastfeeding support at the neonatal unit in the form of counselling, information (handouts and videos), practical help and group breastfeeding clinics are more likely to continue breastfeeding up to a month after discharge.</td>
<td>High</td>
<td>Medium</td>
</tr>
<tr>
<td>4. Chat or social talk between nurses and parents has a positive influence on mothers confidence, their sense of control and their feeling of connection (parent-baby attachment) with their baby.</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>5. Giving parents a photograph of their preterm infant in preparation for seeing the infant for the first time has a positive effect on improving parent-baby attachment with their infant.</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>6. Interventions are likely to be less effective if implemented individually, instead interventions to support breastfeeding should be multi-faceted and should span both the antenatal and postnatal period.</td>
<td>High</td>
<td>Medium</td>
</tr>
</tbody>
</table>
Analysis - barriers and enablers

As part of the analysis and dissemination process the findings in relation to key barriers and enablers were summarised and presented to neonatal units in the form of an infographic (Appendix 4). This was to sense-check the initial findings and engage with a wider range of staff, beyond those who participated in the workshops.

Findings - practice examples

A number of delegates reflected that one of the primary benefits of participation in the workshops was the opportunity to engage with colleagues from other units and organisations and share examples of current practice.

Recognising the importance that participants placed on the current practice discussions, data from the workshops and online consultation have been combined to produce infographic summaries on breastfeeding and kangaroo skin-to-skin care (https://siscc.dundee.ac.uk/mch-practice-examples/). Examples are presented under the enabler thematic headings. Some practices cut across two or more themes:

Practice examples for supporting breastfeeding in neonatal units

Collaboration
- Share women's experience of milk banking
- Cross-unit education
- Get to know team members
- Parent feedback improvement tree
- Discharge plan
- BFI meetings with midwifery and NNUs
- Use of Scottish Donor Milk Bank Service

Leadership
- Breastfeeding advisor on unit
- Dedicated support worker
- Standardised infant feeding advisor job spec
- Standard consistent script on breastfeeding
- Huddle meetings

Culture
- Compassionate care
- Cue-based feeding
- Cultural peer support
- 24-hour unit access
- Good communication across teams
- Consent to use formula
- Education in schools

Support
- Peer support
- Teaching Dads
- Daily expressing logs
- Breastfeeding café
- Forms to access local support
- Expressing at bedside and breastpump availability
- Antenatal information at scans
- Facebook and WhatsApp support
- Breastfeeding clinic via social media
- Donor milk info for staff

Resources
- Family rooms
- Antenatal resources
- Breastfeeding packs in labour ward
- Technology i.e. iPads, podcasts, eLearning
- Segregation screens (yes or no)
- Use of "feedgood" resources
- Use of miniboo blankets
- UNICEF/BFI
- Videos on expressing and massage
- Photos of baby by device/own phone
Practice examples for supporting kangaroo skin-to-skin care in neonatal units

Collaboration
- Non-clinical staff to help with audit
- Grandparents being active (or other relatives)
- Sharing lessons from the HUGG visits to Toronto
- Parents not asked to leave for ward round

Leadership
- Breaking the rules week; parents tell Doctors what they want
- Graduate parent
- Families nominate visitors
- Record if KC on chart. If not, why not?
- Guidelines
- Include ward round discussion on KC

Culture
- Positive information and encouragement
- Caring, supportive environment
- Multi-lingual information on KC
- KC after nappy change or when skin exposed
- Use of Badgernet to record details of KC
- Reduce umbilical lines and move to picc

Support
- Teaching/guidance for parents on taking baby out for KC
- BLISS support
- Parent food preparation area
- Involve relatives in KC
- Emotional support
- KC as topic of the week 'drop in' session
- Cuddle volunteers

Resources
- Specialised wraps and Velcro hold clips
- Family rooms
- Videos showing different holds and transfers
- Low lighting, wireless monitors, reclining chairs
- Privacy screens
- Sling library 'try before you buy'
- Mini boo blankets, Mum and baby have one
- Use of stickers on cots to record KC
- Posters
Figure 3 - Actions from workshops

- Collaboration between units
- Share information from workshops
- Baseline data to support improvements
- Parents part of team
- Early informed choice
- Communication with parents - how to share information
- Physical environment within units - make it “friendlier”
- Address inequalities - travel costs
- Meals for parents
- Discharge planning
- Staff attitudes - benefits of BF & KC
- Continuity of care
- Champions
- Education for staff
During the analysis, there were a number of key emerging themes under both barriers and enablers to embedding the evidence-based statements on breastfeeding and kangaroo skin-to-skin care into routine practice:

- Knowledge and skills
- Resources
- Culture
- Environment
- Leadership
- Support
- Collaboration

Posters of the key themes were produced (Appendix 4) and distributed to units to raise awareness of the project and prompt discussions with staff and visiting families about breastfeeding and kangaroo skin-to-skin care.

Recognising that the barriers and enablers might be different for individuals, units and organisations involved in neonatal care, a supporting booklet was produced. The booklet categorised the workshop consultation data into micro, middle and macro levels (Appendix 5) in relation to both breastfeeding and kangaroo skin-to-skin care. However, it should be noted that some barriers and enablers apply to more than one level.

The booklet was distributed by email to all units and they were offered a visit from the project team to present the findings and explore the barriers and enablers further. This allowed units to sense-check the findings and consider them within their own contexts. It also had the advantage of engaging staff who had been unable to attend the workshops. The poster and booklet were also shared widely with other groups and organisations supporting neonatal care across Scotland including Scottish Government, UNICEF, MCQIC Neonatal Safety Programme, Scottish Donor Milk Bank Service, Neonatal Scottish Infant Feeding Advisors Network.

Peer support and the role of third sector organisations in supporting families and staff within the neonatal environment was raised at all three workshops. As part of the dissemination, a group of third sector organisations was convened to share the findings in the booklet and identify potential mechanisms and current models to overcome existing barriers.
Next Steps

This report summarises the work carried out as part of the SISCC Evidence into Practice (EiP) neonatal project and highlights areas to complement local, regional and national planning, e.g. UNICEF/BFI accreditation, MCQIC and the implementation of the Best Start recommendations.

National workshops

These findings will be used to inform the next stage of the EiP dissemination process. Invitations have been issued to key contacts within all neonatal units to participate in a forthcoming national workshop.

The workshop agenda is built on the findings of the EiP consultation and has been co-created with units.

The aim of the workshop is to widen the dissemination of the findings, facilitate units to consider the results within the context of their unit and identify priorities for implementation. The outcomes and the actions of the workshop will be co-created with participants.

Utilising the evidence base, action plans will be developed by unit staff, promoting ownership and contextual understanding. The workshop will also be an opportunity to highlight any other implementation needs.

Evaluation

SISCC aims to explore and explain the process of implementing evidence into practice by examining the approaches employed in units across Scotland to understand what works, for whom, how and in what contexts.

Further details of the evaluation can be accessed at: https://siscc.dundee.ac.uk/work/maternal-child-health/.

The evaluation will be conducted by working closely with the units and outputs will be disseminated to all relevant stakeholders within the neonatal and improvement practice communities.

Conclusion

It is hoped that this report will be of interest to the neonatal and improvement communities within Scotland and presents the evidence base, to inform and encourage debate around current practice.
References


8. Quigley MA, Kelly YJ, Sacker A, Breastfeeding and hospitalization for diarrheal and respiratory infection in the United Kingdom Millenium Cohort Study. Paediatrics.2007:119(4);e847-42


11. [https://www.onemilkbankforscotland.co.uk/](https://www.onemilkbankforscotland.co.uk/)


# Appendix 1 - Neonatal Units in Scotland

This table sourced from The Best Start - a Five Year Forward Plan for Neonatal Care in Scotland (2017).

<table>
<thead>
<tr>
<th>NHS Board</th>
<th>Designation Level</th>
<th>Intensive Care Unit</th>
<th>High Dependency Unit</th>
<th>Special Care</th>
<th>Transitional Care</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NHS Ayrshire &amp; Arran</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University Hospital Crosshouse</td>
<td>3</td>
<td>5</td>
<td>4</td>
<td>11</td>
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</tr>
<tr>
<td><strong>NHS Borders</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Borders General, Melrose</td>
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<td>2</td>
<td>6</td>
<td>*</td>
</tr>
<tr>
<td><strong>NHS Dumfries &amp; Galloway</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cresswell, Dumfries &amp; Galloway</td>
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<td>9</td>
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<tr>
<td><strong>NHS Fife</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Victoria Hospital, Kirkcaldy</td>
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<td>4</td>
<td>2</td>
<td>14</td>
<td>0</td>
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<tr>
<td><strong>NHS Forth Valley</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forth Valley Royal Hospital, Larbert</td>
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<td>13</td>
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<td><strong>NHS Grampian</strong></td>
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<tr>
<td>Aberdeen Royal</td>
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<td>7</td>
<td>19</td>
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<td>Dr Gray's, Elgin</td>
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<td>0</td>
<td>4</td>
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<td><strong>NHS Greater Glasgow &amp; Clyde</strong></td>
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<td></td>
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<tr>
<td>Neonatal Unit, Royal Children's Hospital, Glasgow</td>
<td>3</td>
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<td>14</td>
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<tr>
<td>Princess Royal Maternity, Glasgow</td>
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<td>Royal Alexandra, Paisley</td>
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<td><strong>NHS Highland</strong></td>
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<td></td>
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<tr>
<td>Raigmore, Inverness</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>8</td>
<td>***</td>
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<tr>
<td><strong>NHS Lanarkshire</strong></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wishaw General</td>
<td>3</td>
<td>8</td>
<td>10</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td><strong>NHS Lothian</strong></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Simpson Centre for Reproductive Health, ERI</td>
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</tr>
<tr>
<td>St John's Hospital, Livingston</td>
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<td>0</td>
<td>2</td>
<td>8</td>
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</tr>
<tr>
<td><strong>NHS Tayside</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ninewells, Dundee</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>14</td>
<td>4</td>
</tr>
<tr>
<td><strong>NHS Orkney</strong></td>
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<td></td>
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<td></td>
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<tr>
<td><strong>NHS Shetland</strong></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>NHS Western Isles</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Provided on postnatal ward and therefore varies from day to day
**1 isolation room, 3 parentcraft rooms, 1 NNU clinic
*** Cots are used flexibly to a maximum of 18 points, ITU: 4 points, HD:2 points, SC: 1 point.
### Appendix 2 - Online Respondents

<table>
<thead>
<tr>
<th>Roles/Organisations</th>
<th>Number</th>
<th>% of Total Delegates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consultants - GPs, Neonatology, Paediatrics</td>
<td>8</td>
<td>11%</td>
</tr>
<tr>
<td>Healthcare Support Worker (HCSWs)</td>
<td>4</td>
<td>5%</td>
</tr>
<tr>
<td>Infant Feeding Role</td>
<td>2</td>
<td>3%</td>
</tr>
<tr>
<td>Neonatal Nurse/Midwife</td>
<td>59</td>
<td>79%</td>
</tr>
<tr>
<td>Other - role not specified</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Third-sector/Public</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>75</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

![Pie chart showing the distribution of roles among online respondents.](chart)

- **Neonatal Nurse/Midwife**
- **Consultants**
- **HCSWs**
- **Infant Feeding Roles**
- **Third Sector/Public**
- **Other**
## Appendix 3 - Workshop Delegates

<table>
<thead>
<tr>
<th>Roles/Organisations</th>
<th>Number</th>
<th>% of Total Delegates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allied Health Professionals (AHPs)</td>
<td>3</td>
<td>4%</td>
</tr>
<tr>
<td>Consultants - Midwifery, Neonatology, Paediatrics, Public Health</td>
<td>5</td>
<td>7%</td>
</tr>
<tr>
<td>Healthcare Support Worker (HCSWs)</td>
<td>3</td>
<td>4%</td>
</tr>
<tr>
<td>Higher Education Institutes (HEIs)</td>
<td>4</td>
<td>6%</td>
</tr>
<tr>
<td>Infant Feeding Role</td>
<td>9</td>
<td>13%</td>
</tr>
<tr>
<td>Manager/Senior Role</td>
<td>7</td>
<td>10%</td>
</tr>
<tr>
<td>National Organisations - Health Scotland, NES, Scottish Government, UNICEF</td>
<td>4</td>
<td>6%</td>
</tr>
<tr>
<td>Neonatal Nurse/Midwife</td>
<td>29</td>
<td>27%</td>
</tr>
<tr>
<td>Student</td>
<td>2</td>
<td>3%</td>
</tr>
<tr>
<td>Third Sector/Public</td>
<td>14</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>70</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>
Barriers and Enablers to Supporting Breastfeeding and Kangaroo Care in Neonatal Units

**Barriers**

- **Knowledge & skills**
  - Inconsistent information & communication, differences in understanding & confidence, safety & risk concerns

- **Resources**
  - Lack of resources including staff, time, chairs & screens

- **Culture**
  - Differences in beliefs, attitudes & behaviours

- **Environment**
  - High tech environment & lack of space

**Enablers**

- **Leadership**
  - Champions, senior level support, commitment & accountability

- **Culture**
  - Staff engagement, public awareness campaigns & empowering parents

- **Support**
  - Peer support & family-centred approach

- **Collaboration**
  - Consistency of approach, language & understanding

- **Resources**
  - Physical & educational resources (chairs, beds, posters, leaflets)
Barriers and Enablers to Support Breastfeeding in Neonatal Units

Unit Level

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Enablers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication, knowledge and advice not consistent across unit staff</td>
<td>Mixed messages about breastfeeding</td>
</tr>
<tr>
<td>Lack of volunteers &amp; peer support</td>
<td>Formula fed culture</td>
</tr>
<tr>
<td>Lack of staff, time &amp; resources</td>
<td>IT failings - printer ink, memory cards</td>
</tr>
<tr>
<td>Staff resistance to change</td>
<td>Turnover of staff</td>
</tr>
<tr>
<td>High-tech environments with clinical focus</td>
<td>Reliance on breastfeeding team &amp; infant feeding advisers</td>
</tr>
<tr>
<td>Cultural attitudes to donor milk</td>
<td>Lack of resources to provide space, privacy &amp; comfort</td>
</tr>
<tr>
<td>Benefits of donor milk not consistently communicated to parents</td>
<td>Difficult to relax, bond &amp; express</td>
</tr>
</tbody>
</table>

Discharge - follow-up support
Family-centred, holistic approach
Unit guidelines
Peer support for parents
Whole system consistent approach across staff working on NNU
Champions
Create welcoming & friendly environment for parents
Given donor milk as default - opt-out
More privacy
Audit for first expression
Measure of breastfeeding on discharge
Neonatal staff supporting breastfeeding clinics
Use of personal stories

Individual discharge plan
Responsive feeding
Signpost to third-sector/support groups
Baby café groups - raise awareness & funding for peer support
Social media
Buddying new and experienced mums
Bliss buddies (matched by age)
Unit-based breastfeeding clinics
Facilities for parents
Collaboration with Allied Health Professionals
24 hour visiting & access
Promote milk donation positively as an opportunity to give back & prevent waste
## Barriers and Enablers to Support Breastfeeding in Neonatal Units

### Organisational Level

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Enablers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultural attitudes to breastfeeding</td>
<td>BFI accreditation</td>
</tr>
<tr>
<td>Lack of resources to provide space, privacy &amp; comfort</td>
<td>Consistent approach across Scotland</td>
</tr>
<tr>
<td>Inflexible ward rounds</td>
<td>National training material - BFI, SIFAN, SNNG</td>
</tr>
<tr>
<td>Communication and knowledge not consistent across departments</td>
<td>Neonatal outreach staff</td>
</tr>
<tr>
<td>Challenges establishing peer support (Bliss buddies - 8 wk course)</td>
<td>National education materials for parents</td>
</tr>
<tr>
<td>Continuity of care across maternity &amp; child services, lack of effective follow-up</td>
<td>Managerial &amp; exec support for skill development</td>
</tr>
<tr>
<td>Inconsistent use of donor milk between units across Scotland</td>
<td>Parent rooms - peer support &amp; education</td>
</tr>
<tr>
<td>Close links with Higher Education institutes</td>
<td>More practical resources/equipment</td>
</tr>
<tr>
<td>Poor quality of information</td>
<td>NNU staff providing antenatal support</td>
</tr>
<tr>
<td></td>
<td>Discharge - follow-up support</td>
</tr>
<tr>
<td></td>
<td>Social media campaign to address cultural attitudes &amp; promote benefits</td>
</tr>
<tr>
<td></td>
<td>BFI on paediatric courses &amp; midwifery</td>
</tr>
<tr>
<td></td>
<td>“Tongue tie” clinics</td>
</tr>
<tr>
<td></td>
<td>National BF flowchart - support early discharge</td>
</tr>
<tr>
<td></td>
<td>Approach and information across units</td>
</tr>
<tr>
<td></td>
<td>Asset mapping</td>
</tr>
<tr>
<td></td>
<td>National LearnPro module</td>
</tr>
<tr>
<td></td>
<td>Use of personal stories</td>
</tr>
<tr>
<td></td>
<td>Comfy chairs, screens, capes, breast pumps, beds</td>
</tr>
<tr>
<td></td>
<td>Neonatal staff supporting breastfeeding clinics</td>
</tr>
<tr>
<td></td>
<td>Breastfeeding included in induction training</td>
</tr>
<tr>
<td></td>
<td>Increase in mandatory training hours</td>
</tr>
<tr>
<td></td>
<td>Early contact with Health Visitor</td>
</tr>
<tr>
<td></td>
<td>Community peer support</td>
</tr>
<tr>
<td></td>
<td>Benefits of breastmilk - expressing, donor milk, breastfeeding</td>
</tr>
<tr>
<td></td>
<td>Public awareness campaign about benefits of donor milk</td>
</tr>
<tr>
<td></td>
<td>Consistent Scotland-wide approach to criteria of use of donor milk - review guidelines, include hypoglycaemic babies</td>
</tr>
<tr>
<td></td>
<td>Best Start implementation - links across maternity services, antenatal education</td>
</tr>
</tbody>
</table>
Barriers and Enablers to Support Breastfeeding in Neonatal Units

Individual Level

**Barriers**
- Attitudes towards social chat
- Length of parental visits, travel distance & costs
- Lack of staff confidence, skills & experience
- Poor communication - pressure to breastfeed
- Staff knowledge & attitudes to benefits of breastfeeding
- Cultural attitudes towards donor milk
- Pressure to produce volume

**Enablers**
- Photos/videostream of baby
- Enhance parental skills & confidence in feeding
- Peer support for parents
- Peer support - mentoring for staff to enhance skills & confidence
- Competencies/simulation
- Observation training support & reminders
- Staff support groups
- Daily huddles - training support & reminders
- Training sessions at staff handovers
- Family-centred conversations - long-term benefits of breastfeeding, not just focus on weight gain
### Barriers and Enablers to Support Kangaroo Care in Neonatal Units

#### Unit Level

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Enablers</th>
</tr>
</thead>
<tbody>
<tr>
<td>No policy to support staff understanding of KC</td>
<td>Kangaroo Care prompts</td>
</tr>
<tr>
<td>Staff resistance to change</td>
<td>Family-centred care, holistic approach</td>
</tr>
<tr>
<td>Lack of staff, time &amp; resources</td>
<td>Kangaroo Care champion</td>
</tr>
<tr>
<td>High-tech environments with clinical focus</td>
<td>Skin-to-skin the ‘norm’</td>
</tr>
<tr>
<td>Communication, knowledge &amp; advice not consistent across unit staff</td>
<td>Use of technology - apps</td>
</tr>
<tr>
<td></td>
<td>‘What matters to you?’</td>
</tr>
<tr>
<td></td>
<td>Unit guidelines</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff cultural attitudes to KC</td>
<td>Cot stickers</td>
</tr>
<tr>
<td></td>
<td>Antenatal information given</td>
</tr>
<tr>
<td></td>
<td>Whole system, consistent approach across all staff working on NNU</td>
</tr>
<tr>
<td></td>
<td>Facilities for parents</td>
</tr>
<tr>
<td></td>
<td>Create welcoming &amp; friendly environment for parents</td>
</tr>
<tr>
<td></td>
<td>More privacy</td>
</tr>
</tbody>
</table>
Barriers and Enablers to Support Kangaroo Care in Neonatal Units

Organisational Level

**Barriers**

- Cultural attitudes towards kangaroo care
- Lack of resources to provide space, privacy & comfort
- Inflexible ward routines
- Communication and knowledge not consistent across departments
- Poor quality of information

**Enablers**

- Consistent approaches across Scotland
- Social media campaign (benefits of kangaroo care, encouraging fathers)
- More practical resources & equipment
- National educational materials for parents
- Managerial and executive support for skill development

- Approach & information across units
- Multilingual posters/leaflets - benefits & techniques, pictures of KC
- Video - showing KC techniques
- Comfy chairs, screens & wraps
# Barriers and Enablers to Support Kangaroo Care in Neonatal Units

## Individual Level

<table>
<thead>
<tr>
<th>Barriers</th>
<th>Enablers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of parental visits &amp; travel time/costs</td>
<td>Photos/videostream of baby</td>
</tr>
<tr>
<td>Lack of staff confidence, skills &amp; experience</td>
<td>Kangaroo care delivered by extended family</td>
</tr>
<tr>
<td>Staff knowledge &amp; attitudes towards benefits of KC</td>
<td>Enhance parental skills &amp; confidence in caring for baby, including KC</td>
</tr>
<tr>
<td>Attitudes towards social chat</td>
<td>Peer support - mentoring for staff to enhance skills &amp; confidence</td>
</tr>
<tr>
<td>Accessibility for parents is limited</td>
<td>Daily huddles - training &amp; support reminders</td>
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<tr>
<td></td>
<td>Parents in charge &amp; making decisions</td>
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<tr>
<td></td>
<td>Sit next to parents to develop their confidence</td>
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<tr>
<td></td>
<td>Staff support group</td>
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<tr>
<td></td>
<td>Video - showing KC techniques</td>
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<tr>
<td></td>
<td>Staff pairing may increase confidence</td>
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</tbody>
</table>