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Duncan Fisher, The Family Initiative, Heron House, Chiswick Mall, London W4 2PR, UK. Director of the Family Initiative's International Neonatal Fathers Working Group, www.familyinitiative.org.uk/neonatal-fathers.
Minesh Khashu, Poole Hospital NHS Foundation Trust Poole, Dorset, BH15 2JB; Bournemouth University, Bournemouth, BH1 2LT, UK; Research Chair of the Family Initiative's International Neonatal Fathers Working Group, www.familyinitiative.org.uk/neonatal-fathers.
Esther A. Adama, Edith Cowan University School of Nursing and Midwifery in Perth, 270 Joondalup Drive, Australia, WA 6027
Nancy Feeley, Centre for Nursing Research & Lady Davis Institute - Jewish General Hospital, McGill University, Montréal (Quebec), Canada
Craig F. Garfield, Departments of Pediatrics and Medical Social Sciences, Northwestern University Feinberg School of Medicine; Lurie Children's Hospital of Chicago, Chicago, IL, USA
Jillian Ireland, Poole Hospital NHS Foundation Trust Poole, Dorset, BH15 2JB; and Visiting Faculty Bournemouth University, Bournemouth, BH1 2LT, UK
Flora Koliouli, Centre d'Études des Rationalités et des Savoirs**,** Laboratoire Interdisciplinaire Solidarités, Sociétés, Territoires (LISST-CERS), University of Toulouse, 2-Jean Jaurès, 31058 Toulouse, France
Birgitta Lindberg, Division of Nursing, Department of Health Sciences, Luleå University of Technology, 97187 Luleå, Sweden
Betty Nørgaard, Department of Paediatrics, Lillebaelt Hospital, Sygehusvej 24, 6000 Kolding Denmark
Livio Provenzi, 0-3 Center for the at Risk Infant, Scientific Institute IRCCS Eugenio Medea, via Don Luigi Monza 20, 23842, Bosisio Parini, LC, Italy
Frances Thomson-Salo, Centre for Women's Mental Health, Royal Women's Hospital, 20 Flemington Road, Carlton, Australia 3053
Edwin van Teijlingen, Centre for Midwifery, Maternal & Perinatal Health, Faculty of Health & Social Sciences, Bournemouth House, 19 Christchurch Road, Bournemouth University, Bournemouth, BU1 3LH, UK

Abstract

The Family Initiative's International Neonatal Fathers Working Group, whose members are the authors of this paper, has reviewed the literature on engaging fathers in neonatal units, with the aim of making recommendations for improved health outcomes in neonatal practice. We find that supporting the father-baby bond and supporting coparenting between the mother and the father benefits the health of the baby, for example, improved weight gain and oxygen saturation and enhanced rates of breastfeeding. We find, however, that despite much interest in engaging with parents as full partners in the care of their baby,

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engaging fathers remains sub-optimal. Fathers typically describe the opportunity to bond with their babies, particularly skin-to-skin care, in glowing terms of gratitude, happiness and love. These sensations are underpinned by hormonal and neurobiological changes that take place in fathers when they care for their babies, as also happens with mothers. Fathers, however, are subject to different social expectations from mothers and this shapes how they respond to the situation and how neonatal staff treats them. Fathers are more likely to be considered responsible for earning, they are often considered to be less competent at caring than mothers and they are expected to be "the strong one", providing support to mothers but not expecting it in return. Our review ends with 12 practical recommendations: (1) assess the needs of mother and father individually, (2) consider individual needs and wants in family care plans, (3) ensure complete flexibility of access to the neonatal unit for fathers, (4) gear parenting education towards coparenting, (5) actively promote father-baby bonding, (6) be attentive to fathers hiding their stress, (7) inform fathers directly not just via the mother, (8) facilitate peer-to-peer communication for fathers, (9) differentiate and analyse by gender in service evaluations, (10) train staff to work with fathers and to support coparenting, (11) develop a father-friendly audit tool for neonatal units, and (12) organise an international consultation to update guidelines for neonatal care, including those of UNICEF.

Keywords: neonatal care, fathers, coparenting, bonding, skin-to-skin

1. Introduction

This paper discusses recent research and practice on engaging fathers in neonatal care and makes practical recommendations for how to optimise their engagement. It follows a literature review in 2016 [1].

Three core principles emerge from recent analysis and practice:

- support the father-baby bond in the same way the mother-baby bond is supported
- pay attention to the differences between mothers and fathers, both within individual families and also in relation to different gendered social expectations experienced by each
- support team parenting, or coparenting, between the mother and father.

This is a paradigm shift from the widespread view in maternal and newborn health that mothers are the primary carers of babies and fathers are helpers. Fathers have innate biologically-based abilities to bond with and care for babies; these are especially important for the health and safety of babies in situations of stress and risk.

There are, of course, situations where a father is not present. It is likely in these situations that other coparents are on-hand and need to be engaged as such. This review focuses on fathers and the male/female gender issues that this raises, and so only applies to families where fathers are involved.

2. Engaging fathers benefits infant and family health

Benefit: baby health

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A randomised controlled trial (RCT) compared Family Integrated Care in a neonatal unit (where parents are supported to become the primary carers of the baby) with standard neonatal care. The study involved about 1,000 fathers and 800 mothers in Australia, Canada and New Zealand. The study found greater weight gain in babies and more exclusive breastfeeding at 21 days in Family Integrated Care [2].

The father-baby bond, like the mother-baby bond, benefits the baby. Researchers at Hallym University Sacred Heart Hospital in South Korea ran an experiment to show the benefit to infant health of fathers giving "tactile stimulation" to their premature babies. They trained 20 fathers to stroke their babies for 10 minutes a day over five days. They found that babies who had received such additional tactile care had higher oxygen saturation levels [3].

A review in 2016 of 12 studies recorded the following benefits of father skin-to-skin care for infant health [4]:

- Increase in baby's temperature, similarly to mother skin-to-skin care (Sweden, Germany)
- Better blood glucose level (Sweden)
- Lower salivary cortisol level, indicating less stress
- More settled baby (Sweden, Canada)

The early presence of fathers can help to reduce the time of parent-baby separation after the birth [5].

In research from outside of neonatal unit care, increased father-child attachment has been shown to improve mother-baby interaction as measured by increased breastfeeding rates. Recent research from Taiwan shows that supporting father-baby skin-to-skin care improved rates of exclusive breastfeeding in the first three months, even when not accompanied by any additional education about breastfeeding itself [6]. This complements research from Vietnam, showing an association between increased breastfeeding rates and support for the father-baby bond [7].

Benefit: service savings

In the United States (US) babies of mothers and fathers who attended a four-session *Creating Opportunities for Parent Empowerment* programme stayed in the hospital on average four days less [8]. This was, however, not reproduced in the later Family Integrated Care RCT and needs further exploration [2].

3. Engagement with fathers in neonatal care remains suboptimal

There is a well-established global interest in an equal "partnership of care" or "therapeutic alliance" between health professionals and parents in neonatal care. The aim is to enable parents to be active carers of their baby, supporting them to bond with the baby and engaging them in decision-making.

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UNICEF's Baby Friendly Initiative (www.unicef.org.uk/babyfriendly/baby-friendly-resources/guidance-for-health-professionals/implementing-the-baby-friendly-standards/guide-to-the-baby-friendly-initiative-standards/) defines a set of standards for this kind of partnership. Family Integrated Care (familyintegratedcare.com) is an advanced form of partnership with parents, which evolved originally in Estonia and has been pioneered in Canada. The process is designed in collaboration with parents and staff are trained to be coaches, mentors and counsellors for parents. In UK the Bliss Baby Charter defines a set of standards for family-centred care (www.bliss.org.uk/the-bliss-baby-charter-guide).

Engagement with fathers, however, needs to be improved.

A study of family-centred care in 11 European neonatal intensive care units found variable performance in the support offered to fathers. In six units they were less present than mothers and perceived less support than mothers. In the others they reported receiving the same level or even more support than mothers did. The survey found that fathers' contribution to the total parental presence varied between the units from 12% to 46% and accounted for 14–43% of the time the babies were held and 10–37% of the provision of skin-to-skin contact. The study was carried out by the Separation and Closeness Experiences in Neonatal Environment (SCENE) research group in Finland. It involved 262 families in six European countries – Finland, Sweden, Norway, Estonia, Spain and Italy [9].

A French study found an association between fathers' rating of neonatal care and how well they felt treated by the staff [10], whereas in contrast, in Ghana, there is total exclusion of fathers in neonatal care. Fathers are sent away, left out of discussion and planning, uninformed and subject to unfriendly exchanges with staff [11].

4. Fathers in neonatal units can and should become very close to their babies

The experience of mothers and fathers trying to maintain closeness with their babies in a neonatal unit has been described as "clinging to closeness" during a rollercoaster ride of closeness and separation. Closeness helps fathers feel like 'real parents' [12].

Neonatal care can offer additional opportunities for fathers to be close to their babies, compared to birth at term, because of the additional needs of the baby that draw both parents in. A 2008 study of fathers in neonatal units found that they reported being closer to their babies than fathers of babies born at term [13]. For example, they were quoted as saying:

> *"I'm the one who accompanied my daughter to neonatology. I was able to be at her side. It made me very happy."* [14]

> *"It's important that I can see him, talk to him, simply touch him so that he knows I'm there."* [14]

If the mother is immobilised in another location, the father often shuttles back and forth, supporting the mother-baby connection as well as he can [14]. The feeling of being caught

DRAFT

in between mother and baby is common immediately after birth, because fathers want to be with both the mother and the baby at the same time [15].

Skin-to-skin contact between fathers and babies generates particularly strong feelings in fathers – of gratitude, happiness and love. To describe the experience, fathers use words like "powerful", "strong", "fantastic", "amazing" and "incredible" [16], for example:

> *"I did a bit of kangaroo with him and when I looked at him….wow! I'm going to be paternal, I know."* [14]

> *"When I first saw M., it was magic, a miracle! I was all alone in the bloc, when they were preparing her for the NICU… I felt like I had to touch my daughter. A very emotional moment, firstly the eye contact and then the physical, a magic contact…"* [17]

> *"Kangaroo care together…these are the unforgettable moments. When we cried together."* (mother of twins) (youtu.be/RGdaKY2HXqc)

> *"The first time I held him skin-to-skin, it was really, like, wow! It was like a communion, like a really privileged contact."* [18]

> *"I looked at my son and then my daughter and then my wife and I just felt, damn I'm so happy."* (father of twins) [16]

After skin-to-skin care, some fathers report relief from anxiety, pride (e.g. wanting to share photos with friends), increase in confidence in care and feeling more equal with the mother as a carer [16].

The aforementioned study from Taiwan about teaching fathers tactile stimulation of babies was associated with fathers reporting more attachment to their baby according to a 35-point attachment questionnaire [3]. The feeling of closeness between father and baby is not associated with a lack of support for mother-baby closeness. For many fathers, the separation of mother and baby is a source of anxiety.

> *"It was a relief [to see mother and baby connected] because I saw that in fact the separation hadn't lasted long. It made me very happy to see my spouse with the baby on her. There was recovery, and that's really important."* [14]

5. Father-baby attachment has a biological basis, like mother-baby attachment, but has not received adequate attention

When fathers are more engaged in caring for their babies, they experience stronger hormonal and neurobiological changes than when not engaged. These changes are, in turn, associated with short and longer-term benefits for the baby.

- Oxytocin is associated with human sociality, including empathy, social collaboration, care of babies and romantic love. It increases in fathers as in mothers through

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physical contact such as skin-to-skin, and decreases less quickly than in mothers post skin-to-skin [19]. When fathers are administered oxytocin (via a nasal spray), they become more attuned to their babies. The babies' own oxytocin levels also become higher and their social orientation and socialising behaviour increase [20].

- Testosterone decreases in men when a baby is born. If the father is more involved in caring, the testosterone decreases further [21]. Fathers with lower testosterone are more affectionate and sensitive towards their babies [22]. Testosterone also drops more if the father is more committed to the relationship with the mother after the birth of the baby. In these couples, there are stronger correlations in testosterone levels between the mother and father [23].

- Cortisol is commonly associated with stress, but not necessarily negatively. Fathers with higher cortisol levels are more alert and responsive to a baby crying [24]. This increase in cortisol might help new parents pay attention to their baby's signals. In contrast, higher cortisol levels in both mothers and fathers are associated with a poorer relationship between them [25]. Skin-to-skin care is associated with a drop in cortisol in fathers, as in mothers, with the effect being longer lasting in fathers post skin-to-skin [19].

- Prolactin is associated with breastfeeding, but it increases in new fathers too. Experienced fathers exhibit increases in prolactin when they hear a baby crying [24]. Prolactin levels are highest when babies are most needy and vulnerable [26].

Neuroscience has identified two areas of the brain associated with caregiving and both can be activated in fathers like mothers, the more so when the father cares for his baby [27].

- The **"emotional empathy" brain network.** This network enables an automatic understanding of the baby's mental state, allowing the parent to "feel" and experience in herself/himself the physical pain or emotional distress of the baby.

- The **"socio-cognitive" brain network**. This is a later developing circuit, including cortical and frontal brain areas. It is associated with mentalizing, cognitive empathy, and social understanding. In relation to caring for a baby, it enables a parent to infer baby's mental state from behaviour, to predict the baby's needs and plan future caregiving activities.

Actively caring fathers show greater activation in the "emotional empathy" brain network. When fathers engage in regular active day-to-day care of children – particularly in the extreme case when fathers raise their babies with no maternal involvement – they become as attuned and as sensitive to the baby's cues as mothers do [27].

Longitudinal research has found that emotional empathy brain activity in a father in year one is associated with better emotional regulation in the child four years later. Similarly, higher activity in the socio-cognitive brain network is associated with a child's higher social skills four years later [20].

DRAFT

The active engagement of fathers in neonatal units triggers these biological and neurobiological processes. This new science helps to explain the feelings of love expressed by fathers holding their babies, as described in the previous section.

6. Social expectations of mothers and fathers influence their experiences and behaviour as well as the behaviours of healthcare professionals towards them

A focus of the most recent research on fathers in neonatal units has been the different social expectations of mothers and fathers and how these influence – but by no means define - their responses to having a baby in a neonatal unit. The father of a premature baby starts in a different place from the mother [16].

In a Canadian study, one third of fathers were highly involved, equally with mothers. Another third visited regularly but believed the role of the mother was to care for the baby and the role of the father was to support the mother. The final third did little or no caring, were fearful about handling the baby and had to be strongly encouraged [18]. Such variation is not see among mothers, whose roles are more clearly defined.

Three particular gender attitudes – some would say myths - emerge as significant:
(1) employment and work are mainly a man's responsibility
(2) women are better than men at caring
(3) men should be strong [28-31].

Research and practice in neonatal parenting support should not ignore gender. It is not possible to design the best service for mothers or fathers without understanding different gender influences of each of them [32]. Healthcare professionals should understand their own attitudes to and assumptions about fathers. All that follows describes *tendencies* among fathers and mothers. In reality, neonatal unit care needs to deal with diversity of responses and needs of both parents.

1. Men are expected to be the lead earner

In Denmark, like many other countries, fathers only get two weeks of paternity leave in the first 14 weeks. This creates a dilemma for fathers of babies admitted to neonatal units. They want to take leave in the first two weeks when their babies are in the most critical condition; but they also need it later on, including when the baby comes home. Furthermore, fathers are typically left in sole care of any older siblings of the baby. This lack of time off for the baby places fathers in a particularly difficult situation [30].

> *"I have never been this stressed before….I take care of the other children at home and of my job, but I also need to be here – I want to be here as well."* [28]

> *"I hate the fact that I get to see my baby 1 hour a day now as I work 8 am-8 pm. Just understand that even though you have a little one in the NICU, it does not mean that the mortgage company or credit company would care."* [33]

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Work commitments also mean that sometimes fathers get no information directly from staff, only via the mother. When this happens, it leads to feelings of being out of control and not a full parent.

2. Women are considered "natural" carers; men are not

There is a widespread belief in society as a whole that mothers are "primary" carers and so fathers are secondary. Hence, fathers in neonatal units can see themselves as secondary parents and staff can treat them as helpers, rather than full parents [34].

> *"As a father, you feel left out."* [28]
>
> *"I think that the mother is more important than the father, even though both would like to hold her."* [14]
>
> *"I didn't always feel comfortable holding him or giving him a bottle. I didn't want to do anything wrong."* [14]

Some studies observe that fathers are less intimate with the baby when the mother is present – they defer to the mother when she is present [34].

Such beliefs, contrasting with the heightened degree of father-baby connection that can occur in neonatal care, generate a diversity of reactions. Sometimes the beliefs impact on the father's own relationship to the child – they hold back from touching or holding the baby [30]. Meanwhile, at other times, such beliefs make little difference to the father's own investment in relating to the baby [14].

The primary/secondary construction has long been challenged by development psychologists who observe the importance of the system of care around the baby, involving multiple parent-child attachments and support by one parent for the other parent's relationship with the child; in this perspective there is no primary or secondary, rather a team [35].

The idea that mothers are natural carers and men are not can lead to mothers and fathers reacting differently to their own uncertainty and lack of confidence. Fathers may need and want more detailed and specific instruction, fearful of their perceived innate inability to care [28].

> *"Tell me what it means when my son raises arms. It means, "I want peace." It is helpful to receive specific instructions. Try to interpret it your way [the nurses say]. What am I supposed to interpret? I have no idea."* [28]

3. Men are expected to be strong and protective

Research shows that fathers of pre-term babies are considerably more at risk of depression and anxiety than fathers of babies born at term, though they are less affected than mothers of pre-term babies [36]. Multiple earlier studies from France, Canada, Sweden, Australia and

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UK have shown that many fathers in neonatal units do not feel at liberty to 'let go' emotionally [28].

Some of the fathers in a Danish study expressed constant worry and an inability to relax. "There is chaos in my mind," one father said. But they also described how they strive to appear calm and show none of this, in line with masculine ideals of independence and self-sufficiency [28,31].

> *"I don't want to be weak in front of my wife. I don't think she knows how bad I am hurting right now."*

> *"We guys like to fix things and this is something that cannot be fixed and there's got to be some frustration about that."* [33]

A recent US study found that, on returning home, cortisol levels in fathers showed they were more stressed than mothers, and yet they did not report this in a *Perceived Stress Scale* questionnaire [37].The fathers stated that their role was to fulfil their partner's needs and expectations, and that they did not expect reciprocal support from their partners [16,28].

> *"I have to cheer her up, but no one helps me. It is difficult to bear. I do not show that I am burnt out; instead, I suppress my feelings."* [28]

> *"My wife does not know that I am about to lose patience."* [28]

> *"I wouldn't want my wife asking me how I feel."* [33]

Fathers said they needed time alone with staff, to be able to talk freely about their difficulties without showing their vulnerability to their partners. [28]

7. Evidence based recommendations for engaging fathers in neonatal units and optimising practice

On the basis of this review of recent evidence and practice this working group makes 12 recommendations for practice.

1. Assessing fathers' and mothers' needs individually

Fathers' needs can be different from mothers' needs, and so assessment should consider parents from the same family as separate individuals.

The National Perinatal Association in the US has established guidelines for the psychosocial care of parents (www.nationalperinatal.org/Support4NICUParents). They recommend that mental health professionals meet with all parents/primary caregivers within one to three days of admission to establish a working relationship, normalize emotional distress and evaluate risk for psychological distress (e.g., depression, post-traumatic stress). Both

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mothers and fathers should be screened for distress within the first week after admission to the NICU and re-screened prior to the baby's discharge.

Measures such as the Clinical Interview for Parents of High-Risk Infants (CLIP) have been found to be less good at predicting depression and anxiety in fathers of pre-term babies than in mothers [36]. This supports the need to adapt tools designed for mothers before applying them to fathers.

Fathers are, of course, diverse, just as mothers are. Gender norms influence but do not define the behaviours of fathers. Fathers come with widely different experiences – socio-economic position, culture, race, age [30,32]. Individual assessment will enable recognition of such diversity.

2. Care plans

Care plans drawn up with parents should specify what each parent needs individually, as well as jointly, to allow for differences between parents. Of particular significance will be the timing of support around each parent's availability [38].

3. Accessibility of neonatal unit

Family-centred neonatal care involves making neonatal units family friendly and that, of course, includes fathers.

Complete flexibility of access for fathers is important, to enable visiting at any time of day around their work and their care of other children. The physical space is important – one survey showed that units providing opportunities for overnight stays for at least one parent had a significantly higher parental presence [39]. The imagery and language in printed materials and the attitudes and body language of professionals are both important [31]. A hospital in Poland has task lists by the cots, divided into "mother", "father" and "nurse" (youtu.be/RGdaKY2HXqc).

4. Coparenting education

Parenting education should be directed equally at both parents within the neonatal unit.

Education in the hospital should also prepare parents for the return home, where they have to work as a team, caring for the baby and for each other. One study found that parents were worried about each other on returning home – mothers tended to worry about fathers' work-life balance and fathers about mothers' mental health [40].

As a future innovation we propose the development of parenting education based on a coparenting approach. This approach rejects the "primary"/"secondary" idea and replaces it with the idea of teamwork. Parenting skills are considered, but also how parents can work together and support each other, fathers for mothers and mothers for fathers. Coparenting is particularly important in stressful situations where parents need to look after each other more.

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5. Father-baby closeness

Neonatal units can support father-baby closeness in a variety of ways.

- Provide privacy and time to bond with their baby in a peaceful and calm environment [12,16].
- Help fathers to recognise a baby's responsiveness to them, for example, how the baby calms down when the father cares [12].
- Help fathers be autonomous carers for the baby – involved in decision-making and understanding the technology [41,42].
- Allow fathers to see other fathers on the unit being close to their babies [16,41]. This communicates a different social norm.

The new understanding of biology and neurobiology of fatherhood marks out father-baby skin-to-skin as a particularly important factor, triggering instincts that tune the father into caring and introducing them into an active paternal role [43]. Skin-to-skin care has a unique role in helping fathers to build confidence as equal carers, not just "helpers", and to discover the joy of loving their baby [34,44]. Skin-to-skin requires adequate time and time alone with the baby, and the father should feel able to practise skin-to-skin even when the mother is present. Mothers too, of course, need protected time and space to develop skin-to-skin care for the baby.

6. Be attentive to fathers hiding stress

Given that many fathers feel the need to be "the strong one" and to provide support to, but not receive support from their partners, the neonatal staff needs to take particular care to afford fathers the space to express their feelings safely, and possibly confidentially from their families [31,34]. The staff needs to be mindful that fathers can mask fear through withdrawal, or the opposite, such as anger and bravado [31]. Simply communicating to fathers that their reactions are normal is important [15].

> *"I wanted to hear this is a normal reaction and you are going to handle it, but nobody spoke to me."* [15]

7. Inform fathers directly

Fathers typically require information as a way of feeling less out of control [15,28]. It is important to inform the fathers directly, not solely via the mother, and that means being able to communicate at times when he is available around work and care for older siblings [34]. It is preferable to provide important updates to parents when they are together: two people will understand the information in more diverse ways, can discuss and support each other after, and one can ask questions the other might not feel comfortable to ask (youtu.be/RGdaKY2HXqc).

A study in Iran found that running an education class specifically for fathers a few days after the baby's admission to a neonatal unit improved their knowledge. The researchers, working with 23 fathers, used a US programme, HUG Your Baby (www.hugyourbaby.org).

DRAFT

This consisted of one session, a DVD and a handout. The programme focused on baby sleep, crying and attachment [45]. Information for fathers should include the biology and neurobiology of fatherhood, as outlined above. Understanding of the science helps fathers understand the difference between what is "natural" and what is social convention.

Professor Khashu in UK has developed a new resource for fathers of babies in neonatal units, with Inspire Cornwall CIC, called DadPad Neonatal©. This is comprehensive and information rich and it addresses all the concerns that are identified in the research, as well as facilitating a father's direct communication with the neonatal unit. It has been developed in such a way that it can be kept as a memento of the neonatal journey. Meanwhile in Australia, a text messaging service for fathers, SMS4Dads, is about to be tested with fathers of premature babies – SMS4Dads Early Arrivals (www.sms4dads.com). In the US, a NICU-2-Home smartphone app has been trialled, and found to improve parenting self-efficacy, discharge preparedness and length of stay by those who use it regularly [46].

A recent US study finds that fathers would like both mothers and fathers to have the same frequent direct updates on their mobile phones. These fathers observed the tendency for health staff to inform mothers preferentially. They also wanted to be able to access more emotional support from professionals [47].

8. Facilitate peer-to-peer communication for fathers

A US study looked at what fathers of babies in neonatal care talked about with each other on social media, in their own space [33]. The researchers found that fathers ask questions, offer suggestions to each other, share information they have found elsewhere and share personal experiences. Topics of conversation include the health of the baby, healthcare costs, the pressure of work and caring for older siblings, the lack of social support and the difficulty of having to be the strong one.

> *"I think that one thing I could have used was communication with other dads who had been through the NICU experience. The moms were able to bond in the pumping room but I had no place to meet or talk with other dads that had gone through what I was experiencing."*

> *"The whole preemie thing is terrifying. Everybody around the situation is focused on mom/baby. Dads are left to worry about everything and everyone. As a dad, you may feel lonely. Hopefully, you will get some support by talking to people in here."*

The same researcher later published evidence about what fathers want, with peer-to-peer communication one of the wished for aspects of support [46].

> *"It would have been helpful to have maybe more contact with NICU fathers such as men with children who were either currently or had been in the NICU at some point."*

> *"My wife and I went to one of the support group meetings that were run by a social worker. I was surprised there was only one other father. Overall, I would say fathers*

DRAFT

> *wouldn't have the time to actually go to those support groups, so maybe something like Facebook would be better for fathers."*

One mother said:

> *"I had a very hard time at first. I felt very guilty. There were some other NICU moms who sat me down and talked to me….It was very encouraging! But there was not really any of that for fathers."*

In Australia a weekly two-hour fathers group is organised. Group discussions are animated, typically featuring strong expressions of sadness, anxiety and anger. Fathers attending the groups say they particularly appreciate the connection with others in a similar position. In addition to the meetings, a closed Facebook page has been set up, moderated by a member of neonatal staff. To organise groups like this, the neonatal unit must provide staff, a room and active promotion to fathers on the unit [29].

Ideally there should be a variety of provisions, since not all fathers want the same thing. Nevertheless, if fathers' groups, on-line and off-line, are well run, they are popular [31].

9. Differentiate by gender in evaluation outcome measurement

Service evaluation should always collect data individually from both parents and analyse results broken down by gender. This is relevant to the evaluation of staff quality, parental involvement in caring, communication and information, unit environment and discharge planning [31].

Engaging fathers in research requires specific recruitment techniques, for example:

- Don't require fathers to disclose their answers to their partners – access the parents separately.
- Access fathers around their working hours.
- Offer the option of a male researcher to interview fathers in case any would find that easier.
- Persist in engaging fathers who are more difficult to reach.
- Offer different venues for data collection, including on-line. The home may not be a suitable environment for some [31].

10. Staff training

Studies have shown that nurses have an important role as facilitators of father engagement. [46] Nurses, however, tend to have more difficulty relating to fathers than to mothers and may benefit from coaching to overcome this [48,49].

Staff training should include engaging fathers across all aspects of care. A special section on "engaging fathers" in a training course all about supporting mothers is not enough. We propose an innovation in staff training, namely teaching a coparenting approach that focuses on enabling parents to work together effectively.

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11. Father-friendly service audit tool

An audit tool for neonatal services, *how father-friendly are we*? could built to analyse any service in relation to all the recommendations above. An existing tool of this kind is the Fatherhood Institute's 10-point father-friendly commissioning checklist, covering such things as organisation policy, staff training and assessment of fathers' needs [50].

12. Review international standards for neonatal care in the light of recent evidence

The importance of supporting father-baby bonding and mother-father coparenting are not adequately reflected in international standards, such as UNICEF's Baby Friendly Standards. A review is now needed.

8. Conclusion

This paper sets a new agenda for international action, with 12 recommendations focusing on how neonatal units can support father-baby bonding and mother-father coparenting, both of which improve infant health.

The Family Initiative's International Neonatal Fathers Working Group will take forward these recommendations, seeking to disseminate knowledge, host discussion among professionals and develop new tools for best practice. The authors invite all those interested to get involved by visiting www.familyinitiative.org.uk/neonatal-fathers.

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