

Constructing a programme of change to improve the provision of family-centred developmental care on a neonatal unit

Family-centred developmental care (FCDC) is often cited as forming the foundations of holistic and humane neonatal nursing, the benefits of which are well documented. Research suggests however, that FCDC is often not implemented to its maximum potential which can have detrimental effects for both infants and families. This problem was recognised by senior management on the authors' unit who reactively developed the Family Care Team (FCT) with the aim of dealing with the problem. The FCT developed their own audit tool and devised a tailor-made teaching programme to improve the provision of FCDC on the neonatal unit.

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Key points

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1. Although the benefits of family-centred developmental care (FCDC) are well documented, implementation is often sporadic and ineffective.
2. Neonatal nurses often believe that they provide effective FCDC, however this is not supported by parents and in the literature.
3. Kangaroo mother care can form the basis of effective FCDC and increase breastfeeding rates.
4. Changing existing practice and opinions can be challenging, but is more likely to be successful with a multidisciplinary team approach.

Family-centred developmental care (FCDC) is often cited as an integral component of holistic and humane neonatal nursing^{1,2}, the benefits of which are well documented and reinforced by recent government publications^{3,4}. Although definitions do vary, it is generally accepted that FCDC places the needs of the infant in the context of the family⁵, acknowledging parents as central to their infant's existence and playing a pivotal role in care provision, planning and decision making⁶. FCDC aims to nurture infants in a way that allows them to achieve their full potential, reducing the negative consequences surrounding prematurity and subsequent neural, social, behavioural and physical development⁷. Significant reported benefits include enhanced infant/parent attachment and bonding, increased breastfeeding rates, improved mental health outcomes and reduced length of hospital stay^{1,5}. Regardless of any empirical evidence, the authors believe that FCDC is the most humane philosophy of care available to neonatal nurses and therefore should be promoted throughout clinical care.

Research suggests that FCDC is not being implemented to its maximum potential. Although the principles are well known, practices are often inconsistent and sporadic^{8,9}. This was highlighted in the findings of the POPPY Project¹⁰, and the 2010 Bliss Baby Report¹¹. Senior management on the unit also recognised that FCDC was not being consistently implemented in clinical practice. This is

often not intentional but in a climate where neonatal nursing shortages are well publicised and British Association of Perinatal Medicine (BAPM) standards are frequently not met, FCDC can become secondary to the primary aim of survival¹².

The neonatal unit at the Royal Bolton Hospital lies with maternity and paediatric care within the Family Care Division of the organisation and is managed by experienced, family-focused paediatric and neonatal nurses. Due to reorganisation, the past two years have seen mass recruitment and training to ensure the requisite workforce was in place to create a tertiary unit on one site from two pre-existing units. To fulfil the criteria of becoming a tertiary unit and to equip new staff with the skills and knowledge to provide best possible care, the 'New Leaders' programme was devised by the Practice Educator and the Clinical Educator. This valuable programme provides an induction to neonatal nursing and support in practice to those new to nursing neonates. Some of the teaching sessions on the highly successful New Leaders programme were lead by two of the authors and included theory and practical sessions on all aspects of FCDC. This provided an opportunity for personal development and to influence the practice of new members of staff.

Family Care Team

The Family Care Team (FCT) has evolved as a result of the Practice Educator identifying the need to challenge the culture and practices on the unit. The team

has taken inspiration from the Uppsala Neonatal Unit where family-centred and kangaroo mother care are the norm¹³. Their philosophy of care: 'Parents are the primary caregivers, nurses are the primary supporters' has been adopted and will be infused into the culture and provision of care. The FCT are experienced neonatal practitioners who still practice clinically, therefore have realistic and not idealistic goals as to what can be achieved by the FCT's vision. Additionally the FCT have been provided with eight shifts per week in which they are supernumerary. This should have a positive effect on the aforementioned staffing and time constraints that can often inhibit the delivery of effective FCDC.

By embedding FCDC into everyday practice, the intention is to empower parents to become the primary care givers with the nursing staff in a supportive and not paternal role. The care provided by parents will inevitably vary depending on their baby's gestation and condition; however parents can still provide the majority of care surplus to the nursing and medical interventions that are required for the baby's survival and should be encouraged to do so. This should make the neonatal experience as positive as it can be for everyone involved.

Following an in-depth discussion regarding Swedish practices and philosophy with a visiting research nurse at the local university, the FCT were convinced by the need to make skin-to-skin care the number one priority.

Although it is unlikely that 24 hour skin-to-skin care (as seen in some Swedish units) will be possible (or desirable for some parents) due to practical and medical constraints, the aim of the FCT is for all parents to enjoy the benefits of skin-to-skin care as soon as possible, as often and for as long as they choose; a principle also enforced by the Neonatal Toolkit³. The FCT believe this practice forms the cornerstone of parental empowerment and family-centred care (FCC). Increased breastfeeding rates are also to be expected as a result of more skin-to-skin care.

The role of Family Care Leads has been developed and defined and input begins prior to delivery or very soon after, to empower parents at the start of their journey. Ongoing support is provided along with consistent information and collaborative relationships between parents and the multidisciplinary team (MDT) are encouraged. Staff training, development and education are also high on the agenda.

Audit

As it was evident that FCDC was not being practised consistently or effectively on the unit, the reasons why this was the case were investigated. An audit tool was developed to examine knowledge and practice surrounding the six areas, including developmental care, family-centred care, breastfeeding, skin-to-skin, cues and pain. The audit consisted of a mixture of qualitative and quantifiable open-ended questions, multiple choice and scaled questions. The aim was to identify factors

that might be inhibiting the delivery of effective FCDC and devise a tailor-made educational programme of change to help overcome these factors.

Staff were audited prior to the aforementioned merger and completed the form during a shift. To avoid some of the extraneous variables associated with audit, primarily discussion with colleagues, the audit was initially conducted on a one-to-one basis. However due to staffing levels and workload this proved impossible to sustain and therefore staff were encouraged not to discuss answers and were reassured that the audit was anonymous, was not a test, but a tool to identify what the FCT needed to do in their roles.

Out of a total number of 110 staff, 74 were audited consisting of five assistant practitioners, 34 Band 5 nurses/midwives, 19 Band 6 nurses/midwives, five Band 7 nurses/midwives and 11 medical staff, which included consultant neonatologists, registrars, SHOs and ANNPs.

To quantify the qualitative open-ended questions the answers were scored through the identification of different themes and transformed into a measurable unit (**TABLE 1**). The results were then quantified separately for the different job roles (**TABLE 2**). Through the utilisation of line graphs, differences between staff groups, trends and the areas where training and education needed to be focussed were identified.

Findings and discussion

Although the benefits of developmental care were first discussed over 20 years ago¹⁴

Question	Themes	Quantification
How would you describe developmental care?	Boundaries, positioning, pain relief, light, noise, cues, contingent handling, family, incubator covers, play, swaddling, sucrose, skin-to-skin care, containment holding, NIDCAP, nesting, non-nutritive sucking, humane, philosophy of care, holistic	Answers scored out of 10. Turned into percentage by multiplying score by 10. Scores then separated into job roles/bands to obtain overall mean percentages to enable comparison. Example: Total Band 5 nurses/midwives = 34 Possible cumulative score = 340 Actual score = 63 (63/340) x 10 = 18.6%
Can you give four examples of avoidance/defensive behaviour in a neonate?	Pauses in breathing, colour changes, eg mottled or dusky, positing, straining, coughing, sneezing, sighing, hiccoughs, yawning, squirming, arching, grimacing, tongue thrust, twitching, limp/stiff posture, bracing legs, mouth hanging open, sudden/jerky movement, finger splay, 'salute', 'sitting on air', 'high guard' hands, fussing, agitation, whimpering, crying, diffuse states, eye floating, looking away, staring, glazed look	Answers scored out of 4. Turned into percentage by dividing score by 4 then multiplying by 100. Scores then separated into job roles/bands to obtain overall mean percentages to enable comparison. Example: Total Band 6 nurses/midwives = 19 Possible cumulative score = 76 Actual score = 55 (55/76) x 100 = 72.4%

TABLE 1 Examples of how answers were themed and quantified.

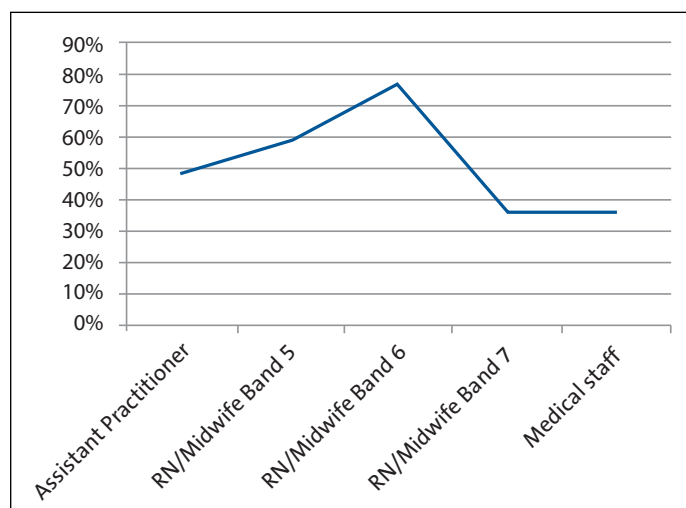


FIGURE 1 Mean score of developmental care interventions used by staff.



FIGURE 3 Mother and baby enjoying kangaroo care.

	Developmental care	Family-centred care	Breastfeeding	Skin-to-skin	Cues	Pain
Assistant Practitioner	15/75 20%	14/50 28%	52/115 45%	20/50 40%	14/40 35%	8/25 32%
RN/Midwife Band 5	164/515 32%	138/340 41%	410/782 52%	161/340 47%	127/272 47%	84/170 49%
RN/Midwife Band 6	124/285 44%	84/190 44%	248/437 57%	111/190 58%	101/152 66%	75/95 79%
RN/Midwife Band 7	19/75 25%	20/50 40%	63/115 55%	25/50 50%	23/40 58%	17/25 69%
Medical staff	60/165 36%	48/110 44%	130/253 51%	39/110 35%	30/88 34%	26/55 47%

TABLE 2 Mean scores and percentages for each staff group and area identified.

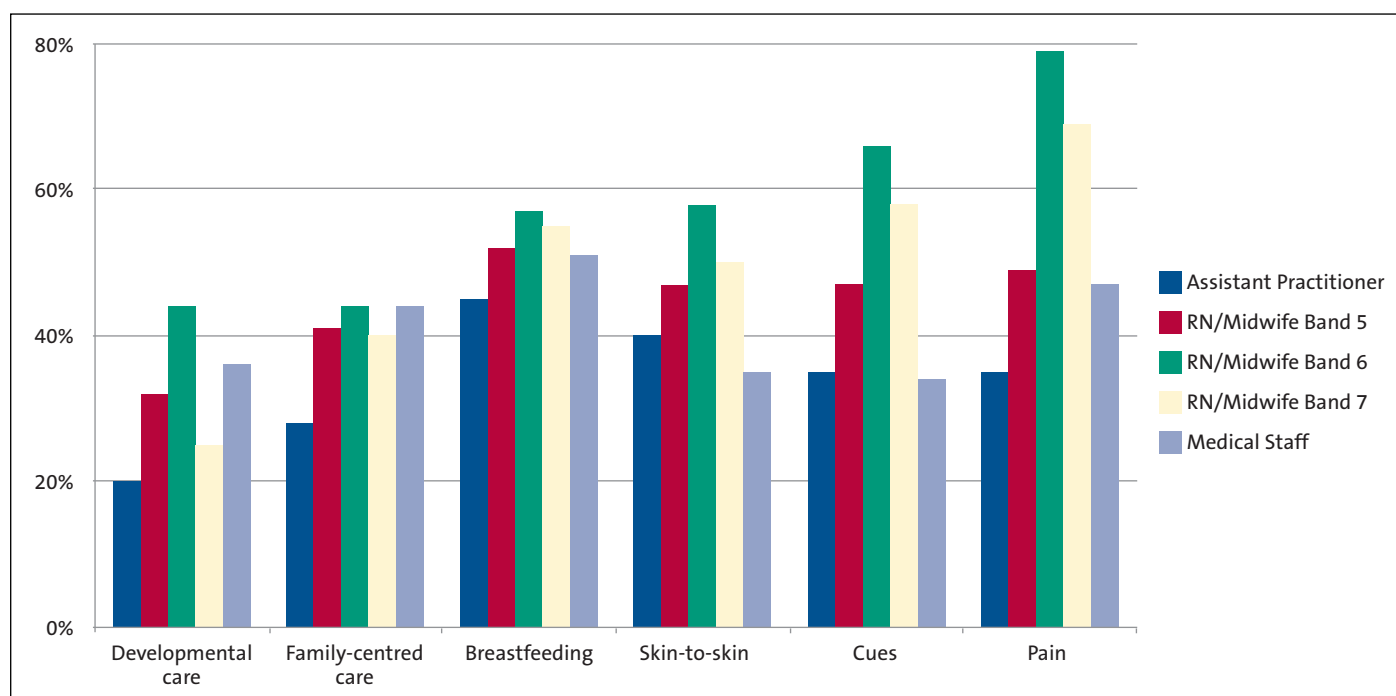


FIGURE 2 Percentage score for each staff group in the six areas identified.

and are now seen by many as a fundamental aspect of modern neonatal care, the results of the audit imply that it is still not being practised consistently (staff

scored a mean of 58% when asked how they used developmental care in everyday practice). The highest scoring group were the Band 6 neonatal practitioners (mean

score 77%) (**FIGURE 1**). On reflection this could be attributed to the aforementioned professional development programmes and training which were targeted at Band 5

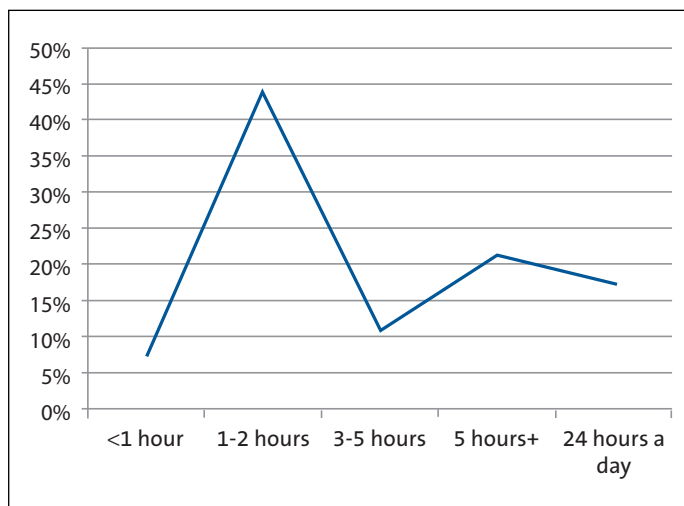


FIGURE 4 Perceptions of staff regarding a suitable amount of time for duration of skin-to-skin when both caregiver and baby are stable.

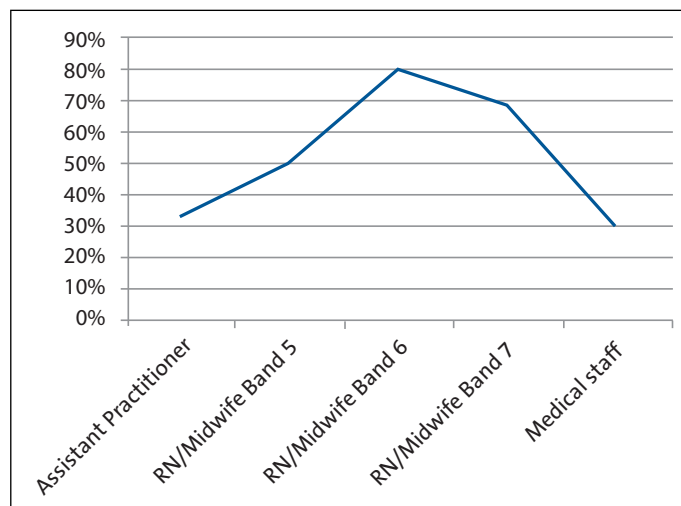


FIGURE 5 Mean score of staff knowledge regarding non-pharmacological methods of pain relief.

neonatal practitioners to enable them to progress confidently and competently into Band 6 roles (the majority of which had also completed the New Leaders Programme). When asked what factors inhibit the implementation of FCDC, time and staff attitudes were the most frequently cited responses, which the FCT have acknowledged and plan to address as detailed further in the article.

One of the weakest areas of neonatal care on the unit appears to be FCC (TABLE 2 and FIGURE 2) which is also reflected in the literature^{5,6,8,9}. Knowledge base surrounding FCC was weak (mean scores of 36% and 46% regarding meaning and benefits of FCC) with assistant practitioners scoring the lowest within this area (mean 28%). Interestingly the medical staff scored better than expected (mean 42% and 46%) arguably due to their practice of involving parents in care and decision making. Sadly, although 92% of staff agree with the statement 'parents are primary caregivers, nurses are primary supporters', this is not evident in practice or substantiated by parental perceptions. As a consequence the greatest challenge may prove to be changing staff opinions and practice if they already believe they are providing optimal FCC.

Knowledge surrounding the benefits of breastfeeding was expectedly high (mean score 82%). However, knowledge regarding fundamentals of milk expression (which arguably leads to successful breastfeeding) was lacking. The areas needing most attention are when expressing should start (mean score 45% knew this) and frequency (mean score 10% correct). This was surprising, considering one of the merging

neonatal units was accredited with BFI level 3 status and all staff receive regular breastfeeding updates. To address this issue, there has been a liaison with the breastfeeding team (who provide the training) to ensure the correct information is reinforced with assessment of retention through 'spot check' questions on an individual basis.

Skin-to-skin care is to be the primary focus of the unit's work (FIGURE 3). Staff knowledge in this area is vague: 48% were able to relate the benefits but 44% (the majority) thought that 1-2 hours was a suitable time (FIGURE 4) which is contrary to World Health Organisation guidelines¹⁵ of two hours minimum. Confidence in this area was noted to be high, but again this is not evident in practice. Most respondents stated that they appreciated assistance when getting ventilated babies out for skin-to-skin care. Providing this assistance is part of the FCT's role. Prior to completion of this audit it was not general practice to consider getting babies out who have umbilical arterial lines *in situ*, but it was interesting to find that a consultant and an ANNP stated they would now be happy to promote skin-to-skin care for such babies.

Cue-led care is promoted by leaders in the field of developmental care⁷. However it is evident from practitioners' responses that knowledge surrounding infant cues is limited and staff are still providing routine rather than baby-led care. Familiarity with non-pharmacological methods of pain relief was again best demonstrated by the Band 6 respondents (mean score 79%), however it is clear that medical staff need educating in this area (mean score 30%) (FIGURE 5).

Due to its qualitative nature, the audit and its results could be criticised in that knowledge and attitudes are notoriously difficult to quantify and what an individual states they do on paper may not necessarily be reflected in their practice and *vice versa*. However the results have provided the FCT with information on where teaching and education needs to be focused and has propelled FCDC high onto the nursing and medical agenda.

Moving forward

The immediate priority is to utilise the audit findings and implement an effective MDT teaching programme. The original idea was to take staff off the unit for a full day's teaching. However due to staffing limitations, this has proved impossible. It has been decided that the best option will be to utilise handover time and offer 'bite size' sessions. Therefore 30-45 minute sessions will be provided in all of the areas and staff will not be overwhelmed with knowledge that they may not retain.

The FCT are there to support parents along the 'neonatal journey' with the aim of making it as positive as it can be. Shift patterns will allow a member of the FCT to be available each day; to chat to and support parents, to assist in the promotion of skin-to-skin care and its implementation, support infants having procedures and deliver teaching.

The FCT will endeavour to ensure all mothers are educated regarding the importance of breastfeeding and are given the guidance, knowledge and support they need to start milk expression within the first six hours after delivery and to continue expressing to ensure lactation and

ultimately achieve successful breastfeeding. As part of a care pathway, the volume of milk a mother is producing will be monitored in order to offer early interventions when milk supply is not optimal and ensure that their babies are offered skin-to-skin care and the chance to suckle at the breast at the earliest opportunity.

As effective skin-to-skin care is to form the foundations of parental empowerment and FCC on the unit, all staff (including medics) will be educated on the importance, benefits and practicalities of skin-to-skin care via the aforementioned teaching sessions and mandatory training. Parents are also fully informed regarding skin-to-skin care on admission and will be encouraged to participate at the earliest opportunity. Posters are to be placed around the unit as prompts to staff and parents as to whether parents have 'had' or 'asked for' skin-to-skin care that day. Six comfortable, reclining chairs have also been ordered to facilitate this and if successfully utilised, more will be obtained.

To overcome the anticipated barriers of staff confidence and time constraints, prolonged skin-to-skin care (more than two hours) will initially be focused on the more stable high dependency and special care infants whom staff may feel more confident facilitating. It will then be a gradual process of education and practice to increase confidence in facilitating skin-to-skin care with stable intensive care infants. The supernumerary FCT can also alleviate some of the time and staffing constraints and provide any necessary support and assistance.

The FCT plan to empower parents with the knowledge and skills needed for them to progress and assume their rightful role as primary caregiver, to encourage the bonding and attachment process, reduce parental stress and anxiety and to reduce length of hospital stay. Ultimately it is hoped that families will have the best possible outcomes when discharged from the neonatal unit and leave feeling confident, competent and happy about the care they have received.

The future

The FCT has great support from the neonatologists on the unit who can see the value of the team's role. The team works with the Clinical Lead, in creating a holistic care pathway from admission to discharge. The Clinical Lead also chairs the popular, fortnightly 'parent meetings' in which parents can influence care and change on the unit. When creating the care pathway, the team will involve the Bolton Improving Care Systems (BICS) team who have the necessary skills and knowledge to ensure effective change. Current work is ongoing to identify factors to improve breastfeeding rates. The data will demonstrate whether the interventions implemented have any impact on breastfeeding success.

There is an extensive MDT working on the neonatal unit to provide best possible care. There is a plan to link with the local children's hospice to improve the provision of palliative care. The neonatal occupational therapist is providing Newborn Behavioural Assessment Scale (NBAS) assessments which can empower parents and enrich the parent-baby relationship. The physiotherapist is involved in providing neurological assessments and care plans and the Speech and Language therapists are also available to offer support with feeding issues and work closely with the dietician. The FCT are also in the process of recruiting a counsellor and play worker to provide holistic care for the entire family.

Summary

The FCT's role has evolved since the start of this project and rather than being there primarily to support parents, it has become a catalyst for service improvement and acts as an advocate for families.

The audit tool was the starting point in analysing knowledge and attitudes and will continue to be a useful tool when there is a re-audit to assess the success of the input and training. The Bliss Charter will also be useful to measure progress. One measure of success is the positive comments and letters received from parents and families, for example:

"You all do an amazing job at making parents feel better and secure... you have always been there and for that I couldn't thank you enough!"

Finally thanks must go to the unit managers for giving the FCT the opportunity to develop and reshape their roles as neonatal practitioners into Family Care Leads and encouraging them to implement the changes and ideas.

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