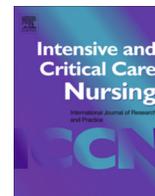




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## Research article

# The health care system is making ‘*too much noise*’ to provide family-centred care in neonatal intensive care units: Perspectives of health care providers and hospital administrators



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## ABSTRACT

**Aim:** To describe the perspectives of health care providers and hospital administrators on their experiences of providing care for infants in Level II neonatal intensive care units and their families.

**Research methods:** We conducted 36 qualitative interviews with neonatal health care providers and hospital administrators and analysed data using a descriptive interpretive approach.

**Setting:** 10 Level II Neonatal Intensive Care Units in a single, integrated health care system in one Canadian province.

**Findings:** Three major themes emerged: (1) providing family-centred care, (2) working amidst health care system challenges, and (3) recommending improvements to the health care system. The overarching theme was that the health care system was making ‘*too much noise*’ for health care providers and hospital administrators to provide family-centred care in ways that would benefit infants and their families. Recommended improvements included: refining staffing models, enhancing professional development, providing tools to deliver consistent care, recognising parental capacity to be involved in care, strengthening continuity of care, supporting families to be with their infant, and designing family-friendly environments.

**Conclusion:** When implementing family-centred care initiatives, health care providers and hospital administrators need to consider the complexity of providing care in Level II Neonatal Intensive Care Units, and recognise that health care system changes may be necessary to optimise implementation.

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## Implications for clinical practice

- Health care providers and hospital administrators need to recognise the complexity of providing care in a Level II Neonatal Intensive Care Unit.
- Operationalisation of family-centred care requires coherence between the philosophical beliefs and practices of individual providers.
- Family-centred care initiatives should consider strategies to recognise and respond to continuously changing parental capacities.
- Staffing models and profession development should be optimised to meet the dynamic of unpredictable workloads.

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## Introduction

Family-centred care (FCC) in perinatal facilities recognises that families are essential to the health of children, and is the recommended practice in paediatric care (Committee on Hospital Care and Institute for Family-Centred Care, 2003). FCC is “an approach to healthcare that is respectful of and responsive to individual families’ needs and values” (Davidson et al., 2017, p. 105). Family is broadly defined, and recognises the diversity of contemporary families (Chalmers, 2017). FCC may be particularly important in neonatal intensive care units (NICU), where a highly technological environment diminishes opportunities for parents and caregivers to be involved in the care of their infant (Finlayson et al., 2014). Yet, nurses struggle to support and facilitate parental participation, while parents report challenges in identifying expectations and their role (Trajkovski et al., 2016).

Since FCC is an approach, rather than a practical application of a protocol for care and is context-dependent and often resource-constrained, there is broad heterogeneity in its implementation (Kuo et al., 2012; Shields et al., 2007). Recently proposed guidelines for FCC best practices in neonatal, paediatric and adult intensive care units (ICU) included: (1) family presence in the ICU; (2) family support; (3) structured communication; (4) use of consultations and supports and (5) operational protocols and resources to promote FCC (Davidson et al., 2017). The guidelines are limited by weak evidence (Davidson et al., 2017), thus, FCC-associated concepts remain fundamentally misunderstood (Harrison, 2010; McGrath et al., 2011; Shields et al., 2007) and are difficult to implement in specific settings (Shields et al., 2006). Nonetheless, institutions, health care providers (HCP), and researchers have forged ahead with implementing interventions to promote FCC in NICUs (Gooding et al., 2011).

Family Integrated Care (FiCare) is a FCC intervention designed to engage parents as integral members of their infant’s NICU team (O’Brien et al., 2013). The most preterm (<32 weeks gestation) and critically ill infants are admitted to Level III NICUs. A matched case-control pilot study of FiCare in Level III NICUs yielded promising results: compared to infants in the matched control group, infants enrolled in FiCare showed a significantly increased weight gain trajectory and were more likely to be breastfed at discharge, while mothers reported less stress (O’Brien et al., 2013). Results from an international (Canada, Australia and New Zealand) cluster randomised controlled trial (cRCT) in Level III NICUs demonstrated similar positive results (O’Brien et al., 2018).

Nearly 80% of preterm infants are born at moderate (32 weeks and 0 days to 33 weeks and 6 days) and late (34 weeks and 0 days to 36 weeks and 6 days) gestation, and are admitted to Level II NICUs (Bassil et al., 2014). Given the effectiveness of FiCare in Level III NICUs, similar improvements in infant and maternal outcomes could occur in Level II NICUs. This notion led to our team to propose a cRCT of FiCare in Level II NICUs (Benzies et al., 2017). To mitigate challenges of implementing a FCC intervention, a comprehensive understanding of the Level II NICU setting was an imperative first step.

The aim of this study was to describe the perspectives of HCP (nurses, allied health professionals, and physicians) and hospital administrators (patient care managers, medical directors and executive directors) on their experiences of providing care for infants in Level II NICUs and their families.

## Methods

### Design

We used a qualitative interpretive description approach (Thorne, 2013) to gain an understanding of HCP and hospital

administrators’ experiences in Level II NICUs. This approach was selected because it yields clinically relevant knowledge from disciplinary conceptual perspectives and seeks to generate new insights from qualitative evidence that can shape practice.

### Setting

We conducted this qualitative sub-study in order to obtain a reference point for how care is provided prior to the implementation of a cRCT of FiCare in 10 Level II NICUs. We included NICUs in larger ( $n = 6$ ) and smaller hospitals ( $n = 4$ ) from urban and semi-rural settings in Alberta, Canada. Alberta has a single, publicly-funded health care system, which serves a demographically diverse population (approximately 4 million people) spread over 660,000 square kilometres.

### Participants

During the design of the cRCT, the research team established working relationships with key HCP and hospital administrators who endorsed the study at each site. Through these pre-existing relationships, we purposively sampled a (1) registered nurse, (2) allied health professional (dietician, social worker, pharmacist, or occupational therapist), (3) physician (neonatologist or paediatrician), and (4) hospital administrator (medical director, executive director, or patient care manager) from each site. We included participants in the qualitative sub-study if they were currently employed and actively working at their site.

### Ethical approvals

This study was reviewed and approved by the University of Calgary Conjoint Health Research Ethics Board (CHREB ID 15-0067), University of Alberta Health Research Ethics Board (Pro00060324), and Covenant Health Research Centre (ID 1762).

### Data collection

The Project Coordinator obtained written informed consent from participants and scheduled interviews. Participants completed a short questionnaire of their demographic characteristics and experiences working in health care (i.e., age, gender, discipline, and years working in health care and NICU). Two female research and evaluation consultants with graduate degrees and expertise in qualitative interviewing were contracted to conduct 40 to 60 minute one-on-one interviews via telephone or face-to-face, depending on geographic proximity to the participant. Following training about the specific aims of this study, they conducted interviews between December 2015 and May 2016. They used two separate semi-structured interview guides: one for HCP and one for hospital administrators. Of the HCP they asked: (1) What are your greatest joys?; (2) What are your greatest challenges?; (3) What do you see as your role on your unit?; (4) What do you see as your contribution to care of families and infants on your unit?; (5) What do you see as your contribution to the multi-disciplinary health care team? and (6) If you had an opportunity to change the care provided on your unit, what changes would you make? Given their involvement in direct patient care was more limited, hospital administrators were asked only the first two and last questions. There was no previous relationship between the interviewers and participants.

### Data analysis

Interviews were digitally audio-recorded, de-identified and transcribed verbatim. We analysed the data using interpretive

description (Thorne, 2013). The first author read all transcripts and manually generated initial codes, then sorted and interpreted them into emerging themes and sub-themes. The research team reviewed emerging themes and sub-themes, labelled them and agreed on a final coding scheme. Two research assistants independently applied the coding scheme to code all transcripts. One research assistant coded intervention group transcripts and one coded comparison group transcripts. To ensure the research assistants approached coding with the same interpretation of themes, they compared their coding for two transcripts. They resolved minor disagreements through discussion with the research team and consensus. We used NVivo 10 to manage the qualitative data, and IBM SPSS version 24 to describe characteristics of participants.

## Findings

### Sample characteristics

Of the 36 participants interviewed and included in qualitative data analysis, demographic information was available for 34 (see Table 1). On average, participants were 44.6 years old ( $SD = 11.3$ ). They reported 19.0 years ( $SD = 12.5$ ) experience in health care, and 12.0 years ( $SD = 11.0$ ) experience in NICU.

Three major themes emerged: (1) providing FCC; (2) working amidst health care system challenges; and (3) recommending improvements to the health care system. Quotations to illustrate major themes are included in the text. For each theme, several sub-themes emerged. See Table 2 for quotations to illustrate the sub-themes.

### Theme 1: Providing family-centred care

Three sub-themes related to providing FCC emerged: (1) involving parents in care; (2) teaching parents; and (3) supporting parents.

#### Involving parents in care

FCC in NICUs requires active involvement of parents in the care and decisions about care of their infant. Most participants described involving parents in the care of their infant as collaborative and part of the unit culture. They perceived that involving parents decreased fear and increased parenting confidence in the NICU and after discharge:

*There's a lot of fear that ... holds parents back from engaging in their role as parents. So our job as an RN is to ... help those parents know and understand that their role is still to be the parent to their baby. And ... break that barrier of fear [so they] are able to do the aspects of care that are appropriate for parents in the NICU. ... [Y]ou'll get a lot less babies readmitted because you have parents at home that are confident in the skills that they've learned. (bedside nurse)*

Facilitators of involving parents included positive nurse-parent relationships, respect and understanding of the emotional toll on parents of having an infant in NICU, and encouraging parents to be part of the care team. Challenges to involving parents included difficult nurse-parent relationships, which were often attributed to the emotional challenges of having a preterm infant in NICU. Also among challenges were lack of shared decision-making, inconsistent practices related to parental involvement, logistical barriers, such as lack of transportation to the NICU or childcare for older siblings, safety risks for the infant, and parental involvement as replacing nursing work.

Most participants described positive working relationships with parents (quote 1.1.a). Difficult relationships were uncommon, and participants accepted parents who were more challenging because of the emotional stress of having an infant in NICU (quote 1.1.d). Even with difficult working relationships, respect and understanding were critical to parental involvement (quote 1.1.b).

Parental perspectives and shared decision-making are critical components of FCC. Yet, some HCP perceived that they had to make decisions based on the best interests of the infant and communicate the decision to parents (quote 1.1.e). Some participants expressed concerns that parental involvement in care was a threat to the health and safety of the infant, particularly when the infant required intensive medical interventions (quote 1.1.f).

Some participants perceived that involving parents in bedside rounds (BSR) was beneficial, and ensured that parents understood the purpose of rounds, informed them when rounds were starting, and encouraged participation (quote 1.1.c). However, there was inconsistency in parental involvement in BSR and how the multidisciplinary team approached rounds on any particular day (quote 1.1.g).

Logistical challenges associated with involving parents in care included lack of transportation to the hospital and finding childcare for older siblings (quote 1.1.h). Others were more concerned that involving parents threatened staffing levels on their unit because fewer nurses would be required if parents were providing care for their infant (quote 1.1.i).

#### Teaching parents

Teaching parents about their infant in preparation for discharge was an important role for nurses. While recognising that parental learning needs were different, the majority used one-on-one teaching methods; others used handouts, videos and books:

*Well every parent's need is gonna be slightly different because everyone learns slightly differently. The majority of time you do a lot of one on one teaching. (bedside nurse)*

Many nurses reported carefully planned, sequential teaching to prepare parents to care for their infant after discharge (quote 1.2.a). Amidst the importance of teaching parents about their infants, nurses voiced concerns about inconsistency of information, creating confusion for parents (quote 1.2.b). Even in a single, integrated health services system, each NICU had slightly different institutional cultures and practices, and transfers between units were challenging (quote 1.2.c).

**Table 1**  
Participant characteristics ( $n = 34$ ).

Characteristic	Frequency	(%)
Age		
24–34	7	20.6
35–44	10	29.4
45–54	9	26.5
55–64	8	23.5
Gender		
Male	7	20.6
Female	27	79.4
Discipline		
Nursing		
Staff nurse	9	26.5
Nurse educator	2	5.9
Allied health professional	6	17.5
Physician (neonatologist/paediatrician)	4	11.8
Hospital administration		
Medical director	4	11.8
Patient care manager	9	26.5

**Table 2**  
Themes and quotations to illustrate sub-themes.

Themes and sub-themes	Quotations
<b>1. Providing Family-Centred Care</b>	
<b>1.1. Involving parents in care</b>	
Facilitators	<p><b>a. Positive relationships:</b> A lot of parents and staff become quite close. You know they spend a lot of time together depending on how long the baby is there. [T]he parents become part of the care team, and part of that temporary kind of NICU family. So it's a lot like sending . . . your family members home when they get discharged. (bedside nurse)</p> <p><b>b. Respect and understanding:</b> I think it works well when we treat each other with respect, and acknowledge the challenges of being a parent in the NICU. [I]t's very difficult sometimes to fully appreciate how difficult it is to be here. . . . I think we sometimes forget that for a parent to have a baby in the NICU is absolutely life changing. (social worker)</p> <p><b>c. Encouraging involvement:</b> We're encouraging parents to be at the bedside whenever possible. Encouraging them to be part of rounds, asking questions. (dietician)</p>
Challenges	<p><b>d. Difficult relationships:</b> You know there's people that you're gonna get that are super receptive, and then there's people that are angry or sad that their babies are there, and they don't agree with the care and some people just have trouble going on in their own lives. So yes, there definitely are people that are more difficult to deal with than others. (bedside nurse)</p> <p><b>e. Lack of shared decision-making:</b> [O]ne of the doctors told me that, as the doctor, they are responsible for everything about that child. Therefore, everything should be their decision. (dietician)</p> <p><b>f. Safety risks:</b> I do caution about those things [involving parents in care] because certainly in the first few weeks of life, if babies are quite sick and have lines, central lines, feeding tubes, respiratory support . . . we can certainly have some very bad complications like line losses or you know respiratory support not working. So, I think that there has to be a certain point at which babies are actually able to be cared for in that way [by HCP]. But thereafter, I think it's actually a really positive thing to try and get parents involved as much as possible. (physician)</p> <p><b>g. Inconsistency in involving parents:</b> [S]ometimes we include families, sometimes we don't, sometimes we introduce ourself[ves] in rounds, sometimes we don't. [F]rom my perspective, since we've opened . . . I think it's all been . . . hit or miss. (dietician)</p> <p><b>h. Logistical challenges:</b> [A] lot of our parents don't have transportation. [T]hey have [to take] the bus here. Often they don't have the financial means. So it can be kinda hard if they have another little one at home. A lot of them are immigrants from other countries . . . and they don't have anyone else, social support. . . . [G]etting them to come here [NICU] is difficult. (bedside nurse)</p> <p><b>i. Staffing levels threatened:</b> You know you're taking a layman [parent] off the street and you're trying to teach them . . . a job that you've taken years to learn. . . . I'm not saying that they can't do it, or they can't learn it. But don't look at it as cost saving measure that now where you used to have 12 nurses on your unit now you only need 10 because the parents are doing most of the work. (nurse manager)</p>
<b>1.2. Teaching parents</b>	
Facilitators	<p><b>a. Carefully sequenced teaching:</b> We have a 1 try and make it a gradual process so that we're working on discharge teaching over a period of time rather than just, 'Surprise, I'm just going to talk to you for 3 h.' (bedside nurse)</p>
Challenges	<p><b>b. Inconsistency:</b> Consistency has always been . . . the biggest issue. [W]e do get feedback from parents that one nurse tells them one thing and another nurse tells them something else. (bedside nurse)</p> <p><b>c. Differing institutional culture and practices:</b> It would be very nice if we could all do things the same way so that the parents do not experience the culture shock when they move between the NICUs. (bedside nurse)</p>
<b>1.3. Supporting parents</b>	
Facilitators	<p><b>a. Professional supports:</b> [T]here are three social workers . . . there around the clock and on call. . . to figure out whatever support is needed. (physician)</p>
Challenges	<p><b>b. Lack of tangible supports:</b> We have a very limited number of parking passes that we get from the parking office but it's a very limited number. So certainly it's not anything that we can give out with any regularity. (social worker)</p>
<b>2. Working Amidst Health Care System Challenges</b>	
<b>2.1. Navigating physical environments</b>	
Challenges	<p><b>a. Open-ward NICUs:</b> I wouldn't call our unit family friendly. We lack some of that space to give families the confidentiality and just the physical space that they need when they're in there for long periods of time. (nurse manager)</p> <p><b>b. Single-room NICUs:</b> [T]he rooms can be somewhat isolating. It's hard for them to interact with other parents. (nurse manager)</p>
<b>2.2. Staffing</b>	
	<p><b>a. Sharing staff:</b> There is usually only two [respiratory therapists] on for the whole of the hospital. It can be a challenge when . . . you need somebody right away. (nurse manager)</p> <p><b>b. Staff shortages:</b> [W]hen we're busy and everybody's busy the unit will go over capacity and they're struggling to get enough staff to come in and have the appropriate nursing to patient ratio for appropriate care. (pharmacist)</p>
<b>2.3. Dealing with unpredictable workloads</b>	
Facilitators	<p><b>a. Passion for working in NICU:</b> Well I believe we have a very high standard of care and certainly have passionate nurses about working in the neonatal intensive care. They would wish to be nowhere else, they love to be with the babies they love to be with the families. You know, I think that that in itself is the most important thing. Is the people that I have that work here love their job and it shows in the quality of the care that they give. (nurse manager)</p>

(continued on next page)

Table 2 (continued)

Themes and sub-themes	Quotations
Challenges	<p><b>b. Bad days:</b> A bad day ... where you have staff members who don't getting along well with the nurse and that friction would tend affect the interventions we put in. So a bad day is ... when the staff [have] forgotten the objective of why they are there. (physician)</p> <p><b>c. Meeting fundamental needs of staff:</b> [W]hen it's really busy or there's a lot of critical things happening people don't have a chance to get away for their breaks or eat or use the bathroom, so that usually means it's a very busy high acuity, high intensity, which can be draining on staff if it persists. (nurse manager)</p>
<b>2.4. Educating staff</b>	
Facilitators	<p><b>a. Wanting more professional development opportunities:</b> I wish that we had more educational opportunities. A lot of, I mean nursing is self-directed learning, but I wish we had a lot more opportunities at work to learn more. (bedside nurse)</p>
Challenges	<p><b>b. Difficulty covering workloads:</b> [I]n a small staff situation, half of your staff has to be working or they just come off work. So when you have educational sessions it's very hard. (medical director)</p>
<b>2.5. Encountering resistance to change</b>	
Challenges	<p><b>a. Personal preference for practice:</b> [S]taff have been here for 30 years, have seen changes come and go and they get a style of practice that they're comfortable in, whether it's best practice or not, it's their practice. (nurse manager)</p>
<b>2.6. Valuing leadership</b>	
Facilitators	<p><b>a. Formal leadership:</b> We have a fairly new manager. [S]he's still ... learning to step into that leadership role. But it's been really great to have experienced staff to work with who have actually helped guide her into her leadership role. (bedside nurse)</p> <p><b>b. Informal leadership:</b> There's lots of great senior staff that really help the unit, like help new staff members and there's always lots of support. There's really good leadership usually on every shift to help out. (bedside nurse)</p>
<b>2.7. Working in multidisciplinary teams</b>	
Facilitators	<p><b>a. Respect for multidisciplinary team members:</b> The physicians, nursing staff, respiratory technologists, pharmacists, dieticians, and social workers ... all of us go on rounds together. They all understand to a great extent that we are actually working as a team, although the attending neonatologist has the ultimate responsibility, the decisions have to be based on some kind of discussion. So the attending physician you know, doesn't just give lip service to team care. (medical director)</p>
Challenges	<p><b>b. Inconsistency:</b> You ... can do an assessment, make suggestions, discuss it with the person who is working, and then you can read into the notes the next shift or the next day [and] somebody is doing something totally different and switching things, or feeding methods and nipples. [T]hings are being changed from shift to shift depending on what that nurse prefers. So I would say consistency can be a challenge for sure. (occupational therapist)</p>
<b>2.8. Accessing tools to do your work</b>	
Facilitators	<p><b>a. Standardisation across units:</b> Because we do have doctors that go from one hospital to the other so it doesn't help the situation or anything if each hospital has a different procedure. So trying to keep everything the same so that it's easier for them to go back and forth. It's easier for staff, cuz we also have staff that work in the different units across the city as well. (nurse manager)</p> <p><b>b. Ease of access:</b> Policies are so readily available that they're very easy to look up and refer to. And the staff in our unit are frequently referring to those policies. So then every time they refer to the policy they're refreshing their knowledge of it and it just becomes more and more ingrained in their practice. (bedside nurse)</p> <p><b>c. Regular policy reviews:</b> You know the last date that it was reviewed so if I do have a concern or a question, or I do feel that something needs to be looked at again, maybe there's new research out there, I've never had any problems bringing it forward to the right committee and saying, 'Hey look at this paper maybe we need to update the guideline. (dietician)</p>
Challenges	<p><b>d. Access to supplies and equipment:</b> [W]e have one computer to use on the unit. So even just creating more access to technology. (bedside nurse) We don't have enough chairs for the babies and the families on our unit. (social worker) Supplies are an issue because we do have to have so many special order supplies... we can't get them through the warehouse. (nurse manager)</p> <p><b>e. Wait time for new policies:</b> When ... I was actually in school, I had heard about the ... milk bank, but it took me just about 2 ½ years of being here before a policy was actually signed off where it had been in the works for 6 years. (bedside nurse)</p>
<b>2.9. Working within resource allocations</b>	
Challenges	<p><b>a. Budget decisions:</b> Sometimes the decisions that come from high above are passed down without any thought to how it affects the front line. Because they don't bother to actually communicate with the front line on a regular basis. (nurse manager)</p> <p><b>b. Inequitable resource allocations:</b> [W]e do not really have the same resources supplied to us in level 2 units as are given to the other units. (medical director)</p>
<b>2.10. Mitigating the impact of semi-rural location</b>	
Challenges	<p><b>a. Physician funding models:</b> [In semi-rural hospitals] physicians work on paediatrics as well as NICU. [V]ery often they will be running their own clinics and not even in the hospital. So we, we do not have a paediatrician in the hospital at all times. (nurse manager)</p> <p><b>b. Geographical factors affecting care:</b> Distance is the biggest challenge. We are a Level 2b, so if we have a child that deteriorates quickly or an unanticipated delivery of a child that maybe be below 32 weeks gestation that needs to get transported to high care, the time factor is huge. Sometimes they can't fly if the weather conditions are bad. So in essence we become a Level 3 very quickly if we have to. We have to be able to give that care until the team comes. (nurse manager)</p>

Table 2 (continued)

Themes and sub-themes	Quotations
<b>3. Recommending Improvements to the Health Care System</b>	
<b>3.1. Refining staffing models:</b>	
a. I would look at having a more diverse staffing group. So I would look at having LPN's in the mix. (nurse manager)	
b. I would have a lot more nurse practitioners involved directly in care. Because I think that advance care nurses and nurse practitioners or whatever label you wanna use for them, you get much more complete and holistic care from them than you do from physician's assistants or residents rotating through or fellows doing their specialty training. (medical director)	
<b>3.2. Enhancing professional development opportunities:</b>	
I don't know that there's a whole lot of opportunities for saying you know, 'When dealing with a difficult parent we should do this.' Maybe workshops would be something that would be of benefit. (bedside nurse)	
<b>3.3. Giving consistent information:</b>	
We give inconsistent information and so the best change that I can see that happens for NICU is that we give care in a more standardised fashion from nurse to nurse. (nurse manager)	
<b>3.4. Recognising parental capacity for care:</b>	
Sometimes we're almost, I don't know to explain it, but we're almost too nice and we'll do too much because mom's tired... I think if we just give the parents as much independence as possible, and if they were able to stay with the babies that would help a lot. (bedside nurse)	
<b>3.5. Strengthening continuity in patient care:</b>	
So not necessarily the same bedside nurse, but just the person who is in charge of assigning the nurses to the patients would be one consistent person (bedside nurse)	
<b>3.6. Supporting families to be with their infant in NICU:</b>	
[T]he majority of times, parents can't stay anyways because they have other, requirements at home. You know, financial or children or you know other, other things that keep them away. So if we had some more, better supports set up for them then it would be easier, and more beneficial to the baby ... for parents to be there more often. (bedside nurse)	
<b>3.7. Anticipating a family-friendly environment:</b>	
We would have individual rooms for parents and caregivers with a bed so they're able to spend the night. We would have a shower accessible for families who stay overnight. We would have space for NICU parents specifically to gather and chat, with resources that are available. [F]rom a nutrition perspective we would have an infant feeding prep room. We would have individualised milk fridges at the bedside. (dietician)	
<b>3.8. Refocusing bedside rounds:</b>	
I would have most of the rounds focused on just the sickest babies... Cuz that allows you much more in depth time with the babies who are sickest, and it also gives a huge message to families of babies who are convalescing they don't actually need to see the entire team every single day. (medical director)	
<b>3.9. Improving diagnostic ability in Level II NICUs:</b>	
If the patient needs an echo done, they have to be transported to [tertiary hospital], which takes an ambulance ride and a transport nurse, which is obviously expensive in itself. If we had all the money in the world I would hopefully improve diagnostic procedures at our site. (pharmacist)	

Supporting parents: Participants supported parental involvement in the care of their infant in the NICU, yet, expressed frustration at the lack of support to make it easier for parents to be present:

So, if we had ...better supports set up for them it would be easier and more beneficial [to] the baby-parent dyad. (bedside nurse)

Social workers were listed as responsible to provide support for parents (quote 1.3.a), but the understanding of available supports was vague. Most participants expressed frustration at their inability to offer tangible supports such as travel assistance for parents from out of town, childcare for families with siblings, or food for breastfeeding mothers. Tokens that enabled parental presence, such as parking passes, were limited (quote 1.3.b).

#### Theme 2: Working amidst health care system challenges

Participants seemed pre-occupied with challenges in the health care system that interfered with their ability to provide care. Sub-themes that emerged included: (1) navigating physical environments; (2) staffing; (3) dealing with unpredictable workloads; (4) educating staff; (5) encountering resistance to change; (6) valuing leadership; (7) working in multidisciplinary teams; (8) accessing tools to do your work; (9) working within resource allocations; and (10) mitigating the impact of semi-rural location.

#### Navigating physical environments

The privacy of a single-room versus open-ward NICUs creates a family-centred environment where parents feel more comfortable staying with their infant. Renovations to change some units to single rooms created uncertainty for HCP:

Right now we're in the process of building a brand new NICU so working very closely with the staff... [T]his [private rooms] is going to be a different topology than what they're currently experiencing. (nurse manager)

In some units, the acuity and census increased over time, yet the physical footprint of the NICU remained the same, resulting in smaller spaces for each infant. Open ward configurations facilitated communication among staff, but often lacked privacy and space for parents (quote 2.1.a). However, single rooms were perceived to reduce interactions among parents, because they tended to stay in their own rooms (quote 2.1.b).

#### Staffing

Staff shortages resulted in participants feeling too busy or rushed to provide high quality care:

[T]heir workload has become so busy that ... they're less able to provide some of the details of care, and they wish they had more time. (nurse educator)

In particular, allied health professionals may be assigned to other units in the hospital and not always immediately available to provide urgent care in the NICU (quote 2.2.a). When NICUs need to provide care for more infants than usual, staff must be called in to maintain appropriate nurse-patient ratios (quote 2.2.b).

#### Dealing with unpredictable workloads

Unpredictable workloads, very sick infants, and high census were perennial problems in the NICU:

*Occasionally great days can turn very bad because we can have sudden admissions of patients who are extremely unwell or require a lot of care, or a sudden deterioration in babies who have already been doing well and then something happens. Or we can have some kind of extended family chaos going on with either a very sick mother who has maybe had emergency caesarean sections or other complications.* (medical director)

Despite these challenges, participants reported passion for their work and provision of high quality care (*quote 2.3.a*). When workloads were unpredictable, it was easy for staff to lose sight of the reasons they worked in NICU and sometimes let personal conflict interfere with care (*quote 2.3.b*). Indeed, heavy workloads often prevented nurses from taking breaks to meet basic biological and psychological needs (*quote 2.3.c*).

#### *Educating staff*

Staff education was valued, carefully sequenced, and took considerable time:

*They're [nurses] trained to come into NICU and then they're trained when they're ready to go on the admission role, and then we retrain them again when they're ready to go on the resuscitation role. So getting them up and trained fully, and really fully functioning in those roles takes a while.* (nurse educator)

Participants wanted more professional development opportunities (*quote 2.4.a*). However, educational sessions led to difficulties covering workload during a shift (*quote 2.4.b*).

#### *Encountering resistance to change*

Although hesitant to mention it, hospital administrators acknowledged resistance to change:

*[W]e just have excellent staff. They're go getters, they're, they, you know, I mean they're, they, they're not great about change. They grumble a little bit, but overall they don't put up a lot of roadblocks. They understand that what we're trying to do is for the best of the patient. They have the best, the patient's best intentions or concerns at heart.* (nurse manager)

Another hospital administrator spoke about personal preferences for practices, despite lack of evidence for these practices (*quote 2.5.a*).

#### *Valuing leadership*

Most participants spoke positively about leadership for their unit:

*We have a unit manager, a nurse educator, and then a program director as well. Then a medical director for the neonatologists. I would say that the leadership that they provide is excellent. . . . Both the unit manager and the nurse educator are both really good resources for the staff and I find that they [staff] always go to them for direction, and they're always well received.* (pharmacist)

Both formal and informal leadership were valued (*quote 2.6.a*), with more experienced nurses viewed as sources of information and support (*quote 2.6.b*).

#### *Working in multidisciplinary teams*

Generally, participants were positive about their experiences working in multidisciplinary teams, and felt respected by their colleagues (*quote 2.7.a*). However, challenges with the multidisciplinary team led to inconsistency in care when there were disagreements on the treatment plan (*quote 2.7.b*).

#### *Accessing tools to do your work*

There was variability in participants' perceptions of access to tools to do their work. Participants articulated the value of standardisation across the integrated health care system for staff working across different units (*quote 2.8.a*). Some pointed out how technology, equipment, and supplies would facilitate their work. Participants, particularly in smaller hospitals, wanted better access to computers and electronic medical records. Others wanted more equipment and easier access to specialised supplies (*quotes 2.8.d*). Ease of access to policies and procedures was important (*quote 2.8.b*), along with regular policy reviews and updates to maintain a current evidence-base for practice (*quote 2.8.c*). In contrast, some participants were frustrated with the time for policies to be approved (*quote 2.8.e*).

#### *Working within resource allocations*

Some participants raised concerns about delays in formalising budget decisions with limited consultation about the unit's needs. These decisions also determined ability to hire staff, which was then perceived to affect quality of care (*quote 2.9.a*). The perception of differential allocation of resources between Level II and Level III NICUs was also raised (*quote 2.9.b*).

#### *Mitigating the impact of semi-rural location*

There were differences in physician models of care. In urban hospitals, neonatologists were salaried; in semi-rural hospitals, paediatricians with community practices also covered the NICU on a fee for service basis. In emergencies, this model of care could delay immediate access to physician expertise (*quote 2.10.a*). Also in semi-rural NICUs, participants articulated the need to be prepared to care for very sick infants (*quote 2.10.b*). When weather conditions prevented air transport of a sick infant to a tertiary centre, semi-rural hospitals were required to provide Level III care until the transport team arrived.

#### *Theme 3: Recommending improvements to the health care system*

Recommendations to improve the health care system were related to: (1) refining staffing models, (2) enhancing professional development opportunities, (3) giving consistent information, (4) recognising parental capacity for care, (5) strengthening continuity, (6) supporting families to be with their infant in NICU, (7) anticipating a family-friendly environment, (8) refocusing bedside rounds and (9) improving diagnostic ability in Level II NICUs.

#### *Refining staffing models*

Participants commented on differing backgrounds and years of experience of the staff. One manager recommended staff should include nurses with various levels of formal education, including registered nurses and licensed practice nurses (*quote 3.1.a*). Recognising the limitations of physician assistant- and resident-led care, a medical director recommended more advanced practice nurses and nurse practitioners be included in the staffing model for NICU (*quote 3.1.b*).

#### *Enhancing professional development opportunities*

Participants suggested enhancing opportunities for professional development through routinely scheduled education sessions:

*We could have training that happened . . . on a regular basis . . . that would be very helpful [because] it's really, really hard to mentor and train up new nurses for the NICU environment.* (medical director)

They recommended workshops to assist in managing challenging interactions with parents (*quote 3.2*).

### Giving consistent information

Participants strongly suggested strategies to provide consistent and evidence-based information to parents (*quote 3.3*). Participants recommended standardised and sequential education pathways, checklists, and easy access to policy and procedures manuals to improve consistency of information.

### Recognising parental capacity of care

Some participants suggested supporting parental independence to provide as much care for the infant as possible. Although parental presence was perceived to be part of the solution to improving parental knowledge and skill in the care of their infant, a nuanced part of this recommendation was the need for nurses to step back, assess, and encourage parents to provide as much care as possible (*quote 3.4*).

### Strengthening continuity

Participants believed continuity in patient care assignments would strengthen nurse–parent relationships and increase efficiency. This is because HCP would be familiar with the infant's history and progress, as well as family capacity and preferences to participate in care:

*I would like more consistent care teams. So if the same nurses can be with the same patients on a consistent basis for continuity, which it's difficult to do because of schedules and sick calls and last minute changes.* (nurse manager)

In contrast to the suggestion for continuity of patient care assignments, one HCP suggested strengthening continuity of charge nurses (leadership) to ensure continuity in understanding of workload for care of infants and their families (*quote 3.5*).

### Supporting families to be with their infant in NICU

Participants recognised that there was an expectation that parents stay with their infant in NICU, but noted that parents were constrained by a lack of supports to achieve this goal (*quote 3.6*). Participants' suggestions included supports for travel and accommodation for parents from out of town, parking passes, and child-care for older siblings.

### Anticipating a family-friendly environment

The physical environments of NICUs in the study varied from single-room to open-ward, to a combination of both. Participants who worked in several NICUs were eagerly awaiting completion of renovations for a single-room NICU configuration (*quote 3.7*). Participants suggested that single rooms would facilitate family presence and recommended dedicated space to prepare infant feedings.

### Refocusing bedside rounds

Re-focusing BSR on the sickest infants would allow more time to understand their progress (*quote 3.8*). It may also have an indirect benefit for parents, who may perceive their infant as stable and progressing as expected if a daily discussion of their plan of care is not required.

### Improving diagnostic ability in Level II NICUs

Cognisant of health care system costs, one participant suggested improving diagnostic capacity, which may reduce parental stress associated with transport (*quote 3.9*).

Generally, participants recommended improvements to the health care system aligned with the challenges of providing care to infants and their families in Level II NICUs. Although it was anticipated that participants would address characteristics of FCC, instead they focused on experiences within the health care

system that interfered with the quality of care they wished to provide. Thus, the health care system seemed to be making 'too much noise' for HCP and hospital administrators to focus on providing FCC.

## Discussion

In this qualitative study, we interviewed 36 HCP (nurses, allied health professionals, and physicians) and hospital administrators (patient care managers, medical directors, and executive directors) on their experiences of providing care for infants admitted to a Level II NICU and their families. In the context of a single, integrated health care system that espouses FCC, three major themes emerged: providing FCC, working amidst health care system challenges and recommending improvements to the health care system. The major finding of this study was that the health care system was making 'too much noise' for HCP and hospital administrators to provide FCC in ways that would benefit infants in Level II NICUs and their families.

Our findings related to providing FCC were fairly consistent with challenges faced by others in operationalising FCC. In a pan-European study of facilitators and barriers to physical closeness between parents and infants in NICUs, investigators reported implementing FCC practices as aspirational but not necessarily practical (Dykes et al., 2016). In the present study, participants spoke about FCC in terms of involving parents in the care of their infant, and providing education and supports to parents. Although participants spoke generally about the core concepts of FCC, such as involving parents in care and decision-making, they expressed challenges with operationalising the concepts in practice.

These challenges may be partially attributed to contradictions between rhetoric and practice. For example, all participants were emphatic that they provided FCC in their NICU. Yet, there was clear dissonance between involving parents and actual practices. It was common for decisions to be made in the best interest of the infant with limited consultation with family. These decisions were then communicated to parents as the plan of care for the infant. Similarly, there were caveats under which parents could be involved. Some HCP believed that parents should be involved in care only when medical devices, such as intravenous lines and respiratory assistance, were no longer needed. This finding requires further investigation.

Similar to other studies (Griffin, 2006), inconsistent information provided to parents created challenges for HCP and hospital administrators in our study. In contrast to other studies where restrictive visiting policies created challenges for FCC (Gooding et al., 2011; Griffin, 2006; Newton, 2000), visiting policies were not identified as a challenge to FCC in our study. Rather, barriers to parental involvement were related to lack of transportation to the hospital and child care for older siblings.

In our study, participants focused on how they worked amidst the challenges of the health care system. Our finding related to the challenges of providing care in a non-facilitative physical environment is consistent with other studies (Beck et al., 2009; Trajkovski et al., 2016). Previously reported as longstanding characteristics of ICUs (Buchan and Aiken, 2008; Cole, 2009), the problems of staffing shortages and unpredictable workloads were reinforced in our study. Interestingly, one participant raised concerns about potential reductions in nursing staff if parents provided direct care to their infant. This contrasts with an Irish study where nurses ( $N = 18$ ) reported over-reliance on parents to provide care as a result of staffing shortages and busy workloads (Coyne, 2015).

Our findings suggest that greater opportunity for professional development was important to strengthen and standardise prac-

tices within and across NICUs, particularly when infants were transferred between hospitals. Similarly, interviews with neonatal nurses ( $N=8$ ) in a working group to enhance FCC revealed the need for continuing education, collaboration and organisational support (Trajkovski et al., 2016), with evidence that professional development has improved FCC practices in NICUs (Axelin et al., 2014; Trajkovski et al., 2016). Our findings also suggest that covering workloads to offer professional development sessions may be challenging, and there may be resistance from some staff to change their practice regardless of opportunities. An interesting finding is related to the value that participants placed on both formal and informal leaders in NICU. There is limited research on informal leadership in nursing; however, since informal nurse leaders have influence to positively impact unit culture, staff performance, nursing management and ultimately patient care (Downey et al., 2011), this is an area worthy of deeper investigation in future research.

### Strengths and Limitations

A strength of this study was a large sample that included HCP from diverse disciplines as well as hospital administrators. Credibility of the findings was strengthened through data analysis conducted initially by the lead author, and verified by the study team who had multiple disciplinary perspectives of care in Level II NICUs. Data analysis was conducted by two coders who verified the consistency of their coding. Dependability of the data was ensured by adhering to the semi-structured interview guide, and maintaining a detailed audit trail. This study was limited by lack of parent and family perspectives. Additionally, it was conducted in a single, integrated health care system, and findings may not be transferrable to Level II NICUs in other settings. Replication of this study in other health care systems would strengthen the evidence.

### Conclusion

Our findings contribute to explanations about the challenges of implementing and maintaining FCC in Level II NICUs, and suggest five main recommendations for policy and practice. First, if FCC initiatives are to be successful, HCP and hospital administrators need to recognise the complexity of providing care in a Level II NICU. Much of the complexity arises from providing FCC within a large and complex health care system. Without attending to system barriers that interfere with HCP and hospital administrators' work, it is unlikely that offering education about FCC core concepts will have much effect. Second, operationalising FCC in Level II NICUs requires coherence between the philosophical beliefs and practices of individual providers. Establishing this coherence requires concerted change management, including identifying the risks and benefits to HCP of involving parents in care and decisions. Third, embedding FCC elements into reporting and incentivising FCC practices may contribute to its sustainability. Fourth, some of the complexity of working in a Level II NICU is a result of the changing needs of infants and parents. FCC initiatives should consider strategies that enable HCP to recognise and respond to continuously changing parental capacities. Finally, staffing models and professional development should be optimised to meet the dynamic of unpredictable workloads. With concerted effort at multiple levels, FCC in Level II NICUs will move from aspiration to reality.

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### Conflict of interest

The authors have no conflicts of interest to declare.

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Pilar Zanoni, Jana Kurilova, Jen Smith, and Natalie Scime: manuscript preparation and editing.

Dr. Carla Ginn: comments on an early draft.

### References

- Axelin, A., Ahlqvist-Björkroth, S., Kauppila, W., Boukydis, Z., Lehtonen, L., 2014. Nurses' perspectives on the Close Collaboration with Parents Training Program in the NICU. *MCN Am. J. Matern. Child Nurs.* 39, 260–268. <https://doi.org/10.1097/NMC.0000000000000061>.
- Bassil, K.L., Shah, P.S., Shah, V., Ye, X.Y., Lee, S.K., Jefferies, A.L., 2014. Canadian Neonatal Network. Impact of late preterm and early term infants on Canadian neonatal intensive care units. *Am. J. Perinatol.* 31, 269–278. <https://doi.org/10.1055/s-0033-1347364>.
- Beck, S.A., Weis, J., Greisen, G., Andersen, M., Vibeke, Z., 2009. Room for family-centered care - a qualitative evaluation of a neonatal intensive care unit remodeling project. *J. Neonatal Nurs.* 15, 88–99. <https://doi.org/10.1016/j.jnn.2009.01.006>.
- Benzies, K.M., Shah, V., Aziz, K., Isaranuwatthai, W., Palacio-Derflinger, L., Scotland, J., et al., 2017. Care Level II NICU Study Team. Family Integrated Care (FiCare) in level II neonatal intensive care units: study protocol for a cluster randomized controlled trial. *Trials* 18, 467. <https://doi.org/10.1186/s13063-017-2181-3>.
- Buchan, J., Aiken, L., 2008. Solving nursing shortages: A common priority. *J. Clin. Nurs.* 17, 3262–3268. <https://doi.org/10.1111/j.1365-2702.2008.02636.x>.
- Chalmers, B., 2017. Family-centred maternity and newborn care in Canada: underlying philosophy and principles. In: *Public Health Agency of Canada (Ed.), Family-Centred Maternity and Newborn Care: National Guidelines*. Government of Canada, Ottawa, ON.
- Cole, A., 2009. Neonatal care: time for action on the shortage of nurses. *J. Fam. Health Care* 19, 42–44.
- Committee on Hospital Care, 2003. Institute for Family-Centered Care. Policy statement: family-centered care and the pediatrician's role. *Pediatrics* 112, 691–696. <https://doi.org/10.1542/peds.112.3.691>.
- Coyne, I., 2015. Families and health-care professionals' perspectives and expectations of family-centred care: hidden expectations and unclear roles. *Health Expect.* 18, 796–808. <https://doi.org/10.1111/hex.12104>.
- Davidson, J.E., Aslakson, R.A., Long, A.C., Puntillo, K.A., Kross, E.K., Hart, J., Cox, C.E., Wunsch, H., Wickline, M.A., Nunnally, M.E., Netzer, G., Kentish-Barnes, N., Sprung, C.L., Hartog, C.S., Coombs, M., Curtis, J.R., 2017. Guidelines for family-centered care in the neonatal, pediatric, and adult ICU. *Crit. Care Med.* 45, 103–128. <https://doi.org/10.1097/CCM.0000000000002169>.
- Downey, M., Parslow, S., Smart, M., 2011. The hidden treasure in nursing leadership: informal leaders. *J. Nurs. Manag.* 19, 517–521. <https://doi.org/10.1111/j.1365-2834.2011.01253.x>.
- Dykes, F., Thomson, G., Gardner, C., Hall Moran, V., Flacking, R., 2016. Perceptions of European medical staff on the facilitators and barriers to physical closeness between parents and infants in neonatal units. *Acta Paediatr.* 105, 1039–1046. <https://doi.org/10.1111/apa.13417>.
- Finlayson, K., Dixon, A., Smith, C., Dykes, F., Flacking, R., 2014. Mothers' perceptions of family centred care in neonatal intensive care units. *Sex. Reprod. Healthc.* 5, 119–124. <https://doi.org/10.1016/j.srhc.2014.06.003>.
- Gooding, J.S., Cooper, L.G., Blaine, A.L., Franck, L.S., Howse, J.L., Berns, S.D., 2011. Family support and family-centered care in the neonatal intensive care unit: origins, advances, impact. *Semin. Perinatol.* 35, 20–28. <https://doi.org/10.1053/j.semperi.2010.10.004>.
- Griffin, T., 2006. Family-centered care in the NICU. *J. Perinat. Neonatal Nurs.* 20, 98–102. <https://doi.org/10.1097/00005237-200601000-00029>.

- Harrison, T.M., 2010. Family-centered pediatric nursing care: state of the science. *J. Pediatr. Nurs.* 25, 335–343. <https://doi.org/10.1016/j.pedn.2009.01.006>.
- Kuo, D.Z., Houtrow, A.J., Arango, P., Kuhlthau, K.A., Simmons, J.M., Neff, J.M., 2012. Family-centered care: current applications and future directions in pediatric health care. *Matern. Child Health J.* 16, 297–305. <https://doi.org/10.1007/s10995-011-0751-7>.
- McGrath, J.M., Samra, H.A., Kenner, C., 2011. Family-centered developmental care practices and research: what will the next century bring? *J. Perinat. Neonatal Nurs.* 25, 165–170. <https://doi.org/10.1097/JPN.0b013e31821a6706>.
- Newton, M.S., 2000. Family centered care: current realities in parent participation. *Pediatr. Nurs.* 26, 164–168.
- O'Brien, K., Bracht, M., Mac Donell, K., McBride, T., Robson, K., O'Leary, L., et al., 2013. A pilot cohort analytic study of Family Integrated Care in a Canadian neonatal intensive care unit. *BMC Pregnancy Childbirth* 13, S12. <https://doi.org/10.1186/1471-2393-13-S1-S12>.
- O'Brien, K., Robson, K., Bracht, M., Cruz, M., Lui, K., Alvaro, R., et al., 2018. Effectiveness of Family Integrated Care in neonatal intensive care units on infant and parent outcomes: a multicentre, multinational, cluster-randomised controlled trial. *Lancet Child Adolesc. Health.* 2, 245–254. [https://doi.org/10.1016/S2352-4642\(18\)30039-7](https://doi.org/10.1016/S2352-4642(18)30039-7).
- Shields, L., Pratt, J., Hunter, J., 2006. Family centred care: a review of qualitative studies. *J. Clin. Nurs.* 15, 1317–1323. <https://doi.org/10.1111/j.1365-2702.2006.01433.x>.
- Shields, L., Pratt, J., Davis, L., Hunter, J., 2007. Family-centred care for children in hospital. *Cochrane Database Syst. Rev.*, CD004811 <https://doi.org/10.1002/14651858.CD004811.pub2>.
- Thorne, S., 2013. Interpretive description. In: Beck, C.T. (Ed.), *Routledge International Handbook of Qualitative Nursing Research*. Routledge, New York, NY, pp. 295–306.
- Trajkovski, S., Schmied, V., Vickers, M.H., Jackson, D., 2016. Experiences of neonatal nurses and parents working collaboratively to enhance family centred care: the destiny phase of an appreciative inquiry project. *Collegian* 23, 265–273. <https://doi.org/10.1016/j.colegn.2015.05.004>.