

An Integrative Review of Nurses' Perspectives of Family-Centered Care Practice in the Level III
NICU: Addressing Persisting Barriers

by

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BScN, University of Toronto, 2009

BSc Hon. Biology, McMaster University, 2005

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Supervisory Committee

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Abstract

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Family-centered care (FCC) remains a challenge to integrate in the Level III(+) NICU by bedside nurses. The goal of this integrative literature review is to identify barriers/ facilitators to shed light on neonatal nurse perspectives of FCC and more effectively implement FCC practices in the NICU. This study aims to determine recommendations that better support the knowledge translation of FCC to nurses and its integration at the bedside by nurses.

An integrative literature review was conducted using a methodological approach of constructivist grounded theory to uncover unique perspectives of NICU nurses and identify and address the issues surrounding FCC integration. General themes of barriers/ facilitators were compared to neonatal nurse perceptions of barriers/ facilitators to FCC and two main categorical differences are now identified: 1) nurses describe a need for change in unit/ organization *culture* rather than focusing on unit design and policy; 2) nurses identify an existing *lack of skill and knowledge* to integrate FCC into practice, rather than viewing staff attitudes or practices as a barrier. A model based on FCC facilitators identified by NICU nurses was constructed (i.e. The Knowledge Translation Model for Family-Centered Care in the NICU) as a strategic approach to improve integration and support of FCC in the NICU. Recommendations were made for nurses, healthcare team members, decision-makers and Nurse Educators based on this model, for development of FCC education curriculum and sustaining an FCC culture in the NICU.

Limits of this study include that findings were not generalizable for many of the articles included in the review, conducting this review as a single graduate student, limits of the critical appraisal tool employed, and small number of studies included due to lack of available research in this area. A lack of literature about how to effectively translate and integrate necessary FCC skills and knowledge into NICU nursing practice indicates that this integrative literature review can significantly contribute to knowledge in this field.

Table of Contents

Supervisory Committee	ii
Abstract	iii
Table of Contents	iv
List of Tables	v
List of Figures	vi
Acknowledgments.....	vii
Introduction	1
Background.....	3
Defining Family-Centered Care.....	3
Origins of Family-Centered Care in Neonatal-Focused Care.....	5
Perceptions of FCC in NICU Clinical Practice	8
Barriers to Application of FCC in the NICU.....	15
Knowledge Translation	18
Theoretical Underpinnings	20
Study Aim.....	23
Methodological Approach.....	24
Step 1.0: Problem Identification & Purpose.....	25
Step 2.0: Literature Search	25
Step 3.0 Data Evaluation	27
Step 4.0 Data Analysis	29
Step 4.1 Data Reduction	32
Step 4.2 Data Display (Findings).....	33
Step 4.3 Data Comparing.....	34
Step 5: Presentation.....	35
Step 4.4: Conclusion Drawing and Verification.....	35
Discussion.....	46
Framing Possibility	47
Limitations.....	50
Implications for Practice, Education & Recommendations.....	52
Conclusion.....	55
References	56
Appendix A The Knowledge Translation Planning Template (KTPT).....	61
Appendix B Search Terms and Inclusion/Exclusion Criteria.....	65
Appendix C The John Hopkins Nursing Evidence Based Practice (JHNEBP) Research Appraisal Tools.....	68
Appendix D Mind Map of FCC Perspectives.....	72
Appendix E Summaries of Studies	74
Appendix F Summary of Studies Depicting Nurse Perceptions to FCC	80
Appendix G Level 4 Competencies ó Nursing and Education Leadership Theory and Practice	102

List of Tables

Table 1. General Barriers vs. Facilitators to FCC in the NICU.....	33
Table 2. NICU Nurse Perceptions of Barriers vs. Facilitators of FCC in the NICU	34
Table 3. Table of Summaries of All Studies in this Integrative Literature Review	74

List of Figures

Figure 1. FCC Model as described by Malusky (2005)	5
Figure 2. Flow Chart of Research	27
Figure 3. The KT Model for Family-Centered Care in the NICU©	42
Figure 4. Mind Map of General Themes	72
Figure 5. Mind Map of Nurse Perspective of Themes	73

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Introduction

The highly acute or Level III(+)¹ Neonatal Intensive Care Unit (NICU) environment can make it difficult to support and involve families in care for their infant. Nurses can be restrained from practicing family-centered care (FCC) at the bedside due to barriers at individual, unit, or organizational levels, making it more difficult to integrate FCC components into nursing practice (Galarza-Winton, Dicky, O'Leary, Lee & O'Brien, 2013). Despite the extensive research available on benefits of FCC, it remains a challenge to effectively integrate this philosophy of care into the NICU for this highly vulnerable population. The heart of this issue may lie in the effective knowledge translation of FCC to the users of this philosophy such as bedside nurses.

In this integrative literature review I complete an extensive review of literature on barriers and facilitators to FCC in the NICU with a special focus toward NICU nurses' perspectives using a constructivist grounded theory approach. This paper begins with a summary of the background and history of FCC in the NICU, describes the theoretical underpinnings applied in this integrative review, and discusses the methods used in this secondary research process. This review considers 15 articles, initially, and specifically focuses on 8 studies that report NICU nurse perceptions of FCC. I identify and discuss themes common to NICU nurse experiences with FCC and relate this to the FCC model chosen for this review. This is followed by a comparison of studies where nurses' perceptions of barriers and facilitators of FCC are reported separately from health care professionals (HCP) as a group, with the intent of identifying specific areas in which NICU nurses can be better supported. Finally, I will discuss a

¹ The Level III NICU is equipped to provide life support and care for critically ill infants, including those weighing <1500g or <32 weeks' gestation (Committee on Fetus and Newborn, 2004). Level III units include access to paediatric medical sub-specialists, paediatric ophthalmologic services, surgical specialists and anesthesiologists, perform advanced imaging and interpretation, and provide transport services. Level IV units include level III NICU capabilities and can do on-site surgeries (Committee on Fetus and Newborn, 2004).

potential model that includes knowledge translation (KT) strategies in order to improve integration of the FCC philosophy into nursing practice and the NICU culture. This integrative literature review seeks to investigate why FCC remains a passing thought rather than a practice standard in neonatal intensive care units among a vulnerable patient population who can benefit immensely from its application.

Background

In this section I provide the definition of family-centered care (FCC) used in this integrative review, briefly review the history of FCC as it applies to the NICU, and explore the current perceptions of FCC in clinical practice. This review seeks the means to strengthen knowledge translation of FCC in nursing curriculum to promote FCC implementation in the level III(+) NICU. This is explored by considering components of KT using a specific KT template. The theoretical underpinnings of this research are then discussed, and I state my purpose behind exploring barriers and facilitators to family-centered care in the NICU.

Defining Family-Centered Care

Family centered-care is based in the idea that a patient's optimal health can be reached with the active inclusion of family in providing emotional, developmental and social support to the patient (Gooding, Cooper, Blaine, Franck, Howse & Berns, 2011). FCC is an established philosophy of care for paediatric units and the NICU, where parents and nurses seek to develop an effective relationship for best care of the infant or child (Reis, Rempel, Scott, Brady-Fryer & Van Aerde, 2010). FCC strives to ensure care is planned within the context of family and community, and family members are seen as care recipients along with the patient (Gooding et al., 2011; Trajkovski et al., 2012). FCC requires a partnership approach, empowering and involving parents, and moving health care professionals towards collaborative care instead of task- or procedure-oriented care for the patient (Axelin et al., 2014; Gooding et al., 2011; Trajkovski et al., 2012). Family members are seen as effective contributors to medical decision-making and the health process, when open and honest communication occurs between HCP and family, and when care is honed to fit a patient's unique cultural/ ethical beliefs, family/ community structure and traditions (Gooding et al., 2011). The act of caring is inclusive of the

relationship formed between nurse, parents and patient, where the nurse guides family and facilitates family involvement in the care of the infant or child (Merighi et al., 2011).

In the NICU, FCC includes the family and community context of the infant. Parents are viewed as natural advocates for the neonatal patient who has fundamental emotional, social and developmental needs (Gooding et al, 2011). The HCP aims to collaborate with parents, engage them in parent-infant interactions to promote health (e.g. developmental care), increase parent confidence and decrease family stress (Gooding et al., 2011; Grzyb et al., 2014; Hendricks-Munoz et al., 2010). FCC-focused family supports, activities and programs have known positive benefits; yet implementation of FCC approaches remains challenging in the NICU due to busy routines and a medically-based focus (Hendricks-Munoz et al., 2010; Trajkovski et al., 2012).

There are multiple frameworks available that encompass core FCC concepts such as the well-known model by the Institute for Family-Centered Care that includes: *Dignity and Respect, Information Sharing, Participation and Collaboration* (Institute for Family-Centered Care, 2015). For this integrative review, I have chosen to incorporate an FCC framework that I believe is better suited to the unique environment of the NICU. This framework encompasses five main concepts: *Respectful Coalition* between the health care provider (HCP) and family to promote family involvement in decision-making; *Open Communication* to seek a family's perceptions/concerns; incorporating *Family Strengths* into patient care; accepting *Diversity/Individuality* of each family; and recognizing family as *Experts* in the infant's care (Malusky, 2005; Thompson et al., 2013). Based on my initial readings of relevant articles, I determined that this model by Malusky (2005) best reflected key elements of FCC that appeared in nurses' perceptions of FCC. Malusky (2005) is identified as having a background in nursing, which also speaks to the specific investment of this framework in nursing practice. This five-

pronged conceptual framework expands on the Institute for Family Centered Care's model by highlighting family strengths and the acknowledgement of parents as experts in their child's care. Two facets that help to empower families to be included as partners in the collaborative care of their infant (see Figure 1). Thus, this five-pronged model of FCC may be a more appropriate model to consider in the evolution of FCC integration in the NICU.

Figure 1. FCC Model as described by Malusky (2005)

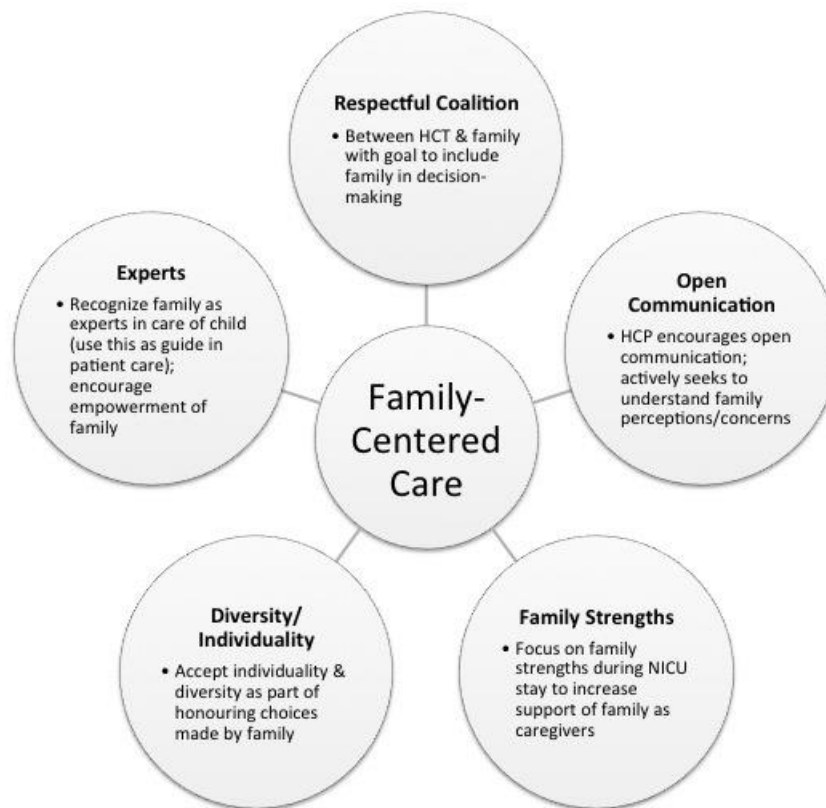


Figure 1. FCC Model as described by Malusky (2005). This figure illustrates elements of the FCC model as one of the underlying concepts of this integrative review.

Origins of Family-Centered Care in Neonatal-Focused Care

Family-centered care is a concept that has been evolving for decades based on historic occurrences stretching back toward the late 19th century. During the 19th century infant death at home was an accepted part of life (Gooding et al., 2011). With the late 19th century to early 20th

century came technological advances such as incubators and intensive hospital-based care for the sick neonate (Gooding et al., 2011). This era marked the beginning of the separation of neonatal care from the family (Gooding et al., 2011, p. 21).

In children's hospitals, before World War I, a greater emphasis was placed on emotional needs of the child and social/psychological needs were addressed. After 1920 came a more industrialized hospital environment where parents handed over responsibility of their child to hospital staff (Jolley & Shields, 2009). Parents were kept apart from paediatric and neonatal units with limited visits, if any (Jolley & Shields, 2009). This change mirrored increased awareness of science and infectious disease that surfaced after WWI (Jolley & Shields, 2009). Hospitals became more institutionalized and nurses prioritized medical needs over developmental, social and psychological needs of paediatric or neonatal patients (Jolley & Shields, 2009). This separation of child and parent started in 1930s when childbirth was moved from home to hospital settings, and infection control and medical interventions showed improved neonatal health outcomes (Gooding et al., 2011). Care for mother and infant was moved from a place of patient-family-focus to the hospital setting where increased concern about infection, sterility, and technological advances led to more strict hospital regulations concerning family presence and participation in neonatal care. Nurses acted as gatekeepers to infants, while families became bystanders in their child's care (Gooding et al., 2011).

In the late 1940s and with the occurrence of World War II, family needs became a growing concern for hospital settings (Gooding et al., 2011). Research conducted during the late 1940s showed that infection rates did not significantly increase with parent visits in hospital settings (Jolley & Shields, 2009). Around the same time, psychiatrists were linking adult mental health conditions to childhood experiences of being hospitalized, and research showed decreased

traumatic effects of surgery on children with maternal involvement (Jolley & Shields, 2009).

This coincided with the outcome of World War II, where many had experienced separation from loved ones, suffering and the grief of war; a growing public concern for the psychological health of adults/children developed (Jolley & Shields, 2009). WWII brought the relocation of hundreds of thousands of children in the UK, leading to research in the effects of child-parent separation, as well as forced separation of families experienced by hospitalized children (Jolley & Shields, 2009). While sporadic areas appeared where hospitals began to move toward allowing parental visitations/stays in hospitals, nurses and physicians were slow to this change and opposed parental involvement in the medicalized model of healthcare institutes (Jolley & Shields, 2009).

With the 1970s came a surge of growth in the campaign for Patient- and Family Centered-Care (PFCC) that has continued to evolve to its present day philosophy. Initially, PFCC arose due to the stance taken by the average American consumer who, "value[d] control of care and decision making" (Gooding et al., 2011, p. 21). Parents (the consumers) began advocating for "child-friendly" hospitals (Jolley & Shields, 2009). Researchers John Bowlby and James Robertson helped to shed light on the effects of separation of parent and child from hospitalization with respect to separation anxiety and grief (Jolley & Shields, 2009). From this research, stemmed the theoretical work that informed core principles of paediatric nursing (Jolley & Shields, 2009). As society changed, FCC evolved to include parents in the care of the hospitalized child. Helen Harrison (parent of a premature infant and author of, "The Premature Baby Book") introduced principles of FCC in the NICU. Beverly Johnson (who held a background in paediatric nursing, health care management, and as a hospital trustee in a national health care organization) founded the Institute for FCC (now Institute for PFCC) in 1993. Beverly Johnson also had a role in developing and defining FCC in healthcare (Gooding et al.

2011; Jolley & Shields, 2009). Since then, other countries have developed similar organizations that uphold the philosophical ideals of FCC (Jolley & Shields, 2009).

With development of FCC models of care, the acknowledgment of parent presence as important in care delivery to children became more accepted among nurses (Jolley & Shields, 2009). The growing adoption of FCC led to development of care-by-parent units where families lived-in with their sick child; however, the high costs of these units was a dissuading factor for hospital organizations (Jolley & Shields, 2009). The idea of partnership-in-care between nurses and parents arose in the early 90s; this was based on effective communication, negotiation and information sharing, and perceived as beneficial to the child's outcome (Jolley & Shields, 2009). These core concepts drove the evolution of FCC as a philosophy of care in the present day.

While FCC may be considered a gold standard in hospital care, FCC initiatives are not well practiced, especially in the NICU setting (Gooding et al., 2011; Jolley & Shields, 2009). Issues in the NICU remain, such as: limited parent involvement, poor parent-nurse communication, unsupported transitions home, continued high levels of parent stress and life-spanning medical/developmental issues for premature and very low birth weight infants (Gooding et al., 2011). Jolley and Shields (2009) state there remains a need for more randomized controlled trials of FCC to better confirm the effectiveness of FCC and propel supportive measures for its practice. The need for effective implementation strategies of FCC is also prominent, as well as seeking how to integrate FCC into NICU policies and culture (Gooding et al., 2011).

Perceptions of FCC in NICU Clinical Practice

The integration of FCC components into the NICU has known benefits such as positive effects on infant development, parent well being, work satisfaction for staff, and overall

improved quality of care for infants in the NICU (Axelin et al., 2014). Other benefits include improved staff attitudes toward families, more adequate preparation of parents for discharge from NICU, and decreases in NICU length of stay (Axelin et al., 2014). These FCC components include engaging parents in holding/ caregiving, encouraging parent presence on the unit, forming a collaborative and partnering relationship between HCP and parents/ family, providing culturally competent care, and offering parent education or supportive parent programs (Asai, 2010; Axelin et al., 2014; Benoit & Semenic, 2014; Bracht, O'Leary, Lee, & O'Brien, 2013); Davidson et al., 2014; Franck et al., 2012; Grzyb et al., 2014; Hendricks-Munoz et al., 2010; Henderson et al., 2015; Gooding et al., 2011; Reis et al., 2010; Trajkovski et al., 2012).

Holding/ caregiving. Holding or caregiving activities that involve parents can have a positive effect on infant health and are promoted via FCC practices. Skin-to-skin holding is shown to support bonding and attachment of parents to infants, reduce length of stay, improve infant health (e.g. skin-to-skin regulates heart rate, reduces infection frequency), and increase parent satisfaction with care (Bracht et al., 2014; Gooding et al., 2011). Forms of touch (e.g. hand swaddling, facilitated tucking) can also reduce infant stress if parents are not ready to hold, or infant is too unstable for skin-to-skin holding (Gooding et al., 2011). Involving parents in patient care helps them read infant cues, experience stress reduction, gain confidence and competence in parenting, and reduce occurrence of postpartum depression for mothers (Gooding et al., 2011). Parent presence is an important facet of FCC in the NICU due to these benefits.

Parent presence. Parent presence for FCC also includes concepts such as unlimited presence (i.e. 24 hour visitation in the NICU), and inclusion in bedside rounds. Unlimited parental presence is seen to enhance parent role in the NICU and decrease parent anxiety, improve staff attitude towards FCC and job satisfaction, as well as promote developmentally

supportive care (Axelin et al., 2014; Davidson et al., 2014; Gooding et al., 2011). In the past family presence (FP) has been limited due to fear of infection, however that fear is unsupported by research evidence (Davidson et al., 2014). The current gold standard in paediatric and adult critical care units is FP during medical rounds (Davidson et al., 2014). FP is shown to contribute new information at rounds leading to more comprehensive clinical decisions (Davidson et al., 2014). Other benefits of FP at rounds are increased confidence in the health care team by parents, clearer understanding of the care plan, and parents feeling satisfied as contributing members of their child's health care team (Gryzb et al., 2014; Davidson et al., 2014).

Partnering/ collaboration. Well-supported parent involvement in patient care stems from the development of an effective nurse-parent or HCP-family relationship that is based on partnering and collaboration (Axelin et al., 2014; Bracht et al., 2013; Franck et al., 2012; Gooding et al., 2011; Reis et al., 2010; Trajkovski et al., 2012). Reis et al. (2010) identified that the nurse/parent relationship can have the greatest impact on parental satisfaction with their NICU experience. Nurses take on the roles of teacher, guardian and facilitator, with the aim of providing support/ guidance to parents and coaching them to become experts in their own care of their child (Axelin et al., 2014; Reis et al., 2010). The formation of a partnership with parents is ideal but nurses can find this difficult to establish (Trajkovski et al., 2012). Partnering strategies suggested in literature include being aware of how nurse attitudes influence development of this crucial relationship, communication skills, finding a 'happy medium' of parent involvement and the NICU world, and being a subtle presence (e.g. nurses are outside of immediate patient space when parents holding, but close-by if needed quickly) (Reis et al., 2010; Trajkovski et al., 2012).

The collaboration/ involvement of parents in their child's care has been shown to be a welcomed role by parents (Axelin et al., 2014). Collaboration as a key element in the nurse-

parent relationship, empowers families, promotes informed involvement in decision-making, and has a positive impact on infant recovery, parent confidence and competence (Franck et al., 2012; Gooding et al., 2011). The concept of integrating families into NICU care practices has taken the shape of many programs, including that of the recently developed Family Integrated Care program at Mount Sinai Hospital (Bracht et al., 2013).

Family Integrated Care (FICare). FICare pushes collaboration between HCP and family further by aiming to integrate family into the care of the infant in the NICU. Mother and infant are considered as one unit. Integration is achieved by engaging parents in education sessions to support their role as integral members of the NICU care team, facilitating parental involvement for most primary care of the infant with RN supervision, and supporting parent presence and parents-as-experts on their baby (Bracht et al., 2013). This program promotes a stronger nurse-parent or health care professional (HCP)-family relationship to support FCC integration.

Cultural competence. An investment in developing a collaborative nurse-parent relationship as a part of FCC extends to the ability to practice with cultural competence. Henderson et al. (2015) identifies culturally competent care in existing literature as the consideration of a family's culture (i.e. set of values, beliefs, and norms that guide thinking or decision making of the group), the ability of health systems to address needs of patients with diverse beliefs/values and behaviours, and the ability to provide care that suits a patient's (or family's) social, cultural and linguistic background. Relationship building is based on building genuine relationships that are respectful of all individuals, and working to empower parents with culturally competent FCC practices (Henderson et al., 2015).

Parent education. The formation of a working HCP-family relationship can be complimented by providing parent education in the NICU on subjects such as developmental care, sibling visits, breastfeeding teaching, infant pain, and transitioning home.

Developmental care. Developmental care aims to improve the development/ growth of preterm infants in the NICU; FCC is integral to developmental care (Hendricks- Munoz et al., 2010). Developmental care considers the neurodevelopment of infants with respect to the effects of environmental stressors (light, sound), family needs (privacy, respect for cultural/ethnic diversity), special handling of premature infants, and parental presence or unlimited visitation for parents (Hendricks-Munoz et al., 2010). Education on developmental care empowers parents, increases their competence in interacting with the infant, leads to less anxiety and increases their satisfaction with patient care (Asai, 2010). Benefits to the infants include improved medical/ developmental outcomes and shorter length of NICU stay (Asai, 2010).

Sibling visits. Education can also be provided on positive outcomes of sibling visits for neonates and families. Sibling visitation has been known to result in positive effects for families, such as fewer behaviour problems and decreased aggressive/ regressive behaviour of siblings. Sibling visitation is also associated with an increased sense of family unity for parents and is thus a valuable component of FCC (Gooding et al., 2011).

Breastfeeding/EBM. Another beneficial component to FCC is breastfeeding education. In the first six months of life expressed breast milk (EBM) or breastfeeding is the optimal source for nutritional and immunological support for infant growth/ development as per the American Academy of Paediatrics, Health Canada, and the World Health Organization (Benoit & Semenic, 2014). Breast milk is known to help premature infants with enzyme development, strengthening their immune system, providing anti-infective and anti-inflammatory properties, and protecting

infants from nosocomial infections, sepsis, and necrotizing enterocolitis, among other benefits (Benoit & Semenic, 2014; Gooding et al., 2011). As a result, developmentally supportive care like skin-to-skin holding, education on the benefits of breast milk, and breastfeeding education are important aspects of FCC in the NICU (Benoit & Semenic, 2014; Gooding et al., 2011).

Infant pain. Education on infant pain can aid parents in becoming more involved in comfort measures and help them gain insight on NICU pain management. Parent emotional distress from infant pain can lead to long-term effects on the parent-infant relationship (Franck et al., 2012). Strategies parents can be taught include facilitated tucking and holding (Franck et al., 2012). While parental involvement in pain management does not necessarily alleviate parent stress, there is increased parental satisfaction with the NICU stay when pain information is provided and parents are involved in pain interventions (Franck et al., 2012). In accordance with FCC, parents should be, "respected" fully informed and given choices and [be able] to be aware of what works best for baby in [their] role of managing baby" (Franck et al., 2012, p. 48).

Parent education sessions on topics such as infant pain management, the NICU environment, and transitioning to home, can reduce parental stress/anxiety, and increase parent coping and problem solving from increased confidence in interacting with their child (Bracht et al., 2013). Provision of educational materials and bedside teaching can be beneficial, but a lack of ideal teaching environments and staff experience with teaching can pose barriers to parent education as a part of FCC (Bracht et al., 2013).

Parent programs. Parent-geared programs seek to help families navigate the NICU experience by providing unit-specific information and support and facilitating peer/ community support. Families can be empowered in decision-making, coping, and in developing mastery in their roles as parents, through the knowledge and support gained with such programs.

Parent-to-parent programs. Parent-to-parent or parent buddy programs provide the opportunity for parents to engage in supportive dialogue with veteran NICU parents in an informal social setting (Bracht et al., 2013; Gooding et al., 2011). This approach can aid coping for parents, promote positive parent-infant interactions and parent-staff communication, and decrease parent stress, depression and anxiety (Bracht et al., 2013; Gooding et al., 2011). Linking families to local resources or community supports can also be beneficial. Online forums such as those found on the March of Dimes (www.marchofdimes.com) and Baby Center websites (www.babycenter.com) allow for storytelling of personal experiences in the NICU and prompting of supportive online discussions (Gooding et al., 2011).

FICare program. The FICare program can significantly increase support received by parents during the NICU admittance. FICare provides additional education for parents in specific skills (if they choose to participate) such as charting, giving reports/ updates during health care team rounds, providing developmental care, and even assessing their infant (Bracht et al., 2013). The FICare education committee consists of veteran parents, a parent resource nurse, a social worker and a lactation consultant to provide optimal support to parents (Bracht et al., 2013).

Transitioning home supports. Multiple education sessions for parents can fall under the protocols in place to help transition infants home. This can include parent educational classes on gastrostomy-tube feeding or ostomy appliance changes, cardiopulmonary resuscitation, preventing sudden-infant death syndrome via safe-sleeping, respiratory syncytial virus (RSV) education, and car seat use (Gooding et al., 2011).

According to current literature, if FCC components are not a part of the NICU culture, families can be left feeling uninformed, intimidated or anxious with the technical environment,

powerless in helping their baby, and experience difficulty with bonding or attachment to their baby (Bracht et al, 2013; Lee & O'Brien, 2014).

Barriers to Application of FCC in the NICU

Two major groups of barriers to FCC integration are acknowledged in literature: a lack of nursing knowledge and skills to support FCC practices (Galarza-Winton et al., 2013); and organization/ unit or technical barriers such as unsupportive health system design, busy workloads, and restrictive unit policies, or a high medical focus for infants due to infant acuity (Trajkovski, Schmied, Vickers & Jackson, 2012; Lee & O'Brien, 2014).

Barriers due to Lack of Nursing FCC Education. A lack of or inconsistent FCC education for nurses and other health care professionals can lead to poor understanding of the philosophy behind FCC, difference in perception of FCC by families vs. HCPs, and its inconsistent application (Asai, 2010). Some studies have shown that neonatal nurses are less likely to implement FCC than paediatric nurses (Trajkovski et al., 2012). Nurses encounter barriers to FCC if lacking in skill or knowledge to support interpersonal relationships with families to build effective collaborative relationships to benefit infant care (Merighi et al., 2011).

In the busy and complex environment of an NICU, medical needs of the infant and technical skills can be prioritized over building relationships with parents (Merighi et al., 2011). While models exist for FCC and culturally competent care, these models do not address barriers to FCC practices that nurses, among other HCPs, can face (Hendson et al., 2015). Studies have shown a need for education for NICU nurses in effective communication, developing relationships, family needs assessment, negotiating skills, conflict resolution knowledge, and supports for nurses to reinforce and improve this learning (Trajkovski et al., 2012). This barrier continues presently, as there is a lack of literature about how to effectively translate the skills

that nurses need for developing more collaborative nurse-parent relationships in the NICU (Reis et al., 2010). Perceptions of FCC on the individual unit, and skill level and confidence in FCC practice can also contribute to this barrier (Trajkovski et al., 2012). A nurse-parent partnering approach is shown to be effective for implementation of FCC (Reis et al., 2010) but NICU nurses are not educated on how to negotiate such a partnership; clarity is required on how to integrate this needed skillset into NICU nurse curriculum.

Another barrier is the lack of investment in education surrounding nurse-family relationships when doing end-of-life care for an infant or bereavements. A lack of bereavement training for NICU nurses leads to feelings of discomfort or being ill prepared when faced with such cases. Nurses must work with families through this difficult process, but can lack experience/ education in the specific training needed. Bereavement education can include helping families create memories with their living child, as well as sensitivity to varying cultural/religious customs and beliefs surrounding death and dying (Gooding et al, 2011). Communication shortfalls can put added stress on families during this time and further highlights the need to invest in training for nurses in development of interpersonal relationships, supporting families through bereavement, and building the nurse-parent relationship (Gooding et al., 2011).

An additional barrier to education in FCC practices surrounding nurse-parent relationships is determining how to reach a happy medium between parent and nurse roles (Trajkovski et al., 2012). Parent empowerment can leave nurses unclear about their role in the NICU. With the focus on collaborating and partnering with parents, comes a transfer of responsibilities for infant care. This is observed as power dynamic changes between nurse and family, where nurses may be reluctant to give up their control of the care of the patient out of concern for patient safety, care efficiency, or reluctance to change a role in which they are

comfortable (Axelin et al., 2014). These issues of power, control, and care responsibilities between nurses and families can act as barriers to FCC (Axelin et al., 2014). A reformation of staff/ parental roles is needed, in these cases, and requires a shift in thinking and NICU culture toward integrating families of infants into unit practices.

Unit/ Organizational Barriers. Changes in education and attitude surrounding FCC integration for nurses also depend on the change of group behaviours (i.e. regarding members of the healthcare team, NICU cultural norms), policies, procedures and organizational changes that modify NICU environment and staff performance expectations (Asai, 2010; Bracht et al., 2013). Although FCC is known to have positive impacts on infant development and maternal-infant relationship, there remains great focus on the medical aspects of NICU care, making FCC practices challenging (Bracht et al., 2013; Hendricks-Munoz et al., 2010). The acuity and instability of these infant patients can make it difficult for nurses to feel comfortable with FCC practices (Asai, 2010; Lee & O'Brien, 2014). The overall culture of the unit (e.g. group behaviours seen in the healthcare team, and organizational policies/practices) affect how likely nurses are to implement FCC (Asai, 2010). A change in performance expectations and physical environments to create space for parents is necessary to reflect the shift to FCC culture, but such changes are slow to develop and can be costly (Asai, 2010).

Performance expectations of nurses in moving toward an FCC model of care can cause nurses to be concerned regarding involvement of parents in care practice and family presence (Gryzb et al., 2014). Nurses express worry regarding breach of confidentiality with increased family presence during handover/rounds (Gooding et al., 2011). The need for valuable input from families during rounds is thought to outweigh the risk of confidential information being shared and can be addressed through means such as soundproof headphones if these unit

resources are available (Grzyb et al., 2014; Davidson et al., 2014). The concern of increased infection rates with family presence can be a barrier for visitation, however there is insufficient evidence to support this claim (Davidson et al., 2014). Another existing barrier is the fear that family presence on rounds impedes teaching at a teaching hospital, however more research is needed to investigate this concern (Davidson et al., 2014; Grzyb et al., 2014).

Davidson et al. (2014) found that family presence at rounds led to decreased time spent meeting with families afterwards to discuss plan of care for their infant. New studies have shown that when families participate in multidisciplinary rounds and the Socratic method² of teaching is employed, there can be a positive effect for both families and medical students (Davidson et al., 2014). FCC initiatives are known to benefit patient/ family care in the NICU; however, they are not wholly integrated into standard care practices at the bedside (Galarza-Winton et al., 2013). Integration may require a revised educational curriculum that includes concepts of mentorship and coaching as a part of knowledge translation.

There is a need to address the barriers to application of FCC at the bedside via a revision of FCC education, FCC integration using KT strategies, and identifying modification needed to support FCC practices in the NICU environment (Galarza-Winton et al., 2013). An FCC curriculum for nurses, based in the paradigm of constructionism, may be one solution to this issue. The inclusion of KT strategies to create a more effective nursing curriculum can support the practice of FCC in the NICU and the creation of an FCC culture throughout an organization.

Knowledge Translation

FCC application at the bedside in the NICU can be constrained by poor knowledge translation to bedside nurses. This can negatively affect the health outcomes of the infant and

² The Socratic method of teaching caters to student-centered learning where the facilitator poses questions that drive the investigation of ideas from varying perspectives, so that students may better reflect on concepts in depth. Inquiry and discussion occur based on asking questions to stimulate critical thinking in learners (Bagshaw, 2014).

NICU experience for the family. Knowledge translation is defined as a:

í dynamic and iterative process that includes synthesis, dissemination, exchange and ethically sound application of knowledge [í] within a complex system of interactions between researchers and knowledge users which may vary in intensity, complexity and level of engagement. (Bjørk et al., 2013, p. 2337)

Many knowledge translation models have been cited in current literature. For this paper I have chosen the model developed by The Hospital for Sick Children (i.e. Knowledge Translation Planning Template (KTPT)) on which to base my development of recommendations for creating a more effective FCC nursing curriculum (See Appendix A). The KTPT is identified as a tool that can support the development of KT plans for research and non-research projects, and can be applied in multiple subject areas (The Learning Institute, 2015). In light of this integrative literature review, the KTPT is discussed as a tool to facilitate a more comprehensive program or curriculum development on FCC for neonatal nurses. The KTPT framework considers Project Planners involved, Degree of Partner Engagement, Partner Roles, KT Expertise on the Development Team, who the Knowledge Users are, Main Messages to convey, KT Goals, KT Strategies, the KT process, KT Impact & Evaluation, Resources, Budget Items, and Implementation of KT strategies (The Learning Institute, 2015). In this paper I consider KT strategies/goals, and examples of implementation techniques (from the KTPT) as FCC facilitators in integrating FCC into nursing curriculum to support its application to a level III (+) NICU. I conduct this secondary research using a constructivist grounded theory approach to build specific knowledge of these facilitators to FCC from a nursing standpoint, in this integrative review.

Theoretical Underpinnings

My philosophical approach is based in the research paradigm of constructivism and my reflection on the four metaparadigm concepts of nursing (i.e. human being, environment, health and nursing) (Lee & Fawcett, 2013). The theoretical approach of constructivist grounded theory can align with this research paradigm of constructivism.

Metaparadigm of Nursing. The benefit of reflecting on the four metaparadigm concepts of nursing (human being, environment, health and nursing), as described by Jacqueline Fawcett, is to situate myself in a place from where I can better consider the role of nurses in relation to how the philosophy of FCC is applied in the NICU. In my understanding of what nursing *is*, these four concepts are synergistic when combined, to reflect on the wider scope of what shapes healthcare and patient/ family well-being. From personal experiences in the NICU, these metaparadigm concepts influence FCC integration in such a way that without consideration of one component, an FCC culture is more difficult to achieve. For example, without an environment conducive to FCC (i.e. chairs at bedside for breastfeeding), nurses' intent to encourage FCC practices of skin-to-skin holding or breastfeeding is impeded. This can negatively impact infant health and infant/ family well-being. A broader perspective gained by reflecting on the metaparadigm concepts shapes my view of what nursing is, from a theoretical perspective, as well as helps me to link FCC clinical practice to theoretical rationale (Lee & Fawcett, 2013). I apply this unique vantage point in my reflection of the outcomes from the thematic analysis of my research, using a constructivist grounded theory approach.

Constructivism. Constructivism holds a relativist ontological position where the idea of an objective reality is rejected (Mills, Bonner & Francis, 2006a; Mills, Bonner & Francis, 2006b). Constructivism supports the concept of subjective and multiple realities, and has the

epistemological understanding that realities are social constructions of the mind, and that multiple constructions can be shared among individuals (Mills et al., 2006a; Mills et al., 2006b). How individuals construe the world, or how a person makes personal meaning via internal cognitive processes, is the focus of constructivism (Raskin & Bridges, 2004). Within this paradigm both the researcher and the participant construct research and influence the knowledge produced (Samuels-Dennis & Cameron, 2013).

The epistemology of constructivism lies in the co-construction of meaning between the researcher and participant, and the subjective interrelationship that is formed between them. While research is obtained through data extraction from the participants, the researcher's own experiences can influence development of research outcome (Mills, Bonner & Francis, 2006a). The researcher is not an objective observer and researcher values must be acknowledged as they can affect outcome (Appleton, 1997; Mills et al., 2006a). Many researchers specifically examine human experience due to the fact that individuals live within, and interact with, their own social worlds (Appleton & King, 2002). Researchers try to understand the variety of constructions derived by individuals, and may seek a consensus of meaning; since multiple knowledges can exist within this paradigm, a range of views can emerge (Appleton & King, 2002). These differing perspectives can hold unequal values and, to reach a consensus of meaning, contextual factors must be considered (Appleton & King, 2002). Under the theoretical framework of constructivism, "the value of knowledge development lies in the ability to understand how people perceive their world," (Samuels-Dennis & Cameron, 2013, p. 29). This framework can be applied to answer the question of what unique perspectives NICU nurses hold regarding barriers to FCC. The research methodology of constructivist grounded theory is identified as underpinned by the research paradigm of constructivism in current literature (Charmaz, 2000;

McCann & Clark, 2003; Mills et al., 2006a), and is my chosen theoretical approach to this research endeavour.

Constructivist grounded theory. In this integrative literature review my research will be based on a constructivist grounded theory approach as described by Kathy Charmaz. Grounded theory is an evolving methodology, and the epistemology of grounded theorists can be based on the ontology of the researcher (Mills, Bonner & Francis, 2006b). Constructivist grounded theory is a more recent evolution, as discussed by Kathy Charmaz, and places the researcher in the position of being able to represent experience and meaning (Mills et al., 2006b). The research paradigm that is congruent with my own beliefs about the nature of reality is that of constructivism. From this perspective, a general consideration of the relativist ontology of constructivism allows for an epistemological and methodological approach that encompasses a constructivist grounded theory approach.

Charmaz's publications on constructivist grounded theory specify the relationship of researcher to the participants, analysis of data, and how participants' experiences can inform grounded theory (Mills et al., 2006a). Constructivist grounded theory is based in relativism (ontology) and subjectivism (epistemology), or the acknowledgment of multiple truths and realities (Mills et al., 2006a). The epistemology of constructivism, which is reflected in constructivist grounded theory, is such that the researcher cannot be separated from the researched (Mills et al., 2006a). Charmaz considers the researcher as co-creator of experience and meaning, and as having an ethical obligation to describe experiences of others in a way most "true" to the participants (Mills et al., 2006a). Analysis of data includes the researcher reflecting on their own assumptions and keeping track of their own thinking as they conduct research (Mills et al., 2006a). The assumption exists that the interaction between

researcher and participants produces data, and meaning extracted is based on researcher observations and researcher-derived themes/definitions (Charmaz, 2000). Data and analysis includes the use of coding language and memoing to keep participants' meanings and experience present in final outcomes (Charmaz, 2000; Mills et al., 2006a).

Due to the nature of an integrative review, I am not working directly with participants, and instead have collected data from primary research articles as outlined in the *Methodology* section of this paper.

Study Aim

The goal of this integrative literature review is to identify barriers and facilitators to integrating effective family-centered care practices, and related programs, as identified by nurses working in the NICU. My project questions consider: *What facilitators support, and what barriers prevent, NICU nurses from implementing family-centered care at the bedside? What strategies can nurses and health care organizations apply to address these barriers?* (With sub-questions: *What curriculum changes are required to support education for bedside RNs in the NICU surrounding FCC? How can knowledge translation strategies assist in FCC translation into nursing practice at the bedside?*) I conducted this literature review with the intent to identify strategies to improve FCC practices in the level III NICU, and determine recommendations that better support the knowledge translation and integration of FCC to bedside nurses.

Methodological Approach

My methodological approach rests on the five-step process for integrative reviews described by Whitemore and Knafl (2005), using specific search strategy parameters, and critically appraising research using the John Hopkins Evidence Appraisal Instruments.

The integrative literature review is a, öspecific review method that summarizes past empirical or theoretical literature to provide a more comprehensive understanding of a particular phenomenonö (Whitemore & Knafl, 2005, p. 546). This process consists of 5 steps: forming a review question(s), developing a search strategy, critically appraising the literature, analyzing and synthesizing the data, and developing conclusions derived from the synthesis. The first stage involves clearly identifying the problem of interest and detailing the purpose of this literature review (Whitemore & Knafl, 2005). Secondly, a comprehensive search of literature is conducted in order to perform an integrative review, with specific inclusion and exclusion criteria (Whitemore & Knafl, 2005). Following this, an evaluation is conducted of data obtained, and this data is analyzed in the format of a chart to identify themes or patterns and their relationships (Whitemore & Knafl, 2005). For the purposes of this literature review, data is considered to be identified themes related to facilitators and barriers to FCC. Finally the researcher draws conclusions and seeks verification of results as the final step in data analysis. The integrative literature review is unique in that it can include both experimental and non-experimental research, and allows for multiple perspectives to be included in research (Whitemore & Knafl, 2005). For this integrative literature review I conducted the five steps as outlined above, while keeping a record of my thoughts, analysis and project decisions as recommended by Whitemore & Knafl (2005).

Step 1.0: Problem Identification & Purpose

Whittemore & Knafl (2005) proposed that the problem identification stage should clearly identify the issue the review seeks to address and its primary purpose. Within my own practice, in two different acute level III(+) NICUs, I have observed that while the intent to provide FCC is present among staff, barriers can arise to prevent well-meaning nurses from applying and integrating components of FCC in their practice. I sought to investigate this issue further through asking specific project questions (as outlined earlier).

For the purpose of this review, the target populations were the *NICU nurses* who practice FCC at the bedside, and the *families of patients* in the NICU who benefit from FCC practices. I sought to gain the perspective of bedside nurses on barriers to FCC by basing my approach in constructivist grounded theory in order to gain a deeper understanding of the experience of these nurses, and develop an understanding to convey this experience to others in a way that holds true to the experience of NICU nurses (Mills et al., 2006a). Under the theoretical understanding and research paradigm of constructivism, I attempted to understand or represent the human experience of these nurses regarding barriers and facilitators to employing FCC in practice, and seek a consensus of these barriers/facilitators to better inform KT strategies for FCC and improve support for nurse practice of FCC in the NICU. This theoretical scope provided the boundaries of my research endeavour and honed my research focus. The variables of interest for this review are stated in the search terms listed under *Step 2.0 Literature Search*.

Step 2.0: Literature Search

According to Whittemore & Knafl (2005), a well-defined literature search strategy can increase the rigour of a review through obtaining more complete and unbiased search results.

The search strategy employed here uses specific search terms, databases, and specific inclusion and exclusion criteria to conduct my research.

My search strategy looked at both research and non-research articles published in peer-reviewed journals over the last 10 years, as well as recently published protocols from organizations with level III NICUs (i.e. The Hospital for Sick Children, Mount Sinai Hospital, Sunnybrook Hospital). I then narrowed my search, and subjected my final results to critical appraisal. A flow chart of this entire process can be found in Figure 2. The specific search terms I used were various combinations of: *neonatal intensive care nursing, family-centered care, Intensive Care Units, Neonatal, barrier* or impediment*, problem* or obstacle*, family integrated care, and facilitate* or framework* or model* or support**. These terms were used to conduct multiple source searches using EBSCOhost (which includes CINAHL and MEDLINE databases) through the University of Victoria library website. The limiters used on my first search on EBSCOhost were to set the inclusion criteria of *international studies in English*, and *Full Text*. My next step was to exclude search results outside of the published date of *2005/01/01- 2015/12/31*, and include only *Scholarly (Peer Reviewed) Journals*.

My initial search resulted in 103 articles so I made the decision to adjust the published date to exclude articles outside of *2010/01/01- 2015/12/31*, and narrow my search results to within the last five years. With my combined search terms and inclusion/ exclusion limiters (see Appendix B), I was able to narrow my search results to 63 studies. Along with these articles, I obtained 2 documents for health care professionals on the staff and parent roles for the Family Integrated Care (FICare) study being conducted at Mount Sinai Hospital and Sunnybrook Hospital, bringing my total amount of articles to 65. This was still a large number for a single researcher, so I read through each abstract or summary, and made the decision to keep articles

that included the specific words *FCC* and *NICU* in the title, abstract or search terms listed by each article/document, as a sign of its relevance to this review. This narrowed my search results to 31 documents (29 studies and 2 practice guidelines). I then applied the John Hopkins Nursing Evidence Based Practice (JHNEBP) appraisal tool (see Appendix C) to conduct a critical appraisal of these 31 documents.

Figure 2. Flow Chart of Research

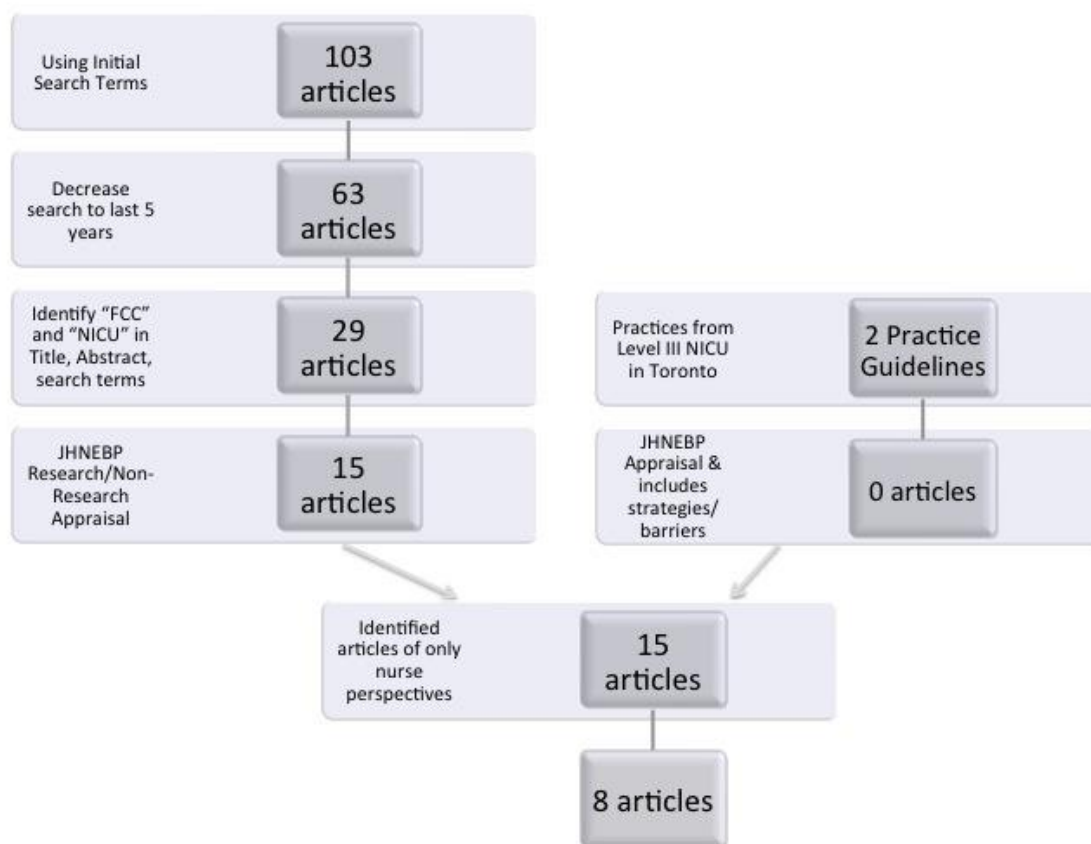


Figure 2. Flow Chart of Research. This figure depicts the thought process of determining relevant articles for this integrative review.

Step 3.0 Data Evaluation

The John Hopkins Nursing Evidence Based Practice (JHNEBP) appraisal tool was applied to conduct a critical appraisal of the resulting 31 articles, for this integrative review.

This particular tool was chosen because it allowed me to appraise multiple study designs (e.g. experimental, meta-analysis, quasi-experimental, nonexperimental, qualitative, and meta-synthesis research evidence). I was also able to include documents such as clinical practice guidelines, case studies or literature reviews (i.e. considered non-research evidence in this instrument) in my research. This tool also provided a means of determining the strength and quality of research evidence, and I was able to narrow my research results to 15 articles of general perceptions of barriers and facilitators to FCC in the NICU.

After reviewing these 15 articles, I determined that only 8 of these research articles specifically investigated the perceptions of the neonatal nurse of barriers and facilitators to FCC in a level III NICU. Initially I conducted a thematic analysis using the constant comparative method on all 15 articles to determine themes of generally acknowledged barriers versus facilitators of FCC. I then did a similar thematic analysis for the 8 articles that provided perceptions solely from the NICU nurse perspective, to compare these results to the original 15 in order to determine if there was insight gained in seeking only NICU nurse perspective.

Whittemore and Knafl (2005) state that while there is no existing "gold standard" for evaluating or interpreting the quality of a research review, the sampling frame can provide a guide for rating quality. The data evaluation stage of the integrative literature review can be strengthened in terms of quality scoring if the research designs are similar among studies (Whittemore & Knafl, 2005). This can have improved authenticity of results and better informational value and representativeness in the conclusions put forth (Whittemore and Knafl, 2005). All of the research in the studies included in this review occurred in an NICU environment. The research designs of the final 15 studies were shown in quantitative research (20% or 3 surveys that included cross-sectional and longitudinal prospective), qualitative studies

(53% or 8 interviews that were of descriptive, interpretive, narrative, or phenomenological designs; 13% or 2 literature reviews; 7% or 1 randomized controlled trial with descriptive, experimental design), and a mixed methods study (7% or 1 Likert scale survey with open-ended question for interpretive analysis). Of the 8 articles specifically considering nurse perspectives, the studies included research designs of quantitative studies (26% or 2 that used cross-sectional or longitudinal prospective surveys), qualitative studies (63% or 5 interviews with non-experimental interpretive, narrative, descriptive or phenomenological designs), and a mixed methods study (13% or 1 Likert scale survey with open-ended question). The research designs of the 8 studies that share NICU nurse perspectives showed slightly less variability in research designs, identifying it as a more homogenous sample than when all 15 articles were considered.

To consider the representativeness of this review I also considered the geographical locations of the study sample obtained. Of the final 15 studies, their locations stemmed from Canada (6 studies; 40%), the U.S. (4 studies; 27%), and the following countries (contributing 1 study each; 7%): Australia, U.K. (England), Finland, Japan, and South-eastern Brazil. Of the 8 articles that focused on nurse perspectives of FCC, the studies originated from Canada (3 studies; 38%), and the following countries (1 study each; 13%): Australia, U.S., Finland, Japan, and South-eastern Brazil. Thus, while the final sample of 15 articles is was representative of a global perspective, both sets of data paint the clearest picture of a North American perception of FCC with Canada as a forerunner in contributing research for this field.

Step 4.0 Data Analysis

In this phase, the data from primary sources are ordered, coded, categorized, and summarized into comprehensive conclusions of the research issue explored (Whittemore & Knafl, 2005). Prior to extracting themes from these studies, I used the John Hopkins Nursing

Evidence Based Practice (JHNEBP) appraisal tool to critically review both research and non-research evidence. For both types of evidence I first answered the question, "Will the results help me in caring for my patients?" to ensure the studies included in my research were connected to my constructivist goal to build on my own previous knowledge of FCC.

I identified levels of *strength of evidence* and provided a *quality rating* for each study based on the key provided by this appraisal tool. For research evidence, I considered *strength of study design* (e.g. sample size, more than one group used, and data collection methods). I only considered the control group as important for experimental studies. Nurse perceptions were a main focus in my research phase. I also looked at *study results* (i.e. clearly presented, interpretation provided), and *study conclusions* (i.e. conclusions based on clear study results, limitations discussed). For non-research evidence (of which I had two literature reviews), I considered the source of the evidence and whether bias was acknowledged along with the other components mentioned, above. The JHNEBP research evidence appraisal tool informed my initial analysis of the sample of studies selected for this review.

Using the JHNEBP tool, I decreased my search results to 15 studies using specific inclusion and exclusion decisions after great deliberation on its relevance to my research questions. I considered the individual studies' contributions, and overall merit of the 31 articles, when conducting my critical appraisal. I included a study if it consisted of Evidence level I, II or III, with a "high" Evidence/ Quality rating. I also included studies if they were of Evidence level I, II or III, with a "good" Evidence/Quality rating plus contained content specific to "barriers" and "facilitators" of FCC, or "nurse perceptions of FCC." Finally, I included studies at Evidence Level V (i.e. literature reviews) only where Evidence/Quality rating was "high" due to the amount of information gleaned from highly relevant literature reviews. Other research studies

were excluded for the following reasons: they did not meet the above inclusion criteria using the JHNEBP tool, sample size was not reported, the study did not include consider nurses' perspectives about FCC, and the topic of the research conducted was not FCC. The appraisal tool was applied to the two practice guidelines, and the result was to eliminate them both from the final research articles because they were at Evidence Level IV, and did not discuss content specific to 'barriers and facilitators' or 'nurse perceptions of FCC.' They, instead, provided guidelines on HCP roles and responsibilities for FICare. Thus, I was left with a total of 15 final studies to conduct this integrative literature review. I completed a table of summaries of these 15 articles for personal reference and transparency (see Appendix E). From this selection of 15, I determined that eight studies focused specifically on the NICU nurses' perspectives of barriers and facilitators to FCC. These eight studies became my focus for in-depth analysis.

The analytic method I employed was informed by concepts belonging to the grounded theory method processes, from a constructivist epistemology. I analyzed the studies and uncovered common themes. A constant comparative method was applied so that common themes were compared on a continual basis as they were acquired in research. These common themes were clustered to form main sub-themes that were grouped under main categorical headings. A constructivist approach allowed me to build on themes that arose throughout this process and derive the final categories for this review. The final result of this process is presented in two tables that highlight general perceptions and nurse perceptions of barriers/facilitators to FCC in the NICU (Table 1 and Table 2, as shown in the following section).

Based on Whitemore and Knafl's (2005) outline of the integrative literature review, the data analysis step encompasses four phases: data reduction, data display, data comparison, and conclusion drawing and verification. These four phases are considered to be compatible with

research from multiple different methodologies (Whittemore & Knafl, 2005). In this following section I will outline these four phases of analysis as pertaining to my integrative review.

Step 4.1 Data Reduction

Whittemore and Knafl (2005) state the first phase of data reduction is important in delineating the method in which research data, of differing methodologies, are classified. I applied a constructivist grounded theory method that included elements of grounded theory such as coding, thought mapping, and constant comparative method in my thematic analysis.

Initially I sought data that fell between two main classifications: barriers and facilitators to FCC. Next I created a mind map, which combined these many various themes under larger themes. This mind map allowed for the grouping of sub-theme into overarching categories, and the elimination of overlapping concepts. The figures provided (see Figures 4 and 5 in Appendix D) show the final overarching themes with main categories in a mind map, created during this data reduction process. The mind mapping of data adds to methodological rigour in that it is a tool that has allowed me to see themes emerge, group concepts based on clustering similar themes, and eliminate bias and assumptions through visualizing the data for conceptual analysis. The mind map program applied here is a free program that is accessible through the www.text2mindmap.com website, and has allowed for easy sorting, grouping, and relocating of themes during the comparative analysis stage.

In support of methodological rigour, I also created a chart of article components and findings as a form of visual presentation and as a reference guide during the course of this research and analysis process to limit bias and assumptions (Appendix E). These articles were reviewed to ensure summaries held the main themes, and these themes were included.

Finally, I composed a summary of the eight articles I uncovered that depicted nurse perceptions of FCC, to ensure transparency and support for my analysis in this research process. These eight papers were directly related to my research question as they provided an analysis of NICU nurses' perception of barriers and facilitators to family-centered care separately from the analysis of other care providers' perceptions. For each summary I highlight study findings, recommendations and limitations. I also discuss its relevance to this literature review, and my personal practice, in terms of barriers and facilitators uncovered by each study (see Appendix F).

Step 4.2 Data Display (Findings)

In this second phase of data analysis, data from the initial step is displayed in forms that allow it to be used for the data comparison phase that follows (Whittemore & Knafl, 2005). To promote the visualization of patterns in themes I have unearthed in this research, I provide a list of general barriers versus facilitators to FCC in the NICU in Table 1. I highlight specific nurse perceptions of barriers versus facilitators to FCC in the NICU in Table 2.

Table 1
General Barriers vs. facilitators to FCC in the NICU

Barriers (Themes)	Main Categories	Facilitators (Themes)
Lack of time/HCP workload Environment restrictions Restrictive policies	Organization/Unit FCC Design & Policies	NICU design/ structures for FCC Supportive organization/ unit policies for FCC
Staff attitudes and practices Ineffective nurse/HCP-family relationships Unclear communication	Strengthening the HCP-Family Partnership	Reflective practice Strategies for HCP-family relationship-building Mindful/ authentic practice Communication strategies
Varied needs of family Infant health context Parental stress	Family Context & Identified Needs	Parent education Parent programs (e.g. mentor) Transitioning support
Parent education lacking Parent versus nurse roles unclear HCP/HCT education lacking	Integrating Family into NICU	Ongoing staff FCC education Support for family presence Strategies to involve family

Table 2*NICU Nurse perceptions of barriers vs. facilitators of FCC in the NICU*

Barriers (Themes)	Main Categories	Facilitators (Themes)
Strength of belief	Organization/Unit Culture	Unit/ organization FCC supports
Lack of skill/ knowledge to build effective relationship	Strengthening Nurse-Family Partnership	Meaningful/ collaborative partnering
Varied religious/ cultural or ethnic practices		Mindful/ reflective practice
Ineffective communication		
Infant health context	Family Context & Identified Needs	Transitioning support
Parent presence		Parent programs (activities)
Inconsistent FCC application		Parent education
Nurse skill level/ experience	Integrating Family into NICU	Strategies to involve family
Lack of FCC education		Ongoing nurse education
Nurse/ parent roles unclear		

I discuss relevant differences between Table 1 and Table 2 under the section entitled, “*Step 4.4: Conclusion Drawing and Verification*” in this paper. (Note: I include the mind maps as Figure 4 and Figure 5 in Appendix D, which are the basis of these final themes shown in Tables 1 and 2). Through these displays, my visualization of patterns and relationships of themes assist with my interpretation of the research data.

Step 4.3 Data Comparing

I was able to combine multiple sub-themes into four major categories of themes for both general perceptions of FCC in the NICU, as well as specific nurse perceptions of FCC. These are displayed in Tables 1 and 2. The four categories that resulted through considering general perceptions of FCC in the ICU were: *Organization/ Unit FCC Design & Policies*, *Strengthening the HCP-Family Partnership*, *Family Context & Identified Needs*, and *Integrating Family into NICU*. For nurse-specific perceptions, these categories changed slightly to become: *Organization/ Unit Culture*, *Strengthening Nurse-Family Partnership*, *Family Context & Identified Needs*, and *Integrating Family into NICU*. Comparison of categories, and implications

for practice and application of KT strategies to promote FCC, are further expanded on in the following sections.

Step 5: Presentation

In this last phase of the integrative review, conclusions can be brought to light through tables or via diagrams (Whittemore & Knafl, 2005). I will provide discussion in the next section that highlights key conclusions that have been drawn, based on evidence collected with this integrative literature review (as depicted in Figure 4/Table 1 and Figure 5/Table 2).

Step 4.4: Conclusion Drawing and Verification

Integrative literature reviews have the potential to, ōí contribute to theory development, and have direct applicability to practice and policyö (Whittemore & Knafl, 2005, p. 546). In this final phase of data analysis, as per Whittemore and Knafl (2005), I seek to move the final level of thematic analysis toward concept growth for the purpose of translating knowledge into practice through knowledge translation strategies. The themes extracted and consolidated into main categories in Table 1 and Table 2, form the foundation for conceptual analysis and novel synthesis in this review. Table 1 highlights general barriers and facilitators of FCC in the NICU, while Table 2 highlights nurse perceptions of barriers and facilitators of FCC in the NICU.

A comparison of categories from Table 1 and 2. In comparing the themes and resulting categories found in the neonatal nurse perceptions of barriers versus facilitators of FCC (i.e. Table 2) to the generally identified themes (i.e. Table 1), small but potentially significant differences are seen. The themes in Table 1 make up the main categories: *Organization/Unit FCC Design & Policies, Strengthening the HCP-Family Partnership, Family Context & Identified Needs*, and *Integrating Family into the NICU*. In some contrast, the themes in Table 2 of nursing perspectives form the main categories: *Organization/Unit Culture, Strengthening*

Nurse-Family Partnership, Family Context and Identified Needs, and Integrating Family into the NICU. The main categorical differences are the change in language where general perspectives of FCC refer to organization and unit design and policies as requiring changes (i.e. such as more supportive designs, policies and supports), whereas, nurses describe a need for change in organization/ unit *culture*.

The recognition of the concept of NICU culture can be something that resonates deeply with bedside nurses and directly influences their individual practice. Organizational culture is described as consisting of underlying assumptions, values and beliefs shared by members within an organization, who have internalized these ideas and practice them unconsciously (Casida, 2008). Organization culture, with its shared assumptions and values, leads to typical behaviour patterns and has been described as a finely tuned social control system (Spence & Lau, 2006). As a result, it can affect how successfully change is implemented (Spence & Lau, 2006). Spence and Lau suggest that the culture of a specific unit functions similarly to that of how organizational culture works, in that it can dictate the success or failure of changes to the unit. The Nursing Unit Cultural Assessment Tool (NUCAT) can be used to measure the subculture of nursing within the NICU (Spence & Lau, 2006). This tool allowed Spence and Lau to link unit culture in the NICU to how successful implementation of an FCC educational program for nurses was in integrating FCC practices in the NICU. Spence and Lau (2006) stated that understanding the work environment culture, and what nurses experienced as interesting, exciting or frustrating in their practice, allowed them to develop an educational curriculum to better implement change in FCC practice.

Unit culture directly and indirectly influences quality of work life and is reflected in staff attitudes related to outcomes like commitment, satisfaction, motivation, morale and power

(Gifford, Zammuto & Goodman, 2002). We know from the literature presented here (Appendix F) that employing FCC can improve nurse job satisfaction (Axelin et al., 2014; Hendricks-Munoz et al., 2010; Henderson et al., 2015; Trajkovski et al., 2012). It has been identified that conflicting perspectives on FCC within the healthcare team, and the unsupportive environment of the NICU, along with other barriers to FCC, combine to create a poor FCC culture in the NICU (Axelin et al., 2014; Benoit & Semenic, 2014; Bracht et al., 2013; Davidson et al., 2014; Gooding et al., 2011; Hendricks-Munoz et al., 2010; Henderson et al., 2015; Trajkovski et al., 2012). Thus, NICU nurses who value the FCC philosophy can find an unsupportive unit culture jarring to their beliefs, thus affecting job satisfaction, commitment to work, ability to feel empowered, and potentially resulting in a higher turnover for nurses (Gifford et al., 2002).

Factors that would support a change in organizational culture toward being more supportive of FCC include: (1) adequate support services, time, continuity and autonomy in decision-making for patient care; and (2) positive teamwork interactions within the health care team (Gifford et al., 2002). These factors may be beneficial to apply in the NICU in order to support a change toward improved FCC culture. Current research shows that whole team support for FCC practice is viewed as a specific FCC facilitator (Trajkovski et al., 2012; Hendricks-Munoz et al., 2010). This review, sharing the unique perspective of NICU nurses, identifies NICU culture as a dominant influencing factor in FCC practice, rather than simply looking at the influences of unit design and policies. It may be that increased FCC support to form a cohesive healthcare team (e.g. ongoing FCC education and resources for the team), acts as a strong facilitator in FCC integration in the NICU.

Another visible difference in language is observed when comparing the similar categories of -Strengthening Nurse-Family Partnership (Table 2) to -Strengthening HCP-Family

Partnership (Table 1). Language and meaning differs when comparing the sub-themes (facilitators and barriers) between these two tables. Research concerning general perceptions of families and other healthcare team members, identified staff attitude and practices as barriers to FCC, along with the lack of ability to form effective relationships with families (see Table 1). Investigations that focused specifically on nurses' perceptions identified barriers such as a *lack of skill and knowledge* to practice FCC (i.e. *how to* form strong partnerships with families), especially when working with diverse religious, cultural and ethnic practices of families (see Table 2) (Asai, 2010; Henderson et al., 2015; Hendricks-Munoz et al., 2010). From this observation it is apparent that nurses identify feelings of being ill prepared to meet family needs when there is a lack of nurse education and support to integrate FCC in their practice. This issue appears to run more deeply than simply a poor attitude, reflecting, rather, on poor nurse FCC preparedness and knowledge based on a lack of investment in FCC education and support for NICU nurses (Asai, 2010; Henderson et al., 2015; Hendricks-Munoz et al., 2010).

Relating identified themes to the FCC model.

NICU nurses' perceptions of facilitators for FCC (identified in Table 2) closely reflect elements of FCC as listed in the model shared by Malusky (2005) (Figure 1). I briefly discuss this connection in this next section.

Organization/unit culture. This category is composed of the themes of having unit/organization supports for NICU nurses, and supporting strength of belief, as facilitators of FCC. These supports relate to the FCC components of *respectful coalition* (i.e. where families and the health care team collaborate to include family in decision-making and infant care), *diversity/individuality* (i.e. where the individuality and diversity of families is accepted as a part of honouring choices made by the family), and *experts* (i.e. where family is recognized as experts

in their child's care, and nurses are guided by this belief in providing education, encouragement and helping to empower families). Nurses must believe in the value of FCC in order to not prioritize medical activities over FCC practices if possible (e.g. restricting parents from the unit in order to complete a medical task) (Hendricks-Munoz et al., 2010). The self-efficacy of nurses, or self-belief in their capacity to practice FCC, also affects their ability to integrate FCC concepts (Asai, 2010). Strength of belief and unit/ organization support for FCC is directly related to nurse education and preparedness to practice with respectful coalition, honour diversity/ individuality of families and acknowledge family as experts in infant care. Thus, these elements of FCC are better supported with investment in nurse education and support.

Strengthening nurse-family partnership. Within this category the themes that facilitate FCC, as identified by NICU nurses, are meaningful/ collaborative partnering and mindful/ reflective practice. These facilitators are linked to all 5 components in the FCC model (i.e. *respectful coalition, open communication* (i.e. HCP actively seeks to understand concerns/perceptions of the family), *family strengths* (i.e. to increase support of family role as caregivers), *diversity/ individuality*, and family as *experts*). An improved nurse-parent relationship is based in being mindful of the family context, reflecting on own practice, and collaborating on infant care with the perception of parents as experts and the role of the nurse as coach or facilitator to support families. Reflective practice, specifically, is deeply supported by a reflective practice community on the unit where issues of diversity or problem solving (e.g. related to culture, religion, ethnic practices, EOL care) may be discussed to contribute to knowledge for nurses in support of FCC practice (Axelin et al., 2014; Henderson et al., 2015; Lindsay et al., 2012). Support for appropriate FCC education for nurses to promote preparedness and an FCC culture in the NICU is identified as an overarching concept for these themes.

Family context and identified needs. This category, based on nurse perspectives, identifies themes of transitioning supports, parent programs and parent education as facilitators of FCC. These may also influence applicability of all five components in the FCC model. Investment in parent education in NICU practices, transitioning support, and parent activities, is based on the individual nurse's ability to provide this education and support, which may directly affect how well FCC is integrated into the unit. Nurses must possess the skillset and experience to be able to recognize needs of parents and provide guidance (Asai, 2010; Merighi et al., 2011). In doing so, nurses can develop respectful coalitions, model open communication, consider family strengths and the diversity/ individuality of family, and acknowledge parents as experts in the baby's care (Merighi et al., 2011). Skills in providing guidance to families, as well as reassurance in transitions, can have rewarding effects for all involved (Trajkovski et al., 2012). In order to promote these elements of FCC, as per the model by Malusky (2005), NICU nurses identify nurse education and FCC support, more specifically in the area of becoming effective in teaching and guiding families, as important contributors to FCC integration in practice.

Integrating family into NICU. The final category is composed of the themes of ongoing nurse education, and strategies to involve family in patient care, as facilitators of FCC. Once more, these themes are related to all five of the FCC components in Malusky's model (2005). With the continuous investment of FCC education for nurses, leading to a more definite conceptualization of the roles of nurses and families in FCC as well as reinforcement of FCC practices, FCC is better supported in the NICU. Nurses identified a need for these facilitators to help integrate FCC practices in order to develop a sustainable FCC culture.

The in-depth look at nurse perceptions of facilitators to FCC makes it clear that ongoing education and supportive NICU culture in terms of resources and reflective practice are of great

importance. Many barriers to FCC can be overcome with greater focus on addressing these areas of practice, identified as meaningful by bedside nurses. The major difference in categories when comparing nurse perspectives to general perspectives of FCC in the literature is that we are able to observe the unique and useful insight drawn from lived experience of NICU nurses of frontline patient care experiences.

The conclusions reached here, based on experiences shared by NICU nurses, speaks true to the constructivist grounded theory approach employed for this integrative literature review. Constructivist grounded theory based in relativism and subjectivism, seeks to acknowledge individual truths and realities, which can vary (Mills et al., 2006a). The main themes for facilitators identified in Table 2 are based on the groupings of research into the multiple perspectives of NICU nurses' experiences with FCC. This directly reflects the epistemological approach of constructivism (Mills et al., 2006a), in that conclusions were built after considering these many experiences of the study population investigated here.

Using Charmaz's constructivist grounded theory approach allowed me to reflect on my own experience and the meaning derived from this project in my role as co-creator of research outcome (Mills et al., 2006a). I sought to reduce assumptions made in this research process through keeping a journal of conceptual ideas, and my own thinking, in this process. I also created a mind-map to arrive at these thematic conclusions and eliminate assumptions. With personal reflection, I find the conclusions, made from the categories and identified facilitators shared in Table 2, resonate as truthful and meaningful based on my experiences with FCC in a level III(+) NICU. Thus, the meaning derived here is based on my observations as a researcher applying elements of grounded theory method, as well as reflective of my role as co-creator of meaning in these themes as per a constructivist grounded theory approach (Charmaz, 2000).

Knowledge translation and FCC. The constructivist grounded theory approach was applied to assist in identifying nurse perceptions of barriers/ facilitators to FCC, to help develop strategic methods for knowledge translation that can better contribute to the integration and support of FCC in the NICU (e.g. suggestions for nurse curriculum development). A KT model employed by The Hospital for Sick Children was chosen to assist in this endeavour, and a model of potential means of knowledge translation was derived (see Figure 3).

Figure 3. The KT Model for Family-Centered Care in the NICU©

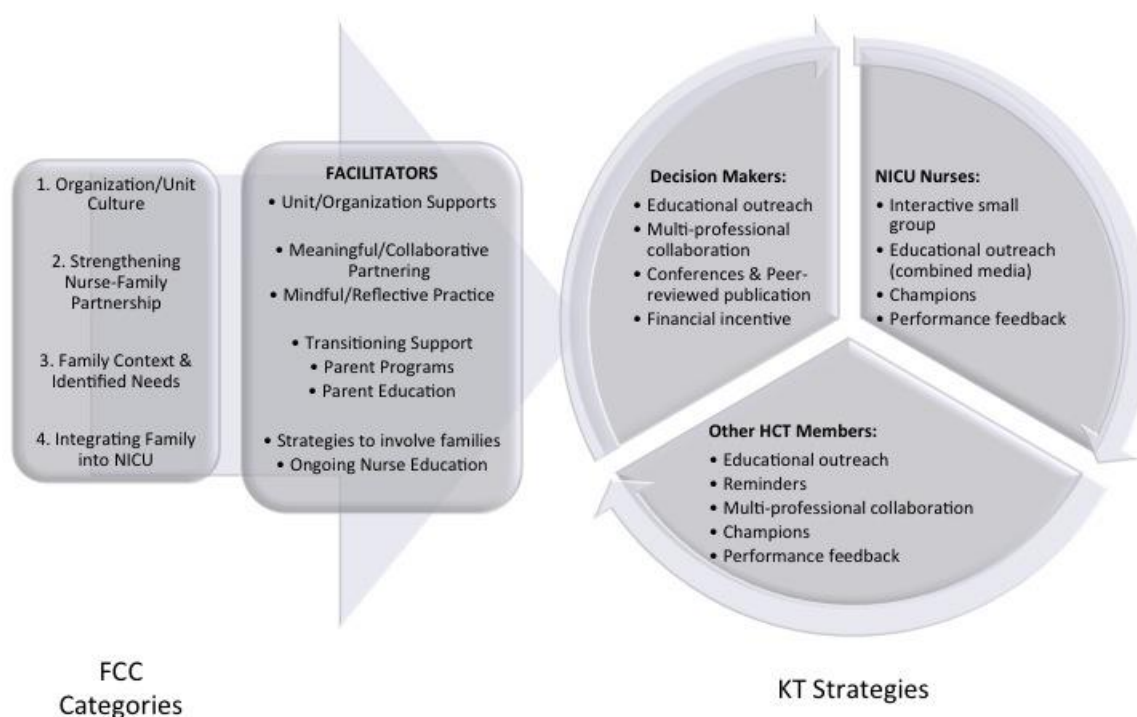


Figure 3. The KT Model for Family-Centered Care in the NICU. (Copyright © 2015 [Shaara Khan]. All Rights Reserved.) This figure illustrates derived KT strategies based on FCC facilitators identified by NICU nurses.

I have created the KT Model for Family-Centered Care in the NICU as an example of translating this valuable knowledge of nurse-identified facilitators into practice. This model focuses specifically on incorporating KT strategies to utilize nurse-identified facilitators of FCC

to integrate FCC into the NICU, as per the aim of this project. The first rectangle shows the FCC categories identified through the integrative literature review. These four categories are associated with unique core facilitators identified through this investigation of the current perspective of NICU nurses, depicted in the second rectangle. These facilitators can be integrated using KT strategies shown in the circle.

A \rightleftarrows ³ encompasses suggested KT strategies to recommend that they be employed on an ongoing basis in order to create and sustain a long-term FCC culture. KT strategies are divided into three groups: decision makers, NICU nurses, and other HCT members. The division of strategies between specific groups reflects the *project parties* necessary to meet KT goals for FCC, based on the facilitators identified. This was determined through following The Hospital for Sick Children KT model (KTPT) employed as an example for this paper.

Using the KTPT to develop KT strategies. In order to determine appropriate KT strategies, I followed the 13-step process of the KTPT (Appendix A). Initially I determined those who would be involved in integration/ application of FCC in the NICU: *nurses* (including Nurse Educators, Nurse Practitioners, Advanced Practice Nurses), *decision makers* (including Nurse Managers, Policy Makers, Unit Directors), and *other members of the HCT* (including Medical Staff, Social Workers, Dieticians, Occupational Therapists, Lactation Consultants). Following this, I considered the degree of each partner's engagement for FCC implementation with my primary focus being curriculum development for nurses. Other facets of engagement to consider were the creation of an FCC culture through engagement of other members of the HCT, and the role of decision makers in mobilizing resources and modifying the unit to support an

³ The arrow surrounding KT strategies is \rightleftarrows in this model to indicate that the identified facilitators can be linked to all levels at which KT strategies occur. The \rightleftarrows arrow also indicates that these KT strategies must work together to achieve creation of an NICU FCC culture (via a synergy of these processes).

FCC environment. I reflected on what each partner role would bring and how it would assist the KT plan (The Learning Institute, 2015).

Partner roles, and how they might contribute to the KT plan, were considered. *Nurses* (at various levels of qualifications) brought FCC knowledge, curriculum development, learning strategies/ theories, and unique knowledge based on experience. Thus, they were necessary for KT development, implementation, and potentially insightful for evaluation processes. *Decision makers* acted as policy-makers and directors of constructing the FCC space needed, as well as were responsible for bringing unique resources to the unit. This group was also necessary for KT development and implementation where investment and sustainability measures were considered, and for financial and statistical evaluation. *Members of the HCT* were needed to provide recommendations, observations, and bring their own understanding of FCC so that their needs were addressed in knowledge translation. This knowledge contributed to the KT plan in terms of development, implementation and evaluation. KT expertise on the team was also considered following identification of partner roles (The Learning Institute, 2015).

The next steps of the KTPT considered factors leading up to development of KT strategies. First I used the model to identify the knowledge users in this particular project. In this case, knowledge users included nurses and the HCT, thus it became apparent that educational training be focused on these users. Main messages were considered next (i.e. effective integration of FCC in the NICU), as well as the audience for these messages (i.e. the knowledge users identified, previously). Finally, KT goals were derived such as: generating awareness, interest, practice change, and policy change related to FCC; and imparting knowledge/tools to aid in FCC translation (The Learning Institute, 2015). Based on this, KT strategies could be derived.

The KT strategies that were developed were based on suggested strategies in the first two sections under step 8 in the KTPT. These strategies were considered *mostly effective* and as having *mixed effects*. The KTPT suggests implementing multiple and combined KT strategies as they are shown to be more effective than single strategies (The Learning Institute, 2015). These strategies are stated in Figure 3 in order to guide specific development of strategic approaches, based on identified facilitators of FCC shown in this KT Model for FCC in the NICU.

Following the development of KT strategies in the KTPT, the template considers the Process of KT, Impact & Evaluation. Identification of Resources, Budget Items, and considerations for Implementation follow next, in order to conclude the directions of this template (The Learning Institute, 2015). The rest of this KT template is not the focus of this review; rather, it is listed in order to contribute to guidance for future FCC implementation project development.

As this KT model suggests, a singular change for nurses alone cannot result in the translation of specific knowledge as effectively as an all-encompassing approach to change that includes other parts of the NICU. Through targeting multiple *partners* in the process of integrating FCC, we are more likely to infuse the NICU with an FCC culture. Deliberation and reflection on the perspectives of NICU nurses, as a realistic portrayal of bedside barriers and facilitators, provides the insight on which to process FCC transformative action. This perspective, obtained from a constructivist grounded theory approach, is one that can inform KT strategic change and curriculum development for NICU nurses.

Discussion

The on-going question of *why* FCC is not better integrated into standard care for our smallest and highly vulnerable patient population in the NICU, despite the vast amount of literature on this subject, is perplexing. This question acts as the driving force behind the project questions and aim of this integrative literature review. The level III(+) NICU has a primarily medical-technical focus in many respects due to the high acuity of the patients and the need for extreme life-saving interventions. Constructivist grounded theory was applied as the framework to answer this question, based on the unique insights that NICU nurses hold with respect to barriers and facilitators to FCC.

The relativist ontology of constructivist grounded theory, and an epistemology based in subjectivism (Mills et al., 2006a), is well suited to investigate the barriers and facilitators of FCC that NICU nurses identified from their work experiences. Using this particular approach allows for multiple truths and perspectives to be gathered, and common themes to be uncovered (Mills et al., 2006a). Stories or reflections about experiences are considered to be social constructions, as multiple constructions can be shared among those experiencing similar practice contexts (Mills et al., 2006a; Mills et al., 2006b).

For this review, I gathered and analyzed nurse perceptions of barriers and facilitators to FCC in the NICU, identified common themes, and sought to reconstruct experience and meaning in a way that accurately reflected the nurses' perceptions (Mills et al., 2006a). My pursuit of a consensus of meaning reflected the constructivist framework that underpins constructivist grounded theory (Appleton & King, 2002). Applying this methodology aided in my ability to delve into the experience of health care professionals working within the world of the NICU and reflect on my own assumptions (i.e. through journaling and creating a mind-map) in this process.

I attempted to represent meanings and experiences in a way that was true to the NICU nurses' perceptions, as shown in my review of current literature (Charmaz, 2000; Mills et al., 2006a). My approach in this research reflects a constructivist grounded theory approach, and is one way of obtaining unique relativist and subjective perspectives of nurses that may serve to better identify and address this issue of barriers to FCC.

The result of this research review is beneficial in identifying facilitators important to bedside nurses to better integrate FCC into the NICU. The KT Model for FCC (Fig. 5) shows how this process can be approached, and acknowledges the need for ongoing education for NICU nurses, as well as multiple other strategies shown to facilitate KT. There is a lack of literature on how to effectively translate and integrate necessary skills and knowledge to NICU nurses related to FCC (Reis et al., 2010; Trajkovski et al., 2012). The development of an FCC curriculum is needed for NICU nurses that supports nurses to act as FCC facilitators, move into the role of coach or mentor for each other, and develop a partnering or collaborative relationship with parents (Reis et al., 2010). We are in need of more clarity on the most effective KT strategies to integrate FCC into the NICU, and specific strategies for effective nurse curriculum development remains one of the many facets of this pursuit.

Framing Possibility

The facilitators of FCC identified by the unique perceptions of NICU nurses, to address barriers to FCC, can be incorporated in nursing curriculum development. However, a change in thinking about how FCC education is currently provided and supported in the level III NICU is required. Current FCC education needs to shift toward a unit and organization-supported, team-encompassing curriculum approach, with ongoing support provided to sustain this change.

Zander and Zander (2002) present the concept of *framing possibility* where the following three steps are necessary when working to invent (or restructure) frameworks to bring forth possibility of change: (1) make a new distinction that is considered a powerful substitute for existing frameworks; (2) embody this new distinction so it is internalized and integrated into surrounding life; and (3) determine what is *on track* vs. *off track* in support of this new framework (Zander & Zander, 2002, p. 163). In working to re-create a nursing FCC curriculum, applying this particular concept of *framing possibility* can provide the conceptual base from which a new curriculum is effectively constructed.

A nursing curriculum must be based in realistic educational strategies that work to reinforce learning on a continual basis. As per Figure 3 (shown earlier), small group discussions or interactive sessions, that can include pedagogies such as story-based learning, context-based learning or simulation learning and debriefing, may be effective as part of an FCC curriculum. The creation of *FCC champions* to encourage peer-teaching and mentoring among colleagues can also be effective, as can other methods of educational media to address multiple learning needs of nurses. Zander and Zander (2002) describe the concept of embodying this *new distinction* and making it a part of the life surrounding you. Nurses and other health care providers need to believe that, *“FCC is a part of our practice. Integrating FCC into practice is a part of our everyday work.”* The FCC model (Figure 3) can be used to provide direction for the creation of an *FCC culture* in the NICU.

Gifford et al. (2002) proposed two main areas to support organizational culture that might strengthen the FCC culture in the NICU. The first of these areas of support included having adequate support services, time, continuity and autonomy in decision-making for patient care (Gifford et al., 2002). In terms of knowledge translation actions for FCC as identified in Figure

3, organization and unit supports such as small group interactions among colleagues to form a community of practice, educational outreach via various forms of media, and identified champions can perpetuate an FCC culture. This type of support for reflective practice for nurses, and education through modelling of FCC practices by colleagues or FCC mentors on the unit, can assist in promoting an FCC culture in the NICU. This can also promote nurse confidence in autonomous decision-making related to FCC practices. The challenge for this extent of FCC support to occur lies in the unit/ organization's investment in nursing education resources, as well as time dedicated to meeting staff learning needs.

The second of the areas of support to organizational culture, as identified by Gifford et al. (2002), includes promoting positive interactions within the health care team. In applying this concept to NICU culture, Figure 3 suggests FCC culture support can be found through similar educational outreach for other members of the health care team (i.e. through multi-professional collaborative opportunities to reflect on practice and learn through sharing FCC narratives/ knowledge, and having identified champions to model behaviours and mentor colleagues). Thus, including KT strategies for FCC for Decision Makers as well as other HCT Members in the NICU is necessary to fully embody this new framework so that it is lived within NICU culture.

Strong nurse leadership by Advanced Practice Nurses (APNs) can also help to shape an evolving FCC culture via multi-professional collaboration and the development of an FCC education curriculum and supports based on KT models. KT models, such as the KTPT used in this paper, can be applied as a way to deliver FCC knowledge into practice.

With any KT framework applied in practice, assessment and feedback is important in keeping the framework on track. The final aspect of *framing possibility* looks at supporting a new framework through evaluating its success. When applying a KT framework, ongoing

evaluation is needed to eliminate elements that are detrimental to development of an FCC culture, and to identify areas for improvement.

Limitations

This integrative review led to the development of a KT model for FCC in the NICU, however limitations were present throughout this process. I highlight limitations in researching for and composing this review in this next section.

Limitations of Articles Reviewed

The most common limitation encountered in the articles used for this review was that findings were not generalizable, however they may be transferable (Asai, 2011; Axelin et al., 2014; Grzyb et al., 2014; Henderson et al., 2015; Lindsay et al., 2012; Merighi et al., 2011). These articles reviewed are also limited by not representing parents' perspectives of FCC in the NICU.

Limitations Specific to This Review

The most significant limitation in this integrative literature review was that only one researcher was responsible for designing and completing this project. Another limit is that as a graduate student, I was in the process of learning how to research and write an integrative literature review as I completed this paper. As a result, it is possible that personal bias and assumptions were introduced in the research process. Specific concepts or themes may have been overlooked or not perceived with the attention they deserved. Another limitation was that while elements of a constructivist grounded theory were employed, this research is secondary to original studies where participants were interviewed thus my interpretations and conclusions may fall subject to researcher bias and assumptions.

In order to address these limitations, I took great care to reduce my assumptions or bias by ensuring rigor throughout this research process. Whittemore and Knafl (2005) attest to the

fact that a well-defined literature search strategy can increase rigor of a review. In my initial literature search I show my thought-process in decision-making and how my literature search was narrowed to final articles (Figure 1). This contributed to transparency in this literature review. I also include a summary of studies (Appendix E) to ensure transparency and support for my analysis. I attempted to stay true to elements of a grounded theory approach. Research gathered for this review was analyzed thematically to highlight the meaning of FCC barriers/facilitators in relation to nurses' experiences, as per a constructivist grounded theory approach. Researcher bias was diminished with reflection through journaling (or memoing) during this process, and reflecting on assumptions. Journaling also provided me with the means to document analysis decisions, analytical hunches, thoughts, and ideas related to interpreting research data. This allowed me to reflect on thought processes throughout the research process in order to limit personal assumptions or biases.

Whittemore and Knafl (2005) state that an integrative literature review that contains multiple methodologies (i.e. drawing from a large variety of data) can lead to a lack of rigour. Multiple methodologies in a literature review can hold potential for inaccuracy in the analysis, synthesis/construction of conclusions (Whittemore & Knafl, 2005). Thus, I ensured that strategies included in finalizing research documents followed the recommended framework as delineated by Whittemore & Knafl (2005).

A limitation of the critical appraisal tool employed (the JHNEBP) may have affected the inclusion of studies in this review. The JHNEBP tool focused more on a quantitative evaluation of research and provided a general critical appraisal for qualitative research studies. A critical appraisal tool that is better able to critique qualitative research would be more suitable for this particular review.

Finally, due to a lack of research on perceptions of NICU nurses on barriers/facilitators to FCC in the NICU, a smaller sample size of studies was obtained. More research remains necessary for this particular subject in order to improve research evidence surrounding this issue.

Implications for Practice, Education & Recommendations

Based on the results of this integrative review, I am able to provide recommendations for development of a more comprehensive FCC curriculum for nurses. I have also developed recommendations for the creation of a supported, sustainable *FCC culture* in the NICU. I divide these recommendations based on the KT strategies suggested from my developed KT Model for FCC (Figure 3), into sections for *NICU nurses*, *HCT Members*, and *Decision Makers*. Finally, I make suggestions pertaining to the role of an Advanced Practice Nurse Educator in contributing to the development of an FCC culture in the NICU.

Recommendations for NICU Nurse Curriculum

- Include interactive small group sessions as part of ongoing education for NICU nurses: sessions may be in the form of discussion groups or supportive groups to promote FCC in the NICU
- Invest in development of an ongoing community of FCC practice support group to tackle difficult issues of end-of-life care or bereavement and cultural/religious/ethnic competence
- Train and implement FCC mentors to provide peer-support and model FCC practices
- Encourage participation in Parent Programs to promote understanding of FCC on unit; include sessions co-led by parents to further investigate FCC gaps in practice
- Provide an area for FCC feedback to identify ongoing learning needs of staff

- Create a measurement tool and measure integration of FCC in the NICU, or the level of FCC culture, from families and staff perspectives on a regular basis

Recommendations for all HCT Members:

- Engage in FCC educational outreach through multimedia tools for teaching
- Post reminders about creating an FCC culture on the unit
- Identify FCC mentors for each health care professional group to model FCC behaviours, provide mentorship to peers
- Encourage participation in Parent Program development and FCC integration initiatives
- Provide means for FCC performance self-assessments

Recommendations for Decision Makers:

- Engage in FCC educational outreach through multimedia tools for teaching
- Implement a Competence Assessment, Planning and Evaluation (CAPE) Tool for FCC for nurses and other health care professionals to help measure and track FCC integration into NICU practices
- Support attendance at FCC conferences and share publications to promote FCC culture within the organization/unit
- Allocate a budget for FCC on the unit and a committee that works with this budget; consider a financial incentive to form an FCC committee

Recommendations for the Advanced Practice Nurse Educator

The advanced practice nurse educator (APNE) can play an integral part in development of an FCC curriculum or creation of an FCC culture in the NICU. This particular role of an APNE is one I am pursuing with the completion of this degree. The FCC recommendations identified below can aid in development of project goals in my place of work in order to

perpetuate an FCC culture, as I embark on a new career path as an APN in a paediatric hospital.

The following recommendations are based on the Level 4 Competencies (see Appendix G) as described by the University of Victoria, Master of Nursing (Nurse Educator) program:

- Collaborate with multi-disciplinary team and decision-makers for FCC curriculum development and revision
- Develop and implement integrated evidence-informed teaching/learning strategies that address learner needs and desired learning outcomes using identified KT strategies (consider use of model in Figure 3)
- Engage in feedback/ discussion with staff and other unit educators regarding facilitators to FCC integration in the NICU (e.g. form FCC Community of Practice with colleagues)
- Integrate strategies for coaching, mentoring, supporting, facilitating FCC practice and staff learning on the NICU as a part of the curriculum development
- Facilitate the development and application of critical thinking with learners in an FCC curriculum for NICU nurses through encouraging and supporting development of Communities of Practice among staff nurses (e.g. related to FCC and end-of-life care or working with a culturally diverse population)

The practice recommendations listed above encompass not just a change in creating a more holistic educational curriculum for nurses, but the drive toward a change in thinking in the unit as a whole. The promotion of an FCC culture in the NICU, as well as throughout an organization, holds the potential to ensure FCC practices at the bedside are secured and sustainable.

Conclusion

This review aimed to identify barriers and determine resulting facilitators to FCC practice in the level III(+) NICU. Perceptions of NICU nurses were also examined separately to help identify facilitators that might more directly influence nursing practice. Using the KT Model of FCC, which I derived from the research conducted here, I determined KT strategies based on nurse-identified themes of facilitators to FCC. I have made recommendations on nursing, unit-wide and decision-maker levels, as well as regarding the role of APNEs, to better support the integration of FCC and guide nurse FCC curriculum development in the NICU.

Creating an FCC culture is identified as the most important goal for FCC integration (Trajkovski et al., 2012; Hendricks-Munoz et al., 2010). Having the support of all members of the HCT leads to better support for FCC in nursing practice (Asai, 2010; Henson et al., 2015). Addressing the identified educational needs of nurses for FCC, can promote preparedness among nurses to practice within an FCC philosophy (Axelin et al., 2014; Lindsay et al., 2012). The results provided by this review show that nurses identify ongoing FCC education and the development of an FCC culture as integral to supporting infants and families in the NICU. Nurses need to obtain this crucial knowledge, engage in reflective practice and have the resources necessary to successfully integrate FCC into their everyday work.

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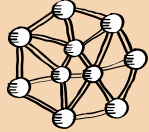
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Appendix A

The Knowledge Translation Planning Template (KTPT)

<h2 style="margin: 0;">Knowledge Translation Planning Template©</h2>			
<p style="margin: 0; font-size: small;">INSTRUCTIONS: This template was designed to assist with the development of Knowledge Translation (KT) plans for research but can be used to plan for non-research projects. The Knowledge Translation Planning Template is universally applicable to areas beyond health. Begin with box #1 and work through to box #13 to address the essential components of the KT planning process.</p>			
(1) Project Partners	(2) Degree of Partner Engagement	(3) Partner(s) Roles	(4) KT Expertise on Team
<div style="text-align: center; margin-bottom: 10px;">  </div> <ul style="list-style-type: none"> <input type="checkbox"/> researchers <input type="checkbox"/> consumers - patients/families <input type="checkbox"/> the public <input type="checkbox"/> decision makers <input type="checkbox"/> private sector/industry <input type="checkbox"/> research funding body <input type="checkbox"/> volunteer health sector/NGO <input type="checkbox"/> practitioners <input type="checkbox"/> other 	<div style="text-align: center; margin-bottom: 10px;">  </div> <ul style="list-style-type: none"> <input type="checkbox"/> from idea formulation straight through <input type="checkbox"/> after idea formulation & straight through <input type="checkbox"/> at point of dissemination & project end <input type="checkbox"/> beyond the project <p style="font-size: small; margin-top: 10px;">Consider: Not all partners will be engaged at the same point in time. Some will be collaborators, end users or audiences, or people hired to do specific activities.</p>	<p style="font-size: small; margin-top: 10px;"><i>(1) What do the partner(s) bring to the project?</i></p> <p style="font-size: small; margin-top: 10px;"><i>(2) How will partner(s) assist with developing, implementing or evaluating the KT plan?</i></p> <p style="font-size: small; margin-top: 10px;">Action: Capture their specific roles in letters of support to funders, if requested.</p> <div style="border: 1px solid #ccc; height: 20px; margin-top: 5px;"></div>	<ul style="list-style-type: none"> <input type="checkbox"/> scientist(s) with KT expertise <input type="checkbox"/> consultant with KT expertise <input type="checkbox"/> knowledge broker/specialist <input type="checkbox"/> KT supports within the organization(s) <input type="checkbox"/> KT supports within partner organization(s) <input type="checkbox"/> KT supports hired for specific task(s)
<p style="font-size: x-small; margin: 0;">© 2008, 2013 The Hospital for Sick Children</p>			

 (5) Knowledge Users (KUs)	 (6) Main Messages	 (7) KT Goals	 (8) KT Strategy(s)
<p>Which KUs or audiences will you target?</p> <ul style="list-style-type: none"> <input type="checkbox"/> researchers <input type="checkbox"/> health practitioners or service providers <input type="checkbox"/> public <input type="checkbox"/> media <input type="checkbox"/> patients/consumers <input type="checkbox"/> decision makers <ul style="list-style-type: none"> <input type="checkbox"/> in organization <input type="checkbox"/> in community <input type="checkbox"/> policy makers <input type="checkbox"/> private sector/industry <input type="checkbox"/> research funders <input type="checkbox"/> venture capitalists <input type="checkbox"/> volunteer health sector/NGO <input type="checkbox"/> other: specify ► _____ <p>Consider: Have you included any of your audiences on your research team? If so, who and why (be strategic)?</p>	<p>What did you learn, or what do you anticipate learning?</p> <div style="border: 1px solid #ccc; height: 40px; background-color: #f9f9f9;"></div> <p>What messages do you anticipate sharing (up to 3 KU audiences can be included on this form)?</p> <p>Audience 1 <div style="border: 1px solid #ccc; height: 20px; background-color: #f9f9f9;"></div></p> <p>Audience 2 <div style="border: 1px solid #ccc; height: 20px; background-color: #f9f9f9;"></div></p> <p>Audience 3 <div style="border: 1px solid #ccc; height: 20px; background-color: #f9f9f9;"></div></p> <p>OR</p> <p><input type="checkbox"/> No idea yet; messages will emerge during research through collaboration with partners.</p> <p>Consider: What can you feasibly do within this project, given time and resources? Aim for defining your Single Most Important Thing (SMIT) or Bottom Line Actionable Message (BLAM).</p>	<p>What are your KT Goals for each KU/audience?</p> <p>Audiences 1 2 3 ↓ ↓ ↓</p> <p>Generate...</p> <ul style="list-style-type: none"> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> awareness <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> interest <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> practice change <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> behaviour change <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> policy action <p>Impart...</p> <ul style="list-style-type: none"> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> knowledge <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> tools <p>Inform...</p> <ul style="list-style-type: none"> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> research <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> product <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> patent <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> other ► _____</p> <p>Consider: KT is applicable to all research; even single studies are shared via journal articles. However, intent to change practice, behaviour or policy must be supported by a body of high quality research evidence (synthesis). Always consider legal and ethical principles in your KT efforts.</p>	<p>What KT strategy(s) will you use?</p> <p>Audiences 1 2 3 ↓ ↓ ↓</p> <p>Mostly Effective¹</p> <ul style="list-style-type: none"> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> interactive small group <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> educational outreach <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> reminders <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> IT decision support <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> multi-prof collaboration <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> mass media campaign <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> financial incentive <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> combined interventions <p>Mixed Effects¹</p> <ul style="list-style-type: none"> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> conferences (didactic) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> opinion leaders <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> champions <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> educational materials <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> patient-mediated interview <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> performance feedback <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> substitution of tasks <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> peer reviewed publication <p>Limited Effects¹</p> <ul style="list-style-type: none"> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> CQI - Continuous Quality Improvement <p>Effects Unsupported by Synthesis²</p> <ul style="list-style-type: none"> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> press release <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> patent license <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> arts-based KT <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> social media <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> networks <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> communities of practice <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Café Scientifique <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> webinar <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> other ► _____ <p>Consider: Multifaceted/combined KT strategies are more effective than single strategies.</p>

(9) KT Process

**When will KT occur?**

- integrated iKT³ – researchers and research users will collaborate to shape the research process, e.g., setting the research questions, deciding the methodology, involvement in data collection and tools development, interpretation of findings and dissemination of research results
- end of grant KT³. KT undertaken at the completion of the research process
- both

Comment on the specifics of your KT procedures; describe how you are using iKT:



(10) KT Impact & Evaluation

**(a) Where do you want to have an impact?**




- healthcare/well-being outcomes
- (clinical) practice
- policies/systems
- research & knowledge

(b) How will you know if you achieved your KT goal(s)? Consider:

- reach indicators (*# distributed, # requested, # downloads/hits, media exposure*)⁴
- usefulness indicators (*read/browsed, satisfied with, usefulness of, gained knowledge, changed views*)⁴
- use indicators (*# intend to use, # adapting the information, # using to inform policy/advocacy/enhance programs, training, education, or research, # using to improve practice or performance*)⁴
- partnership/collaboration indicators (*# products/services developed or disseminated with partners, # or type capacity building efforts, social network growth, influences, collaborativeness*)⁴
- practice change indicators (*intent or commitment to change, observed change, reported change*)
- program or service indicators (*outcome data, documentation, feedback, process measures*)
- policy indicators (*documentation, feedback, process measures*)
- knowledge change (*quantitative & qualitative measures*)
- attitude change (*quantitative & qualitative measures*)
- systems change (*quantitative & qualitative measures*)

(c) Guiding Questions for Evaluation⁵

- 1) What internal/external factors do you need to consider? Where is the energy for this work? How have similar initiatives been evaluated in the past? (*link this to partners, KUs*)
- 2) Who values the evaluation of this initiative? What are they saying they need from this evaluation? (*link this to partners, KUs*)
- 3) Why are you evaluating? For program growth or improvement; accountability? Sustainability? Knowledge generation? (e.g., *to know if the KT strategy met the objectives*)
- 4) How will literature or existing theories inform how you evaluate the initiative?
- 5) Which questions/objectives are critical? (*link this to KT goals, process, impact*)
- 6) Will you focus on process or outcome information? What are your pre-determined outcomes? How will you capture emergent outcomes? Does this information already exist in your system? (*link to methods, process, impact*)
- 7) Will methods be quantitative, qualitative or mixed? Do tools exist or will you need to create your own? (*link to KT methods*)
- 8) What perspective or skill set do you need to help you reach your evaluation objectives? (*link to partners, KUs*)
- 9) How do your stakeholders wish to receive this information so that it will be valuable and useful to them? How will you engage them throughout? (*link to partners, KUs*)

 (11) Resources	 (12) Budget Items	 (13) Implementation																												
<p>What resources are required?</p> <ul style="list-style-type: none"> <input type="checkbox"/> board <input type="checkbox"/> financial <input type="checkbox"/> human <input type="checkbox"/> IT <input type="checkbox"/> leadership <input type="checkbox"/> management <input type="checkbox"/> volunteer <input type="checkbox"/> web <input type="checkbox"/> worker <input type="checkbox"/> other: (list) <div style="border: 1px solid black; height: 100px; margin-top: 10px;"> <p>▶</p> </div>	<p>What budget items are related to the KT plan?</p> <table border="0"> <tr> <td><input type="checkbox"/> accommodation</td> <td><input type="checkbox"/> production/printing</td> </tr> <tr> <td><input type="checkbox"/> art installation</td> <td><input type="checkbox"/> programming</td> </tr> <tr> <td><input type="checkbox"/> evaluation specialist</td> <td><input type="checkbox"/> public relations</td> </tr> <tr> <td><input type="checkbox"/> graphics/imagery</td> <td><input type="checkbox"/> reimbursements for partners (e.g. time, parking, travel)</td> </tr> <tr> <td><input type="checkbox"/> knowledge broker</td> <td><input type="checkbox"/> tech transfer/commercialization</td> </tr> <tr> <td><input type="checkbox"/> KT specialist</td> <td><input type="checkbox"/> teleconferencing</td> </tr> <tr> <td><input type="checkbox"/> mailing</td> <td><input type="checkbox"/> travel: conferences</td> </tr> <tr> <td><input type="checkbox"/> media release</td> <td><input type="checkbox"/> travel: meetings/educational purposes</td> </tr> <tr> <td><input type="checkbox"/> media product (e.g. video)</td> <td><input type="checkbox"/> web 2.0 (e.g. blogs, podcasts, wikis)</td> </tr> <tr> <td><input type="checkbox"/> networking functions</td> <td><input type="checkbox"/> webinar services</td> </tr> <tr> <td><input type="checkbox"/> open access journal</td> <td><input type="checkbox"/> website development</td> </tr> <tr> <td><input type="checkbox"/> plain text writer</td> <td><input type="checkbox"/> venue</td> </tr> <tr> <td></td> <td><input type="checkbox"/> other: (list)</td> </tr> </table> <p>Estimated costs for items listed</p> <table border="0"> <tr> <td style="border: 1px solid black; width: 150px; height: 60px;">▶</td> <td style="border: 1px solid black; width: 150px; height: 60px;">▶</td> </tr> </table> <p>NOTE: Be sure to include all KT costs in your budget for funders</p>	<input type="checkbox"/> accommodation	<input type="checkbox"/> production/printing	<input type="checkbox"/> art installation	<input type="checkbox"/> programming	<input type="checkbox"/> evaluation specialist	<input type="checkbox"/> public relations	<input type="checkbox"/> graphics/imagery	<input type="checkbox"/> reimbursements for partners (e.g. time, parking, travel)	<input type="checkbox"/> knowledge broker	<input type="checkbox"/> tech transfer/commercialization	<input type="checkbox"/> KT specialist	<input type="checkbox"/> teleconferencing	<input type="checkbox"/> mailing	<input type="checkbox"/> travel: conferences	<input type="checkbox"/> media release	<input type="checkbox"/> travel: meetings/educational purposes	<input type="checkbox"/> media product (e.g. video)	<input type="checkbox"/> web 2.0 (e.g. blogs, podcasts, wikis)	<input type="checkbox"/> networking functions	<input type="checkbox"/> webinar services	<input type="checkbox"/> open access journal	<input type="checkbox"/> website development	<input type="checkbox"/> plain text writer	<input type="checkbox"/> venue		<input type="checkbox"/> other: (list)	▶	▶	<p>Describe how you will implement your KT strategy(s): What processes/procedures are involved? If practice or behaviour change is the focus, how will you ensure the knowledge (intervention) you are transferring retains quality, fidelity, sustainability?</p> <div style="border: 1px solid black; height: 250px; margin-top: 10px;"> <p>▶</p> </div>
<input type="checkbox"/> accommodation	<input type="checkbox"/> production/printing																													
<input type="checkbox"/> art installation	<input type="checkbox"/> programming																													
<input type="checkbox"/> evaluation specialist	<input type="checkbox"/> public relations																													
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<p>Barwick, M. (2008, 2013). Knowledge Translation Planning Template. Ontario: The Hospital for Sick Children.</p> <p>1) Grol & Grimshaw 2003 <i>The Lancet</i>, 362(19391): 1225. 2) <i>KT strategies may have support from individual studies</i>. 3) CIHR http://www.cihr.ca/e/29418.html. 4) Sullivan, Strachan, & Timmons. <i>Guide to Monitoring and Evaluating Health Information Products and Services</i>. http://www.inforhealth.org/hipnet/MEGUIDE/MEGUIDE2007.pdf. 5) Parker, K (2013). <i>KT and Evaluation</i>. Unpublished; courtesy of Knowledge Translation Professional Certificate, Learning Institute, Hospital for Sick Children.</p> <p>© 2008, 2013 The Hospital for Sick Children</p>																														

Appendix B

Search Terms and Inclusion/Exclusion Criteria

Print Search History: EBSCOhost

http://web.ebscohost.com.ezproxy.library.uvic.ca/ehost/searchhi...



Tuesday, April 14, 2015 5:17:26 PM

#	Query	Limiters/Expanders	Last Run Via	Results
S11	(S1 AND S3 AND S5) OR (S1 AND S4 AND S5) OR (S2 AND S3 AND S5) OR (S2 AND S4 AND S5)	Limiters - Full Text; Scholarly (Peer Reviewed) Journals; Published Date: 20100101-20151231; English Language Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL with Full Text;MEDLINE with Full Text	63
S10	(S1 AND S3 AND S5) OR (S1 AND S4 AND S5) OR (S2 AND S3 AND S5) OR (S2 AND S4 AND S5)	Limiters - Full Text; Scholarly (Peer Reviewed) Journals; Published Date: 20050101-20151231; English Language Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL with Full Text;MEDLINE with Full Text	103
S9	(S1 AND S3 AND S5) OR (S1 AND S4 AND S5) OR (S2 AND S3 AND S5) OR (S2 AND S4 AND S5)	Limiters - Full Text; Scholarly (Peer Reviewed) Journals; Published Date: 20050101-20151231 Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL with Full Text;MEDLINE with Full Text	107
S8	(S1 AND S3 AND S5) OR (S1 AND S4 AND S5) OR (S2 AND S3 AND S5) OR (S2 AND S4 AND S5)	Limiters - Full Text; Published Date: 20050101-20151231 Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL with Full Text;MEDLINE with Full Text	186
S7	(S1 AND S3 AND S5) OR (S1 AND S4 AND S5) OR (S2 AND S3	Limiters - Full Text Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced	272

	AND S5) OR (S2 AND S4 AND S5)		Search Database - CINAHL with Full Text;MEDLINE with Full Text	
S6	(S1 AND S3 AND S5) OR (S1 AND S4 AND S5) OR (S2 AND S3 AND S5) OR (S2 AND S4 AND S5)	Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL with Full Text;MEDLINE with Full Text	340
S5	neonatal intensive care nursing OR Neonatal Intensive Care Nursing OR Intensive Care Units, Neonatal	Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - CINAHL with Full Text;MEDLINE with Full Text	23,364
S4	barrier* OR impediment* OR problem* OR obstacle*	Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Basic Search Database - CINAHL with Full Text;MEDLINE with Full Text	1,187,397
S3	facilitat* OR framework* OR culture OR support* OR model*	Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Basic Search Database - CINAHL with Full Text;MEDLINE with Full Text	4,845,715
S2	family integrated care	Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Basic Search Database - CINAHL with Full Text;MEDLINE with Full Text	5,256

Print Search History: EBSCOhost

<http://web.ebscohost.com.ezproxy.library.uvic.ca/ehost/searchhi...>

S1	family centered care	Search modes - Find all my search terms	Interface - EBSCOhost Research Databases Search Screen - Basic Search Database - CINAHL with Full Text;MEDLINE with Full Text	10,993
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Appendix C

The John Hopkins Nursing Evidence Based Practice (JHNEBP) Research Appraisal Tools

JHNEBP Non-Research Evidence Appraisal

Evidence Level: _____

ARTICLE TITLE:		NUMBER:	
AUTHOR(S):		DATE:	
JOURNAL:			
<input type="checkbox"/> Systematic Review	<input type="checkbox"/> Clinical Practice Guidelines	Organizational (QI, financial data)	Expert opinion, case study, literature review
Does review/expert opinion address my practice question?		Yes	No
If the answer is No, STOP here (unless there are similar characteristics).			
Systematic Review			
• Is the question clear?		Yes	No
• Are search strategies specified, and reproducible?		Yes	No
• Are search strategies appropriate to include all pertinent studies?		Yes	No
• Are criteria for inclusion and exclusion of studies specified?		Yes	No
• Are details of included studies (design, methods, analysis) presented?		Yes	No
• Are methodological limitations disclosed?		Yes	No
• Are the variables in the studies reviewed similar, so that studies can be combined?		Yes	No
Clinical Practice Guidelines			
• Were appropriate stakeholders involved in the development of this guideline?		Yes	No
• Are groups to which guidelines apply and do not apply clearly stated?		Yes	No
• Have potential biases been eliminated?		Yes	No
• Were guidelines valid (reproducible search, expert consensus, independent review, current, and level of supporting evidence identified for each recommendation)?		Yes	No
• Are recommendations clear?		Yes	No
Organizational Experience			
• Was the aim of the project clearly stated?		Yes	No
• Is the setting similar to setting of interest?		Yes	No
• Was the method adequately described?		Yes	No
• Were measures identified?		Yes	No
• Were results adequately described?		Yes	No
• Was interpretation clear and appropriate?		Yes	No
Individual expert opinion, case study, literature review			
• Was evidence based on the opinion of an individual?		Yes	No
• Is the individual and expert on the topic?		Yes	No
• Is author's opinion based on scientific evidence?		Yes	No
• Is the author's opinion clearly stated?		Yes	No
• Are potential biases acknowledged?		Yes	No
PERTINENT CONCLUSIONS AND RECOMMENDATIONS			
Were conclusions based on the evidence presented?		Yes	No
Will the results help me in caring for my patients?		Yes	No

Quality Rating (scale on back):

Basic quality rating of the study under review (check one)	High (A)	Good (B)	Low/major flaws(C)
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STRENGTH OF EVIDENCE

LEVEL 4

SYSTEMATIC REVIEW

- Research review that compiles and summarize evidence from research studies related to a specific clinical question
- Employs comprehensive search strategies and rigorous appraisal methods
- Contains an evaluation of strengths and limitations of studies under review

CLINICAL PRACTICE GUIDELINES

- Research and experiential evidence review that systematically develops statements that are meant to guide decision-making for specific clinical circumstances
- Evidence is appraised and synthesized from three basic sources: scientific findings, clinician expertise, and patient preferences.

LEVEL 5

ORGANIZATIONAL

- Review of quality improvement studies and financial analysis reports
- Evidence is appraised and synthesized from two basic sources: internal reports and external published reports.

EXPERT OPINION, CASE STUDY, LITERATURE REVIEW

- Opinion of a nationally recognized expert based on non-research evidence (includes case studies, literature review, or personal experience).

QUALITY RATING (SUMMATIVE REVIEWS)

- A High quality: well-defined, reproducible search strategies; consistent results with sufficient numbers of well-designed studies; criteria-based evaluation of overall scientific strength and quality of included studies, and definitive conclusions
- B Good quality: reasonably thorough and appropriate search; reasonably consistent results, sufficient numbers of well-designed studies, evaluation of strengths and limitations of included studies, with fairly definitive results
- C Low quality or major flaws: undefined, poorly defined, or limited search strategies; insufficient evidence with inconsistent results, conclusions cannot be drawn

QUALITY RATING (EXPERT OPINION)

- A High quality: expertise is clearly evident.
- B Good quality: expertise appears to be credible.
- C Low quality or major flaws: expertise is not discernable or is dubious.

JHNEBP Research Evidence Appraisal

Evidence Level: _____

ARTICLE TITLE:				NUMBER:	
AUTHOR(S):				DATE:	
JOURNAL:					
SETTING:				SAMPLE (COMPOSITION/SIZE)	
Experimental	Meta-analysis	Quasi-experimental	Non-experimental	Qualitative	Meta-synthesis
Does this study apply to my patient population?				Yes	No
If the answer is No, STOP here (unless there are similar characteristics).					
Strength of Study Design					
<ul style="list-style-type: none"> • Was sample size adequate and appropriate? • Were study participants randomized? • Was there an intervention? • Was there a control group? • If there was more than one group, were groups equally treated, except for the intervention? • Was there adequate description of the data collection methods 				Yes	No
				Yes	No
				Yes	No
				Yes	No
				Yes	No
				Yes	No
Study Results					
<ul style="list-style-type: none"> • Were results clearly presented? • Was an interpretation/analysis provided? 				Yes	No
				Yes	No
Study Conclusions					
<ul style="list-style-type: none"> • Were conclusions based on clearly presented results? • Were study limitations identified and discussed? 				Yes	No
				Yes	No
PERTINENT STUDY FINDINGS AND RECOMMENDATIONS					
Will the results help me in caring for my patients?				Yes	No

Evidence Rating (scales on back)

Strength of Evidence Rating			
Quality Rating (check one)	High (A)	Good (B)	Low/major flaws(C)

STRENGTH OF EVIDENCE**LEVEL 1 (HIGHEST)**EXPERIMENTAL STUDY (RANDOMIZED CONTROLLED TRIAL OR RCT)

- Study participants (subjects) are randomly assigned to either a treatment (TX) or control (non-treatment) group.
- May be:
 - Blind: neither subject nor investigator knows which TX subject is receiving.
 - Double-blind: neither subject nor investigator knows which TX subject is receiving.
 - Non-blind: both subject and investigator know which TX subject is receiving; used when it is felt that the knowledge of treatment is unimportant.

META-ANALYSIS OF RCTS

- Quantitatively synthesizes and analyzes results of multiple primary studies addressing a similar research question
- Statistically pools results from independent but combinable studies
- Summary statistic (effect size) is expressed in terms of direction (positive, negative, or zero) and magnitude (high, medium, small)

LEVEL 2QUASI-EXPERIMENTAL STUDY

- Always includes manipulation of an independent variable
- Lacks either random assignment or control group.
- Findings must be considered in light of threats to validity (particularly selection)

LEVEL 3NON-EXPERIMENTAL STUDY

- No manipulation of the independent variable.
- Can be descriptive, comparative, or relational.
- Often uses secondary data.
- Findings must be considered in light of threats to validity (particularly selection, lack of severity or co-morbidity adjustment).

QUALITATIVE STUDY

- Explorative in nature, such as interviews, observations, or focus groups.
- Starting point for studies of questions for which little research currently exists.
- Sample sizes are usually small and study results are used to design stronger studies that are more objective and quantifiable.

META-SYNTHESIS

- Research technique that critically analyzes and synthesizes findings from qualitative research
- Identifies key concepts and metaphors and determines their relationships to each other
- Aim is not to produce a summary statistic, but rather to interpret and translate findings

QUALITY RATING (SCIENTIFIC EVIDENCE)

- A** High quality: consistent results, sufficient sample size, adequate control, and definitive conclusions; consistent recommendations based on extensive literature review that includes thoughtful reference to scientific evidence.
- B** Good quality: reasonably consistent results, sufficient sample size, some control, and fairly definitive conclusions; reasonably consistent recommendations based on fairly comprehensive literature review that includes some reference to scientific evidence
- C** Low quality or major flaws: little evidence with inconsistent results, insufficient sample size, conclusions cannot be drawn.

Appendix D Mind Map of FCC Perspectives

Figure 4. Mind Map of General Themes

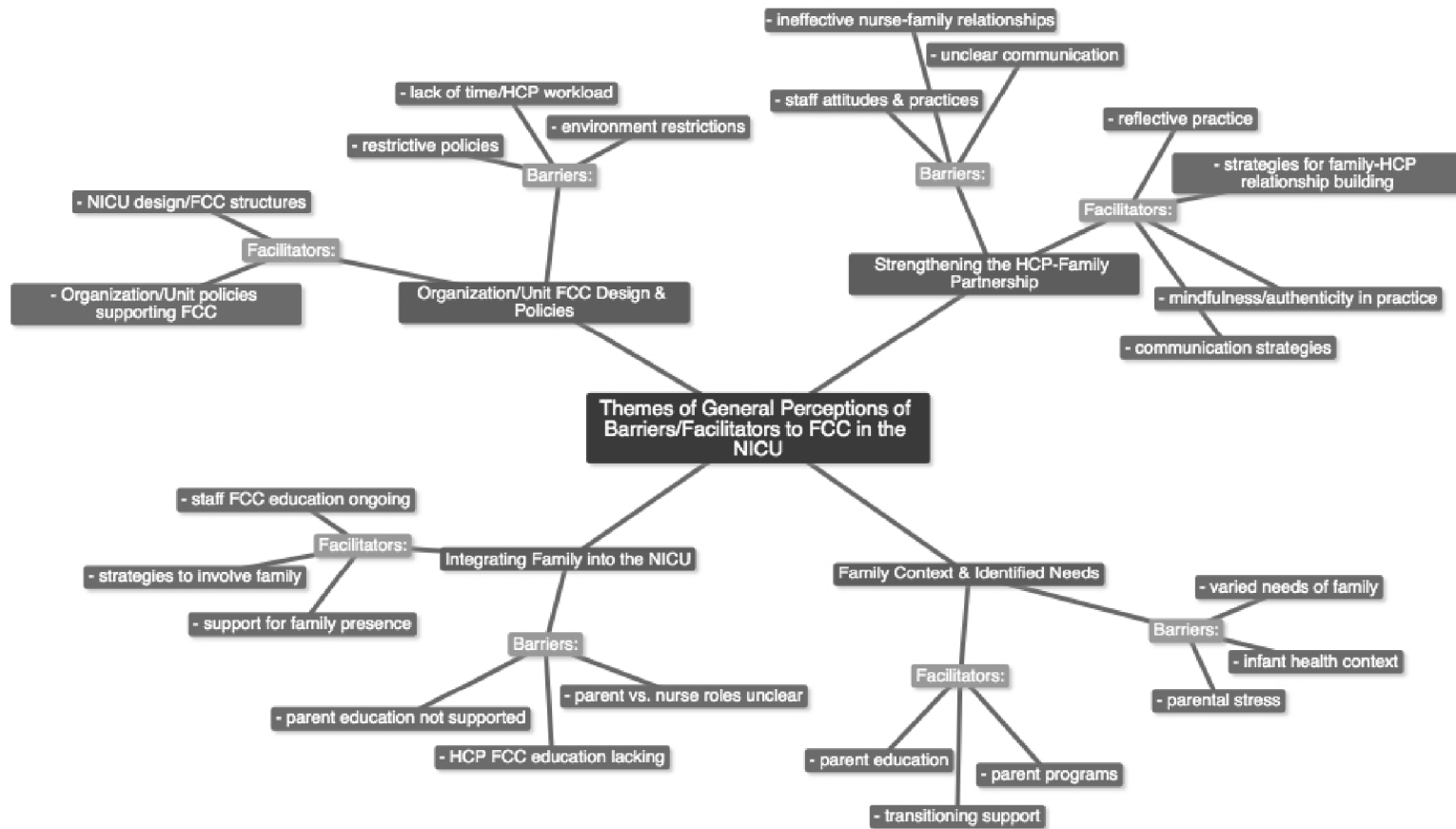


Figure 4. Mind Map of General Themes. This figure portrays the themes of barriers and facilitators of general perspectives of FCC.

Figure 5. Mind Map of Nurse Perspective of Themes

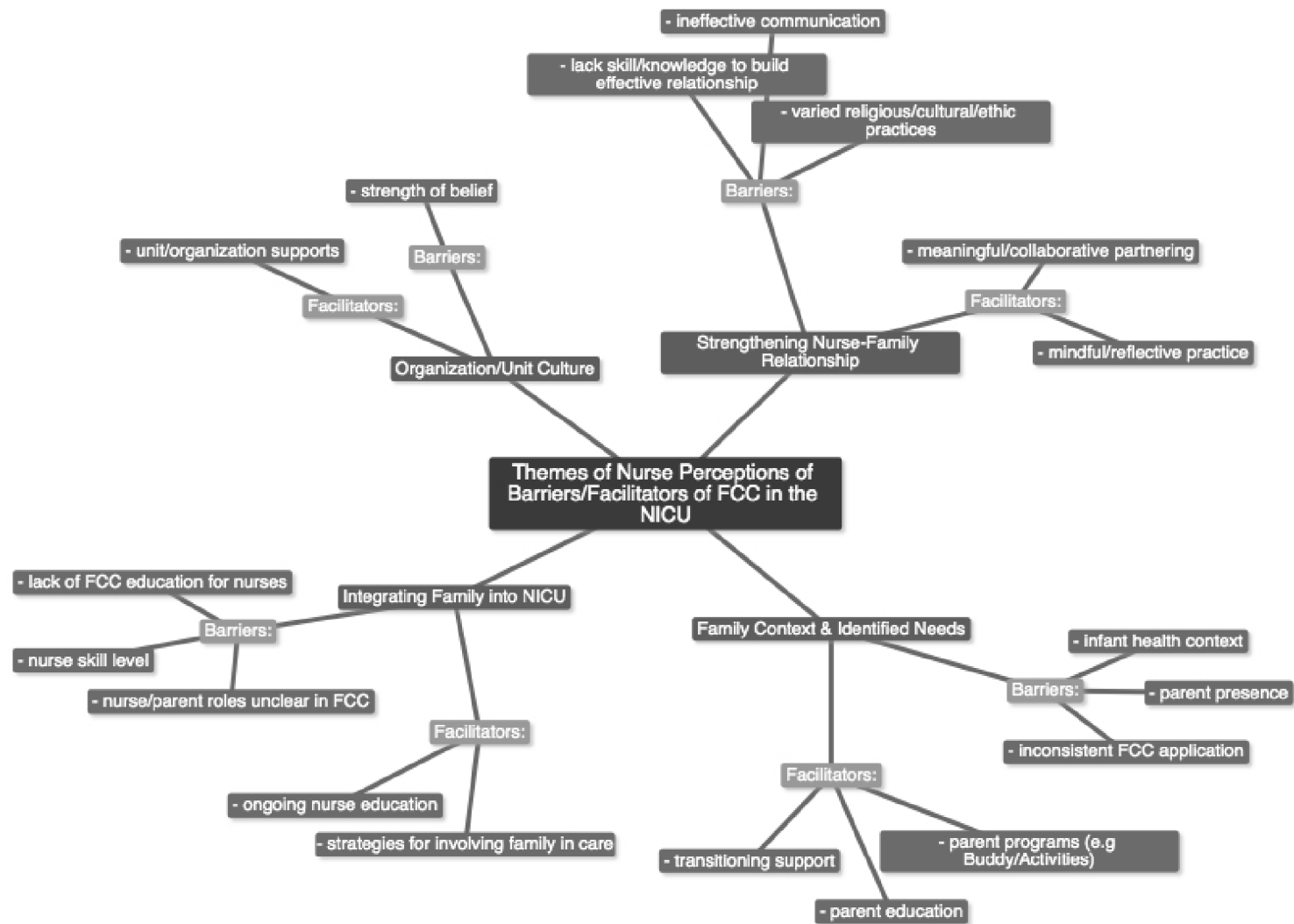


Figure 5. Mind Map of Nurse Perspective of Themes. This figure portrays the themes of barriers and facilitators of nurse perspectives of FCC.

Appendix E

Summaries of Studies

Table 3

Table of Summaries of All Studies in this Integrative Literature Review

Table of Summaries of All Studies in this Integrative Literature Review						
Summary of Studies Addressing NICU Nurse Perspectives of FCC						
#	Citation/ Date	Evidence Type	Sample Size	Pertinent Study Findings & Recommendations	Identified Limitations/ Bias	Location of Study
1	Trajkovski, S., Schmied, V., Vickers, M., & Jackson, D. (2012). Neonatal nurses' perspectives of family centred care: A qualitative study. <i>Journal of Clinical Nursing</i> , 21(17-18), 2477-2487. doi:10.1111/j.1365-2702.2012.04138.x	Qualitative	33 (NICU nurses)	<p><i>Findings:</i></p> <ul style="list-style-type: none"> - 4 dominant themes in FCC: getting to know parents & their wishes; involving families in daily care; finding a 'happy medium' in nurse-family dynamic; transitioning supports - FCC inconsistent in NICU; need for increased organizational support, guidance and education to support nurses <p><i>Recommendations:</i></p> <ul style="list-style-type: none"> - Use a multi-disciplinary team approach to integrating FCC in NICU; Assign nurse/parent representatives on FCC committees; Better define parent vs. nurse role; Investigate FCC resources required 	Conducted in one NICU, thus may not be able to generalize results.	NICU (Australia)
2	Lindsay, G., Cross, N., & Ives-Baine, L. (2012). Narratives of neonatal intensive care unit nurses: Experience with end-of-life care. <i>Illness, Crisis & Loss</i> , 20(3), 239-253.	Qualitative	17 (NICU nurses)	<p><i>Findings:</i></p> <ul style="list-style-type: none"> - Patterns noted for nurses in EOL Care: call-to-presence (where nurses must interpret/witness infant's experience/suffering); Within the liminality of knowing/unknowing (reflection on way of <i>being</i> with this information); Exploring experience for transformative learning <p><i>Recommendations:</i></p> <ul style="list-style-type: none"> - NICU nurse findings are transferable to other units (ICU, CCU, Gerontology) - Reflective practice communities hold benefit as nurse supports 	Meaning derived from this research reflective of the participants' interpretations. (i.e. May not be generalizable.) Experience of nurses with end of life care can be elaborated on with future research on what this means; this can aid with understanding of what essential engagement.	NICU (Canada)
3	Hendson, L., Reis, M. D., & Nicholas, D. B. (2015). Health care	Qualitative	58 (multiple health care professionals; 62% nurses)	<p><i>Findings:</i></p> <ul style="list-style-type: none"> - HCP and immigrant family relationships affected by HCP 	Only HCP interviewed (potential for one-sided portrayal of	NICU (Canada)

	<p>providers' perspectives of providing culturally competent care in the NICU. <i>Journal of Obstetric, Gynecologic, & Neonatal Nursing</i>, 44(1), 17-27.</p>			<p>competence/awareness and sensitivity to cultural/ethnic diversity.</p> <ul style="list-style-type: none"> - Themes leading to barriers: decision-making with different norms/beliefs of family, communication, unintentional stereotyping or issues with transitioning home, limited intangible activities (e.g. teaching) <p><i>Recommendations:</i></p> <ul style="list-style-type: none"> - Need for organization recognition of culturally competent care to integrate this as part of FCC culture - Need framework to understand relationship influences between HCP and new immigrant families - More research needed to explore importance of culturally competent care in NICU 	<p>issue, despite hearing HCP's observed view of families)</p> <ul style="list-style-type: none"> - Sampling technique of focus group; more vocal members influenced discussion - HCPs interviewed from two large metropolitan hospitals (results may not be transferable) 	
4	<p>Hendricks-Muñoz, K. D., Louie, M., Li, Y., Chhun, N., Prendergast, C. C., & Ankola, P. (2010). Factors that influence neonatal nursing perceptions of family-centered care and developmental care practices. <i>American Journal of Perinatology</i>, 27(3), 193.</p>	Non-experimental (survey)	59 (NICU nurses ó multiple locations)	<p><i>Findings:</i></p> <ul style="list-style-type: none"> - Need for education, leadership & support for FCC (and developmental care) for all members of health care team - Best FCC care results when specialists/educators available for continual training <p><i>Recommendations:</i></p> <ul style="list-style-type: none"> - Further studies on nurse perceptions of competencies and requirements needed to provide parent education, and studies of nursing perception related to factors that support FCC, to guide/promote clinical behavioral change 	<p>Transferability of study. Limitations of study research tool: did not consider individual nursing perception of parental interest in FCC, as well as nurse comfort level in educating parents, and time constraints.</p>	NICU (U.S.)
5	<p>Grzyb, M. J., Coe, H., Rühland, L., & Dow, K. (2014). Views of parents and health-care providers regarding parental presence at bedside rounds in a neonatal intensive care unit. <i>Journal of Perinatology</i>, 34(2), 143-148.</p>	Non-experimental (survey)	28 nurses, 67 medical trainees, 81 parents	<p><i>Findings:</i></p> <ul style="list-style-type: none"> - With increased parental presence (i.e. at rounds) nurses find parents less anxious, patient care is improved, parent-nurse communication is improved. - Nurses find that discussion of patient's condition limited with parent presence 	<p>Findings may not be generalizable to other NICU or different patient populations. Differences in characteristic of parents who attended rounds vs. those who chose not to may affect our</p>	NICU (Canada)

				<p>- 54% nurses agree they prefer parents to be present</p> <p><i>Recommendations:</i></p> <ul style="list-style-type: none"> - Specific measure of impact of family presence on inhibition of discussion or deferred teaching point should be explored - Need for guideline development for discussing child's condition, prognosis, plan of care when parent present 	<p>perception of parent views. A validated scale to examine HCP views on parental presence during rounds does not exist.</p>	
6	<p>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. <i>MCN: The American Journal of Maternal/Child Nursing</i>, 39(4), 260-268.</p>	Qualitative	22 (nurses)	<p><i>Findings:</i></p> <ul style="list-style-type: none"> - FCC care practices support and increase parent involvement in infant care - FCC practices lead to nurses' increased interaction with parents, and greater awareness of family's psychosocial context - Nursing role becomes that of facilitator/coach with FCC <p><i>Recommendations:</i></p> <ul style="list-style-type: none"> - An FCC program (like the one for this study) can change nurse attitudes, care practices to align with FCC values; this is achieved through FCC training/involvement of all health care staff on unit 	<p>Findings are not generalizable (but can be transferable to other NICU contexts for FCC implementation). Descriptions are based on subjective experiences of nurses.</p>	NICU (Finland)
7	<p>Asai, H. (2011). Predictors of nurses' family centered care practices in the neonatal intensive care unit. <i>Japan Journal of Nursing Science</i>, 8(1), 57-65.</p>	Non-experimental (survey)	30 nurse managers, 710 staff nurses	<p><i>Findings:</i></p> <ul style="list-style-type: none"> - The most significant predictor of implementation of FCC is nurses' self-efficacy to implement FCC (supported by statistical significance in study) <p><i>Recommendations:</i></p> <ul style="list-style-type: none"> - Educational programs for nurses to enhance self-efficacy (i.e. necessary FCC knowledge/skills) - FCC implementation requires organizational efforts, staff support, and frequent information sharing about child's care between family & staff 	<p>The research survey tools used (MPOC-SP and MBP-FCS) were developed for pediatric units and not the NICU. Cultural differences between Canada and Japan can affect results of tool used.</p>	NICU (Japan)
8	<p>Merighi, M. A. B., Jesus, M. C. P. D., Santin, K. R., &</p>	Qualitative	7 (nurses)	<p><i>Findings:</i></p> <ul style="list-style-type: none"> - Nursing action is a factor in parent FCC 	<p>Limited in scope due to sample size; require</p>	NICU (Southeastern Brazil)

	Oliveira, D. M. D. (2011). Caring for newborns in the presence of their parents: the experience of nurses in the neonatal intensive care unit. <i>Revista latino-americana de enfermagem</i> , 19(6), 1398-1404.			involvement; relationship of care important between nurse-family-infant triad, thus must maintain this relationship and view parents as subjects of care in NICU (Note: emotional relationship exists; triad can be changed in emergent situations) <i>Recommendations:</i> - Context of care in NICU is a triad; must consider this in planning/executing care to infant - Need more research in considering triad in patient care	further studies on implications of this relationship of care.	
Summary of Studies Addressing General Perspectives of FCC						
9	Benoit, B., & Semenic, S. (2014). Barriers and facilitators to implementing the Baby Friendly Hospital Initiative in Neonatal Intensive Care Units. <i>Journal of Obstetric, Gynecologic, & Neonatal Nursing</i> , 43(5), 614-624.	Qualitative	10 (medical and nursing managers, nurse educators, lactation consultants, neonatal nurse practitioners)	<i>Findings:</i> - Potential value of Baby-Friendly Hospital Initiative program applied to NICU in that it facilitates FCC via: interdisciplinary staff education, increased access to LCs, establishes NICU champions to support BFHI (overall: addresses contextual barriers) <i>Recommendations:</i> - More studies to develop and test the effect of BFHI-NICU strategies on organizational readiness and capacity to adopt ðNeo-BFHIö program.	Potential for biased response from participants as they are more invested in BF initiatives and are responsible for quality of care on the units. Applying this specific Neo-BFHI program may not be generalizable to other NICUs.	NICU (Canada)
10	Reis, M. D., Rempel, G. R., Scott, S. D., Brady Fryer, B. A., & Van Aerde, J. (2010). Developing nurse/parent relationships in the NICU through negotiated partnership. <i>Journal of Obstetric, Gynecologic, & Neonatal Nursing</i> , 39(6), 675-683.	Qualitative	10 (parents: 9 mothers, 1 father)	<i>Findings:</i> - Model of Negotiated Partnership suggested to support parents as HCP: Perceptive Engagement, Cautious Guidance, Subtle Presence (strategies nurse can employ for parent education, FCC, improved parent-nurse relationship) <i>Recommendations:</i> - Consider model with respect to: parent contributions to development of effective/collaborative relationships; nursing role and development of effective collaborative relationships - Consider revising language used in model (e.g. permission and permitting) in relation to FCC concept of	Experiences of parents are specific to this NICU; cannot generalize. Findings may show overly positive perspective by parents as aware of study. Small sample size used.	NICU (Canada)

11	Lester, B. M., Hawes, K., Abar, B., Sullivan, M., Miller, R., Bigsby, R., ... & Padbury, J. F. (2014). Single-family room Care and neurobehavioral and medical outcomes in preterm infants. <i>Pediatrics, 134</i> (4), 754-760.	Non-experimental (longitudinal prospective)	151 infants in NICU (open-bay NICU) and 252 infants (single-family room (SFR) NICU)	empowerment of families <i>Findings:</i> - SFR results in increased infant weight at discharge, increase rate weight gain, decreased medical procedures, lower gestational age at full enteral feeds, less incidents of sepsis, increased attention for infant, and decreased physiologic stress, hypertonicity, lethargy, and pain for infant. (Weight at discharge and increased weight gain related to increased developmental support, difference in number of medical procedures, and infant stress/pain, due to increased maternal involvement.) - SFR increases work environment and attitudes of nurses toward FCC <i>Recommendations:</i> - Further studies required on benefits of SFR NICU.	SFR can vary from NICU to NICU, benefits may vary, layout may cause increased nurse concern or affect patient care; study may be transferable with limits. Sociodemographic population can affect maternal involvement and developmental support for infant in SFR; this study did not focus on underprivileged patients. Pre-post design could be limitation due to selection bias, differential treatment by staff, varied parental preferences.	NICU (U.S.)
12	Gooding, J. S., Cooper, L. G., Blaine, A. I., Franck, L. S., Howse, J. L., & Berns, S. D. (2011, February). Family support and family-centered care in the neonatal intensive care unit: Origins, advances, impact. In <i>Seminars in Perinatology, 35</i> (1), 20-28.	Literature review	Multiple research studies used.	<i>Findings:</i> - FCC has clear benefits, but improvement needed in its uptake in NICUs. - Several successful models/approaches to FCC exist, however there is a need for supportive organizations and unit cultures to embrace FCC philosophy. - Few large scale randomized controlled trials exist to support most FCC practices and models <i>Recommendations:</i> - Further research is needed (e.g. more RCTs) in support of FCC models/practices.	Bias not discussed.	Multiple studies, thus multiple locations. (Review conducted by U.S.)
13	Franck, L. S., Oulton, K., & Bruce, E. (2012). Parental involvement in neonatal pain management: An empirical and conceptual update. <i>Journal of Nursing Scholarship, 44</i> (1), 45-54.	Experimental ó RCT (Randomized controlled trial)	169 (parents: 84 part of the intervention group, 85 as controls)	<i>Findings:</i> - Model of parent involvement in infant pain management developed (i.e. trajectories of opportunities and barriers) - Can apply model to investigate questions re: interrelationships among factors that influence parental involvement (e.g how to alter order of described factors in their	Some differences shown between the written comments of the intervention and control group that was not apparent in the analysis of the quantitative measures for this study. This may affect accuracy of results.	NICU (U.K.)

				model) to increase involvement?) <i>Recommendations:</i> - Apply model in guiding new proposals and testing of interventions to remove barriers to parent involvement (that benefits infants) in the NICU		
14	Davidson, J. E., Savidan, K. A., Barker, N., Ekno, M., Warmuth, D., & Degen-De Cort, A. (2014). Using evidence to overcome obstacles to family presence. <i>Critical Care Nursing Quarterly</i> , 37(4), 407-421.	Literature Review (with Case Study)	Multiple research studies used in review.	<i>Findings:</i> - Future research needed for more evidence on FP benefits and barriers. - FP is not related to increased infection in patients in the NICU (e.g. during procedures, with burn patients, with open visiting policies). - FP is shown to not slow down rounds significantly, or decrease the quality of teaching rounds. - There exists mostly positive evidence for FP during rounds despite the potential for legal risk of sharing confidential information. <i>Recommendations:</i> - More research evidence needed to strengthen case for FP in hospitals. - FP is recommended for hospitals.	Bias discussed: By evaluating available evidence and reflecting on unfounded long-term beliefs can these research findings transferred to practice.	Variety of research studies (research conducted in U.S.)
15	Bracht, M., O'Leary, L., Lee, S. K., & O'Brien, K. (2013). Implementing family-integrated care in the NICU: a parent education and support program. <i>Advances in Neonatal Care</i> , 13(2), 115-126.	Qualitative ó descriptive	39 (mothers in NICU)	<i>Findings:</i> - FICare program provides parents with tools needed to parent in NICU, recognize own strengths, increase problem-solving strategies, emotionally prepare them to transition home. - FICare is a flexible, comprehensive education series, facilitates peer-to-peer support, strengthens nurse-family relationship, allows for a personalized approach to parent education/feedback. <i>Recommendations:</i> Translate FICare model to other NICUs to determine if it has long-term benefits to infants/families.	Specifically created program for one hospital; may not be directly applicable to other NICUs. Carried out in small group over short time period. Significant time demands on staff and veteran parents; requires commitment, availability and willingness.	NICU (Canada)

Appendix F

Summary of Studies Depicting Nurse Perceptions to FCC

Eight articles were found during the research process that focused on nurses' perceptions of barriers and facilitators to family-centered care. Below, I highlight study findings, recommendations and limitations. I discuss the relevance of each article to this literature review regarding barriers and facilitators uncovered in each study, and reflect on my own experiences as an NICU nurse.

Asai, H. (2011). Predictors of nurses' family centered care practices in the neonatal intensive care unit. *Japan Journal of Nursing Science*, 8(1), 57-65.

Asai (2011) considers the significant question of what predictors exist for nurses' FCC practices in the NICU environment. This study was completed across 30 NICUs in Japan, involving 30 nurse managers and 710 staff nurses. The study design employed a quantitative, cross-sectional survey, and was approved by the Research Ethics Committee at St Luke's College of Nursing in Tokyo, Japan. Administrative approval was obtained from each hospital in the study, and voluntary participation was obtained from the participants, as well as confidentiality by shredding study data after the study period. In my appraisal of this study I gave it a quality rating of A (High), and evidence level III.

The methods for this study included employing a questionnaire for nurses on the practice and beliefs related to FCC in the NICU. The questionnaire for nurse managers covered the philosophy, policies and environment of the NICU. The questionnaires were conducted anonymously over June to October 2007, and confidentiality was assured. The hospitals provided characteristic information such as visiting policy, educational materials for parents, family

supports, and the unit's philosophy on FCC. Demographic data was also collected on participants. Data analysis consisted of statistical analysis of data, recognizing significant results if the P value was less than 0.05. Limits of this study were that the research survey tools that were used (i.e. the Measure of Processes of Care for Service Providers, and the Measure of Beliefs about Participation in Family-centered Service) were developed for paediatric units and not the NICU. Also, these survey tools originated from another country, and were adapted to fit the Japanese culture, which may have affected the results and its transferability (Asai, 2011).

Study Results

Asai (2011) found that the most significant predictor of FCC implementation for nurses in the NICU is nurse self-efficacy to practice FCC. Self-efficacy is defined as a person's beliefs about their capabilities that affects how they may think, feel or derive motivation for certain behaviours (Asai, 2011). Asai (2011) discusses how self-efficacy, based in social cognitive theory, arises through: mastery of experiences, experiences gleaned via social models, social persuasion and improved somatic/emotional states. Thus there is a need to invest in FCC education in terms of learning experiences, and opportunities for what Asai (2011) defines as vicarious experiential learning (e.g. observing senior nurses, modeling behaviour, discussion groups among colleagues). In terms of using social persuasion, NICU educators are suggested as a resource to encourage FCC practices among nurses by identifying capabilities of staff and providing support in areas where needed (Asai, 2011). This approach can better support FCC practice in areas like involving families in infant care, improving collaborative relationships between nurse and family, and seeking organizational support (Asai, 2011).

Barriers to FCC, as identified by this study, include the stressful NICU environment, which can impede learning, and a lack of RN education or support via FCC resources (Asai,

2011). Asai (2011) recommends educational discussion groups on FCC for nurses, as well as opportunities to observe FCC modeled behaviour from more experienced nurses. Also recommended is greater support for nurses (e.g. during bereavement or end-of-life care) in order to decrease the stressful impact of the NICU environment to promote self-efficacy with FCC. The need for education and a supportive environment in which to practice the FCC philosophy in one's own practice is accentuated through this comprehensive study on nurse perspectives of FCC. This brings well supported knowledge to my literature review regarding the need for organizational and staff support in creating an FCC culture of care in the NICU.

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: The American Journal of Maternal/Child Nursing*, 39(4), 260-268.

Axelin et al. (2014) sought to describe the experiences of NICU nurses with a training program that promoted FCC, and determine how their practice was influenced with this philosophy of care. The study was completed in Finland in an 18-bed level III NICU in a university hospital, with a sample size of 22 NICU nurses. This study design was a qualitative approach, and was approved by the Joint Commission on Ethics of the Hospital District and the University Hospital. In my appraisal of this study I found the quality rating to be B (Good) and the evidence level at III; this study looked directly at nurses' experiences with facilitators and barriers to FCC as per my review project questions.

The FCC training program included training an initial group over 2 years to be trainers for the rest of the staff, using a train-the-trainer method, then allowing for the untrained nurses to be tutored by the trained group over an 18 month period. Training was based on a multi-method

learning philosophy using hands-on teaching and reflective supervision, with frequent meetings for collaborative discussion or reflection of the trainees' learning experiences. For the study, 22 nurses were interviewed in 8 group sessions by one researcher from March to May 2011 (immediately after training was completed). Interviews were recorded and transcribed verbatim by someone outside the study. Thematic analysis was employed to analyze data and data coding was conducted which highlighted five main themes. Notes were taken throughout this process by the researcher to aid in discussion of themes. Limitations discussed in this study included that findings are not generalizable, but may be transferable to other NICU contexts for FCC implementation, and that descriptions informing the data of the study were based on subjective experiences of these NICU nurses (Axelin et al., 2014).

Study Results

Axelin et al. (2014) bring attention to multiple FCC care practices that can support and increase parental involvement in infant care, and help improve nurse interaction with parents due to an increased awareness of family psychosocial context and the transitioning of the nurse role to that of facilitator or coach. These facilitators include providing reassurance to families in FCC practices (e.g. skin-to-skin, infant handling) to promote a less stressful experience for parents/infant with handling (Axelin et al., 2014). Unit/environment supports such as allowing parents to stay overnight before the infant is discharged home, open unit policies for parents/family, early support in breastfeeding and skin-to-skin holding, and long-term planning of patient discharge, were found to facilitate FCC practice and improve staff attitudes toward FCC (Axelin et al., 2014). Incorporating parents in comforting activities for infants promoted nurses' work satisfaction, and more meaningful interactions with parents (Axelin et al., 2014). Individualized care as per family context, where infant's individuality directs care, and effort is

placed in building nurse-family relationships, lead to individualized early discharge plans and easier communication with parents (Axelin et al., 2014).

Reflective practice for nurses, supported by a reflective work community (i.e. groups formed by HCT to promote open discussion and problem solve with respect to FCC), support integration of FCC into nurse practice (Axelin et al., 2014). Perception of parents as experts who can better interpret baby's behaviour is also encouraged, as it aids in empowering families, increasing parental role (e.g. confidence in discussing infant on rounds, improving understanding for decision-making), and seeing the nurse as a coach/facilitator to support parents in their expert role (Axelin et al., 2014). These facilitators to FCC are offset by the barriers identified by Axelin et al. (2014).

Axelin et al. (2014) determined three main areas where barriers arose to FCC practice, highlighted via nurse perspectives. First was a lack of clarity on specific nurse versus parental roles at the bedside leading to role confusion and feelings of stress (Axelin et al., 2014). Second, when nurses encountered barriers to FCC at the bedside they proceeded to revert to comfortable past practices; this indicates a need to better support NICU culture change to align with FCC values at both organization and unit levels (Axelin et al., 2014). Lastly, nurse concerns about feeling obligated to do skin-to-skin holding to meet parent and medical staff expectations for FCC, came to light when nurses expressed that they sometimes found infants too unstable to recommend holding (Axelin et al., 2014). This also unearths a more subtle issue of power dynamics in the NICU with respect to FCC practices, and nurse-family relationships.

Overall, Axelin et al. (2014) recommends implementing FCC programs such as the one used in this study in order to propel change in nurse attitudes and care practices toward aligning with FCC values/practices. This can be achieved through FCC training and involvement for all

health care staff in the NICU (Axelin et al., 2014). Providing nurses with tools to work with parents, and take the role of facilitator/coach to families, is necessary through further FCC education for nurses (Axelin et al., 2014). Axelin et al. (2014) has brought to light core points in FCC educational needs for nurses in order to be effective facilitators of FCC in their practice.

Grzyb, M. J., Coo, H., Rühland, L., & Dow, K. (2014). Views of parents and health-care providers regarding parental presence at bedside rounds in a neonatal intensive care unit. *Journal of Perinatology*, 34(2), 143-148.

This study aimed to identify views and preferences of parents who attended rounds, those who did not, and to compare views of medical staff and nurses on parental presence during NICU rounds (Grzyb et al., 2014). As parental presence is considered one of the gold standards in FCC, questioning perspectives of NICU staff on this issue was of direct interest for this review (Grzyb et al., 2014). The setting for this study was a tertiary care and teaching hospital in Canada, with a sample size of 28 nurses, 67 medical trainees, and 81 parents. The study design was non-experimental, and ethics approval was obtained from the Queen's University Health Sciences and affiliated Teaching Hospitals Research Ethics board. My appraisal of this study resulted in a quality rating of A (high) and determined it was evidence level III.

Study design consisted of a cross-sectional survey of parents who had infants admitted to the NICU for at least 5 consecutive days who had an opportunity to attend rounds. The survey was also given to medical trainees and residents who had been in the NICU for at least one rotation, and nurses who worked part- or full-time. The surveys were self-administered, with questions based on a five-point scale, and a section for general comments; prior to the survey questions basic contextual information was collected. Statistical data analysis was conducted in

SPSS 18.0, and all significant results were of P -values of less than 0.05 (Grzyb et al., 2014). Identified limitations were that findings may not be generalizable to other NICUs as the study was done in a single NICU, potential for Hawthorne effect despite knowing responses were anonymous, characteristics of parents differed between those who attended rounds and those who chose not to, and a validated scale to determine parent and HCP views on parental presence during rounds is non-existent (Grzyb et al., 2014).

Study Results

(Note: The results discussed here are solely nurse perspectives (n=28) from Table 4.

Comparison of medical trainees' (n=67) and nurses' (n=28) views regarding parental presence at bedside rounds (Grzyb et al., 2014, p. 147).

Overall, Grzyb et al. (2014) show that with increased parental presence at rounds, nurses find parents less anxious, patient care is improved and parent-nurse communication is improved (Grzyb et al., 2014). It was also identified that less time is required to explain patient status and their plan of care when parents attend rounds, thus allowing for more time to engage with families on other matters (Grzyb et al., 2014). Despite these positive results, this study found only 54% of nurses who participated agree they prefer parents to be present in light of barriers identified.

With increased parental presence, nurses can find that rounds take more time and that frank discussions of patient conditions can be inhibited (Grzyb et al., 2014). Grzyb et al. (2014) also determine that nurse attitudes toward having parental presence for rounds rests on experience: those with shorter work experience believed patient care improved with parental presence, but those with longer work experience had a decrease in positive attitude toward this change in practice (Grzyb et al., 2014). This difference in attitudes may have been due to the

fact that newer nursing curriculums increase focus on FCC so that recent grads are more comfortable integrating this philosophy of care into their practice (Grzyb et al., 2014).

Grzyb et al. (2014) identified that more studies that specifically measure the impact of family presence on rounds (e.g. in terms of inhibited discussion or deferred teaching points) should be conducted. There exists a need for guideline development for discussing the infant's condition, prognosis and plan of care in a way that considers parents' capacity when they are present during rounds (Grzyb et al., 2014). This study highlights the contrasting perspectives of nurses on the pros and cons of having parental presence during rounds, and indicates a need for further exploration of FCC benefits/ barriers and necessary education/ support for this FCC practice (Grzyb et al., 2014).

Hendricks-Muñoz, K. D., Louie, M., Li, Y., Chhun, N., Prendergast, C. C., & Ankola, P. (2010).

Factors that influence neonatal nursing perceptions of family-centered care and developmental care practices. *American Journal of Perinatology*, 27(3), 193-200.

Hendricks-Muñoz et al. (2010) sought to assess nurse acceptance and perceptions of developmental care and FCC in the NICU with respect to team structure and training. The study was completed in three different hospitals at the NICU in the United States, and had a total sample size of 59 NICU nurses from all three hospitals. The study design was non-experimental, using a survey approach, and ethics approval was obtained through the Institutional Review Board prior to the start of the study. My appraisal of this study showed a quality rating of A (high) and evidence level III. The perceptions of NICU nurses on this subject were of direct interest to the questions posed by this integrative literature review.

The methods employed for this study consisted of inviting nurses from three hospitals to participate in an anonymous Likert scale survey of 24 questions that was developed specifically for this study and related to specific FCC and developmental care. Data was also collected regarding the characteristic details of each NICU with respect to support, training, and practices associated with FCC and developmental care. The results were analyzed using Fisher exact test and one-way analysis of variance. Limitations identified in this study included the limits of the research tool in that it did not consider nurses' perceptions of parental interest in FCC, nor did it assess the nurses' comfort level in educating parents (Hendricks-Muñoz et al., 2010).

Study Results

Results of the study showed a need for education, leadership and support for all members of the HCT in order to integrate FCC and developmental care in the NICU (Hendricks-Muñoz et al., 2010). Facilitators to FCC included continuing education for multi-disciplinary staff in FCC and developmental care, along with key leaders in this initiative in the NICU (Hendricks-Muñoz et al., 2010). Hendricks-Munoz et al. (2010) found that this approach promoted behaviour change activities, and supported nursing acceptance of FCC practices (e.g. ambient light, handling of premature infants), while education for the whole HCT promoted strength of belief in the value of FCC practices. The behaviour changes for staff were found to be directly related to education received, leadership on the unit and ongoing staff FCC support (Hendricks-Muñoz et al., 2010).

Barriers to FCC and developmental care practices in the NICU included a lack of education and support for nursing staff in the knowledge needed to apply these practices (Hendricks-Muñoz et al., 2010). A lack of strong beliefs in the value of FCC was found in areas where the whole HCT were not sharing the same vision of practicing FCC (Hendricks-Muñoz et

al., 2010). The decreased strength of belief in FCC led to lower action to support FCC where nurses prioritized medical activities over visitations from parents (Hendricks-Muñoz et al., 2010). The medical team's beliefs were found to be mirrored by nursing practice, in that poor physician and colleague attitude towards FCC proved to be a barrier to nursing clinical FCC practice (Hendricks-Muñoz et al., 2010). Finally, individual nursing perception and nursing comfort level in educating diverse families, as well as time constraints to educate parents, proved to be a challenge to FCC and developmental care practices by nurses (Hendricks-Muñoz et al., 2010).

Recommendations by Hendricks-Muñoz et al. (2010) accentuated the need for complete HCT training on FCC and related practices, since the best FCC care results found in this study resulted when specialists and educators were available to support the whole team on a continual basis. These conclusions underline the need to build an FCC culture in the NICU through reaching all members of the health care team, as well as providing an ongoing resource to reinforce education, guide and promote FCC clinical behaviour change among NICU staff.

Hendson, L., Reis, M. D., & Nicholas, D. B. (2015). Health care providers' perspectives of providing culturally competent care in the NICU. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 44(1), 17-27.

Hendson et al. (2015) sought to examine the perceptions and experiences of health care providers (where 62% of the 58 participants were NICU RNs or NPs), who provided culturally competent care for new immigrant families within five years of immigration. This study was conducted in two tertiary-level NICUs in two large metropolitan hospitals in Canada and a grounded theory methodology was used. Other participants included social workers, medical

staff, dieticians, respiratory therapists and administrative staff. Ethics approval was obtained from the University Research Ethics Board, and all participants provided written informed consent prior to starting the study. My appraisal of this study was a quality rating of A (high), and evidence level III.

The method employed was a semi-structured interview guide to allow participants from seven focus groups (3 to 15 participants per group) to share their experiences. Data was collected and analysed as per grounded theory method, and each of the three researchers kept personal field notes throughout the study. After each focus group, all three researchers debriefed to allow for reflection, theory generation, identification of concepts, and modifying questions (Hendson et al., 2015). Rigor was demonstrated in this way, along with peer debriefing, triangulation, member checking, and documenting an audit trail (Hendson et al., 2015). Limitations of this study were identified in that only health care providers were interviewed thus it may be a one-sided portrayal of this practice. The sampling technique of focus groups were also considered a limitation, as some members of the group were more vocal than others and varying perspectives may have been overshadowed (Hendson et al., 2015). Finally, HCPs were interviewed from two large metropolitan hospitals, thus results may not be transferable to other NICUs.

Study Results

This study identified that HCP and immigrant family relationships are affected by HCP competence, awareness and sensitivity to cultural and ethnic diversity (Hendson et al., 2015). Intuitive perceptions of the families needs helps facilitate practice of a culturally competent FCC approach, such as ability to perceive diverse cultural norms (e.g. related to modesty, privacy, eye contact, touch), gender role differences, body covering related to breastfeeding and skin-to-skin,

and modesty with the opposite sex (Hendson et al., 2015). Employing empathy and having the ability to listen to the family's perspectives without being judgemental of various life practices are necessary strategies to support cultural competence in FCC (Hendson et al., 2015). Other facilitators for this included peer-support among HCPs to encourage reflection of own perspectives and acting to facilitate knowledge about other cultures and religious through in-services and discussion/debriefing after cultural encounters with families (Hendson et al., 2015).

Barriers to cultural competence include decision-making for families with different norms and beliefs, communication between HCP and family, unintentional stereotyping regarding transitioning home, and limited time for intangible activities (Hendson et al., 2015). HCPs can be distressed when working with new immigrant families regarding who is involved in decision-making and how decisions are made (e.g. parents are not key decision-makers, or someone in the community is consulted on the infant's care plan) (Hendson et al., 2015). In other cases, parents may not be accustomed to having a say in infant care. For example, a new immigrant parent stated, "You are asking me what I should do? I don't know what you should be doing?" (Hendson et al., 2015, p. 22) when asked to collaborate on their infant's care with a HCP. Such cultural, religious or ethnic clashes with Western perspectives of FCC can prove to be a barrier to FCC if they are not understood by the HCP (Hendson et al., 2015). Hendson et al. (2015) also highlight the difference in beliefs and norms, citing the example of a parent of a preterm infant, who was terrified to see their child in the NICU, and stated, "You know, in our home, babies born before this gestation just die." (Hendson et al., 2015, p. 22). Other barriers highlighted include issues with language, where meaning can be lost in translation in both directions between HCP and family, and unintentional stereotyping of a family (e.g. HCP expectations of family roles) (Hendson et al., 2015). Limited time for intangible activities

was also highlighted as a barrier in this study by Henderson et al. (2015), where nurses lack the time/skills to carry out tasks such as effectively providing teaching, ensuring understanding, providing reassurance, and supporting families that are newer to the country (Henderson et al., 2015).

Overall, Henderson et al. (2015) bring to light important points about providing culturally competent care in support of FCC: there is a need for better HCP support and education on how to integrate culturally competent care into their practice, and there is a need for organizational recognition that culturally competent care is a part of FCC culture (Henderson et al., 2015). This study brings a fresh perspective to this review, of specific barrier to FCC in the NICU. Within my own practice, in a large metropolitan hospital, I can attest to the time one must invest to develop collaborative relationships with families of diverse backgrounds. There is a clear need for more support for bedside nurses in navigating this aspect of FCC.

Lindsay, G., Cross, N., & Ives-Baine, L. (2012). Narratives of neonatal intensive care unit nurses: Experience with end-of-life care. *Illness, Crisis & Loss*, 20(3), 239-253.

Lindsay et al. (2012) explored the experiences of NICU nurses with end-of-life care of infants and their families with this study. This study was conducted in a tertiary care NICU in Canada, with a sample size of 17 NICU nurses. The study design was a qualitative (interpretive-narrative) design, using Newman's research-in-praxis approach as discussed by Lindsay et al. (2012). Ethical approval was obtained from the hospital and university affiliated with this study. My appraisal rated this study a level of B (Good), with evidence level III, and the inclusion criteria of directly researching barriers, strategies and nurse perspective of FCC.

The research methods employed included two small-group dialogues (60 to 90 minutes) that were three weeks apart, with individual follow-up phone sessions (30 minutes) after three months. The meetings were located at space away from the NICU, two meetings were offered in order to seek emergent patterns with participants, while the phone dialogue added further data for analysis. Verbatim transcripts of dialogue were subject to analysis for pattern recognition, and review of emergent patterns. Data was presented in the form of a composite story, followed by study findings of patterns and further discussion. This analysis served to contribute to the rigour of this study. Identified limitations included that the meaning derived from this research was reflective of the participants' interpretations, and may not be generalizable experiences.

Study Results

This study identified three main patterns in nurse experience of end-of-life care: call-to-presence, being within the liminality of knowing/unknowing, and exploring their experience for transformative learning (Lindsay et al., 2012). Understanding these patterns can facilitate nurse practice in end-of-life care with respect to FCC values.

A facilitator to nurses' experiences with end-of-life care for infants/families lies in their essential engagement that dictates the relationship between the baby and the nurse (Lindsay et al., 2012). The call-to-presence is the first in a pattern of experiences observed to be experienced by nurses in end-of-life care, where nurses must interpret or bear witness to an infant's experience or suffering (Lindsay et al., 2012). This relationship between nurses and babies can have a deep impact on infant care (Lindsay et al., 2012).

Being within the liminality of knowing/unknowing (where liminality represents time/space, rites of passage or transitions, and is a threshold between past and future), is the second identified phase by Lindsay et al. (2012). Knowing or not knowing what to do and say in

the face of end-of-life care (e.g. having technical knowledge) is a part of this phase. Baby-nurse-parent perspectives can be prevented from coming together due to tension from the nurse's sense of infant suffering and conflict with the medical plan of care (Lindsay et al., 2012). Unknowing can be from where transformative learning occurs.

The final phase for nurses, in this pattern, is to explore experiences for transformation of practice (Lindsay et al., 2012). This calls for the co-construction of knowledge through sharing end-of-life experiences with colleagues, reflection on interaction with the family, and presencing used to explore the lived experience of others (Lindsay et al., 2012). These strategies assist in transformative learning, which may prove to be educational supports for nurses going through this experience (Lindsay et al., 2012). Studies have shown that debriefing during and after a critical event can allow nurses to reflect and become better advocates for patients at end-of-life in the NICU; this also alleviates moral distress felt by nurses when witnessing infant suffering (Lindsay et al., 2012).

The barriers to these beneficial practices include lack of education and support for NICU nurses with end-of-life care. More education/support is needed to help nurses bear the emotional burden, address issues of cultural/religious competence, and know-how for specific end-of-life practices (Lindsay et al., 2012). Education is also lacking in how to teach nurses a way of *being* with the family. Lindsay et al. (2012) suggest simulation learning or modelling from more experienced nurses to teach these particular skills of being present with families/interaction. Finally, a lack of support from resources like NICU Palliative Care and Bereavement Coordinators can put a strain on nurses (Lindsay et al., 2012). This specialized knowledge from such a resource can lead to better nurse self-care and improved inter-professional relationships with end-of-life experiences for HCP (Lindsay et al., 2012).

Recommendations for this study underline the importance of building reflective practice communities on units handling end-of-life care (Lindsay et al., 2012). These findings are thought to be transferable to other units such as the adult or paediatric ICU, CCU, and gerontology (Lindsay et al., 2012). Through this insightful study, Lindsay et al. (2012) show that there is a niche for nurse education and supportive resources regarding end-of-life care. I can attest for this need, in particular, based on my own experience in a tertiary NICU for four years where the recent loss of having a resource such as an NICU Bereavement Coordinator has led to less educative support for bedside nurses. This is a deep loss for nurse education and FCC support in that it is a loss of a guiding light for nurses in reflective practice for end-of-life care.

Merighi, M. A. B., Jesus, M. C. P. D., Santin, K. R., & Oliveira, D. M. D. (2011). Caring for newborns in the presence of their parents: the experience of nurses in the neonatal intensive care unit. *Revista Latino-Americana de Enfermagem*, 19(6), 1398-1404.

Merighi et al. (2011) investigated NICU nurse experience in providing care to newborns in the presence of parents. This study, conducted in a NICU in Brazil, had a sample size of seven nurses who were interviewed between January and February 2009. The study used a qualitative design guided by social phenomenology. Approval was obtained from the Research Ethics Committee of the Hospital at the site of the study. My appraisal of this study showed a quality rating of B (Good), and evidence level III; it was included as it directly related to investigating nurse perceptions of facilitators and barriers to FCC in the NICU.

The researchers employed a social phenomenology design to understand the specific perspectives of nurses in their lived experiences with FCC. Nurses were contacted at the hospital, and interviews occurred on location at a time/place of their choosing. Semi-structured

interviews were given with the guiding questions: "what is it like for you to care for the newborn hospitalized in the NICU, when the parents are present? What do you consider when you care for the newborn and the parents are present?" (Merighi et al., 2011, p. 1401). Interviews were transcribed, transcripts were read and reread to identify categories of "motives for" and "reasons why" with respect to nursing actions. Three main categories emerged from analysis in the study results (Merighi et al., 2011). Limits to this study were identified as the small sample size, and thus trustworthiness and transferability of results (Merighi et al., 2011).

Study Results

Findings consisted of three main categories: recognizing the needs of the parents, feeling difficulties in an emergency situation, and being the link in the proximity of parents and children (Merighi et al., 2011).

In recognizing parental needs, care is based on comprehension of the other in social interaction between nurse-parents (Merighi et al., 2011). According to Merighi et al. (2011), empathy and compassion, technical expertise and emotional competence are a part of this interaction. Merighi et al. state a nurse's action and abilities rests on their know-how in supporting parents and providing education, providing information related to the infant's care, and responding to parental concerns. Nursing action is based within a nurse-family-infant triad where the nurse must maintain this interconnected relationship, can see parents as subjects of care in the NICU, and must balance the emotional relationship (Merighi et al., 2011). The emotional aspect of this triad pertains to emergent situations and shifts in how nurses connect to patient and family.

Nurses aim to care for infants within the contexts of the family and infant, however parental presence in emergency situations can create stress on the relationship between nurse-

infant-family (Merighi et al., 2011). Interactions during emergent situations can cause nurses to focus on immediate medical aspects of the situation rather than consider family context or support family in this distressing time (Merighi et al., 2011). Merighi et al. identified that nurses can perceive parental presence as impeding their role during these situations, and nurses cannot function as a link between families/infants.

The concept of nurse as a link between parent proximity to children was observed in the study by Merighi et al. (2011), highlighted by one nurse's statement that, "we are closest to them, I think it has to come from us, this increase of the bond between mother and baby." (p. 1403). Nurses feel that they must facilitate this contact, promote bonding/commitment of family to infant, and involve family in NICU activities. This, however, requires skill/knowledge in interpersonal relationships, a caring practice as a way of humanizing interactions with families (i.e. learning to *be* with family in an *authentic* way), and being able to guide parents and recognize needs as a family (Merighi et al., 2011).

Overall, Merighi et al. (2011) sheds light on the issue that nurses can feel discomfort when performing invasive procedures on infants in the presence of parents, especially when the infants are unstable. This can be because, "[nurses] believe that the parents are not prepared to accompany their child in a complex situation" (Merighi et al., 2011, p. 1402). This is a large barrier in the practice of FCC and raises the question of how we can support NICU nurses in such difficult contexts. The issues identified in this study bring our attention to this realistic barrier felt on a regular basis in a level III NICU with highly acute and unstable infants. Questions of what sort of education can be beneficial to bedside nurses, and how to obtain unit/organization support for FCC in such situations, are ongoing issues to address in the integration of FCC into the NICU.

Trajkovski, S., Schmied, V., Vickers, M., & Jackson, D. (2012). Neonatal nurses' perspectives of family centred care: A qualitative study. *Journal of Clinical Nursing*, 21(17-18), 2477-2487.

Trajkovski et al. (2012) sought to explore neonatal nurses' understanding of the FCC philosophy and how they view their role in facilitating FCC in the NICU. The study was completed in a tertiary NICU in Australia with a sample size of 33 neonatal intensive care nurses. The study design consisted of a qualitative interpretative approach, and institutional ethical approval was obtained along with written consent from study participants prior to completing the study. My appraisal of this study showed a rating level of B (Good) and evidence level III; this study focused direction on strategies, barriers, and nurse perspective of FCC as per my inclusion criteria stated earlier and directly related to my purpose for this review.

The researchers conducted a literature review followed by semi-structured interview questions to obtain nurses' understanding/reflections of FCC and perception of both their and parental role over two months. Four focus groups of six to eight nurses, running at 1.5 to 2 hours in length, were conducted in this time. Both focus groups and face-to-face interviews were transcribed verbatim, thematic analysis conducted, and themes were derived from data as part of a rigorous data analysis process, contributing to overall trustworthiness of the study. Identified limitations of this study were that it was conducted in just one NICU location, thus results may be particular that specific NICU and not generalizable.

Study Results

Results of the study showed four dominant themes exist in FCC from the perspectives of NICU nurses: (i) getting to know parents and their wishes, (ii) involving families in daily care,

(iii) finding a 'happy medium' in the nurse-family dynamic, (iv) transitioning supports for family.

The strategies identified to aid in FCC included 'getting to know' parents through spending more time at the bedside and providing individualized care through focusing on each family's unique needs (Trajkovski et al., 2012). This can be done through engaging in social conversation, and adapting interaction to conversational/behavioural needs of the family, resulting in the development of a trusting meaningful parent-nurse relationship (Trajkovski et al., 2012).

Another strategy identified was to apply methods to involve family in day-to-day care through sharing information (e.g. patient information, teaching) and guiding families in participating (e.g. scheduling infant care with families, promoting skin-to-skin, sibling involvement, and having all members of the HCT facilitate family participation) (Trajkovski et al., 2012). One nurse in the study stated, 'It's up to us nurses to work closely with the family, to involve and include parents in their babies care' (Trajkovski et al., 2012, p. 2481), indicating that nurses felt they shouldered most of this responsibility.

The strategy of finding a 'happy medium' for parental involvement in infant care requires that, '[nurses] negotiate with the parent to have that happy medium,' (Trajkovski et al., 2012, p. 2482). Being mindful of parents' unique situation helps with negotiating with the family to address needs. Clear communication and explanations can be beneficial in negotiating with families (Trajkovski et al., 2012).

Increasing transitioning support for parents regarding discharge from the NICU is another identified theme and strategy for FCC by Trajkovski et al. (2012). Trajkovski et al. determined that the changing roles and responsibilities of nurses have led to parents becoming more

independent caregivers with minimal nurse support before discharge from the NICU. Nurses were found to see this transition experience as rewarding in this study (Trajkovski et al., 2012).

Barriers to applying these strategies include the varied needs and cultural backgrounds of families that nurses may find challenging (Trajkovski et al., 2012). One nurse in this study stated she was, "not adequately prepared or trained in caring for the social aspect of the family" (Trajkovski et al., 2012, p. 2438). According to Trajkovski et al., the skill level of the nurse plays a role in building relationships and discussing care and rationale of care with families. Those who are less experienced may focus more on stabilizing the infant rather than including FCC in practice (Trajkovski et al., 2012).

Poor communication may lead to parents not coordinating schedules with the nurse, leaving nurses feeling a lack of consideration for the infant's needs and their workload (Trajkovski et al., 2012). Other barriers noted were difficulty for nurses to meet family needs due to time constraints, health contexts of the baby, issues of power imbalance (e.g. one nurse stated, "I'm the first one to take the baby out for cuddles" but if I think the baby's not going to tolerate it, I won't.) (Trajkovski et al., 2012, p. 2483). Nurses in this study identified that having expertise and experience helped them to empower parents via acting as role models, facilitators, and educators; however, lack of education and experience were barriers (Trajkovski et al., 2012).

Overall, it was determined that FCC is inconsistently applied in the NICU, showing a need for increased organizational support, guidance and education to better support nurses in applying this philosophy of care. Trajkovski et al. (2012) recommend using a multi-disciplinary team approach to integrating FCC in the NICU, assigning nurse and parent representatives on FCC committees to highlight their perspectives, and to better define parent and nurse role in

FCC. FCC resources needed for each unit should be investigated. This study was of particular importance to this review in that it highlights barriers that ring true in my personal experience as well as those observed in literature appraised in this review. It brings to the forefront the question of how we may effectively support NICU nurses in terms of providing culturally competent care, improved communication with families, and taking on the role of FCC facilitators in the NICU.

Appendix G

Level 4 Competencies – Nursing and Education Leadership Theory and Practice



Educator Pathway Project

Level 4 Competencies

The competencies in this document were developed collaboratively by a group consisting of representatives from each of the project partners – Fraser Health, Vancouver Coastal Health, University of Victoria, University of British Columbia and the Nurses Bargaining Association.

There are 6 main competencies that reflect the development of education theories and practice competencies as an educational leader with a Master Degree in Nursing.

The indicators included for each competency represent examples of how the competency might be demonstrated and are not meant to represent a complete list of all possible indicators.

The competencies are meant to assist participants reflect on their practice and direct their learning. The competencies reflect those expected of participants upon completion of the fourth level of the pathway and will help inform the curriculum development process.

Level 4 Competencies Nursing and Education Leadership Theory and Practice

Context: Enacting a new role that crosses programs, organizations and sectors (academic and healthcare) philosophically based and system focused education; teaching others how to teach.

1. Demonstrates knowledge of and engagement with education theories

- Synthesizes educational theories and evidence to inform teaching practices
- Critically reflects on relationships between educational theory and curriculum trends and issues in both the academic and practice sectors
- Collaborates with internal and external stakeholders in curriculum development and revision
- Develops strategic goals for education programs to meet educational, organizational and intersectoral goals
- Develops and implements integrated evidence informed teaching and learning strategies appropriate to learner needs and desired learning outcomes
- Develops and implements innovative teaching modalities congruent with the evolution of healthcare delivery and learning environments
- Develops and implements evidence informed strategies for curricular and program evaluation
- Analyzes the impact of a variety of teaching perspectives on the educational process
- Articulates own philosophy of teaching and learning linking this to education philosophy

2. Fosters effective teaching and learning relationships

- Reflects on the impact of one's actions and decisions on others
- Provides effective feedback to educators, individual learners and groups
- Respects the uniqueness of learners and other educators
- Analyzes the impact of learner diversity in the application of instructional, program and curricular design to empower learners
- Integrates multiple stakeholder interests, needs and relationships
- Acts as a mentor to cross sector educational colleagues
- Integrates strategies for coaching, mentoring, supporting, facilitating and leading learning
- Demonstrates caring, confidence, patience, integrity, and flexibility to model relational nursing practice



3. Facilitates learning and creates effective learning environments

- Contributes to research and policy development related to learners and the learning environment
- Develops collegial relationships to promote positive learning environments
- Advocates for attention to self care in educational processes in academic and practice settings
- Fosters creativity in educational processes
- Mentors educators to translate and transfer knowledge between the academic and practice sectors
- Inspires enthusiasm for learning

4. Manages multiple complexities related to learning

- Collaborates in the development educational priorities across sectors.
- Facilitates the development and application of critical thinking, clinical reasoning with learners and groups of learners across academic and practice settings
- Analyzes the multiple complexities of human and organizational resources, environment, context, and power factors when planning for education
- Synthesizes the impact of the relationship between the healthcare and societal trends on practice and learning
- Interprets the roles, culture and environment across the academic and practice sectors
- Critically engages with the mission and strategic priorities of organizations to develop learning communities

5. Advances Nursing Professional Practice

- Promotes reflective professional practice
- Develops a plan for ongoing personal professional growth by incorporating practice experience, research, and literature to ensure own competency in academic and practice sectors
- Advances own competencies through the generative process of reflecting on the relationship between knowledge and professional practice
- Assists others to develop and utilize practice assessment tools
- Promotes evidence informed professional and educational practice
- Assists others to develop educational sessions and materials that promote best practice
- Contributes to new knowledge in the advancement of nursing education and nursing practice
- Creates spaces for conversations between nursing education and practice
- Participates in inter professional efforts to address academic and healthcare sector challenges
- Uses a systems view to address academic and healthcare sector challenges
- Demonstrates scholarship in advancing nursing and education practice

6. Demonstrates leadership abilities

- Communicates effectively within collaborative partnerships
- Designs and implements quality improvement and risk management strategies for professional practice and educational programs.
- Creates and maintains learning communities that support practice and educational partnerships.
- Collaborates in implementing change strategies within organizations.
- Analyzes the impact of population health determinants and institutional factors to influence education practice.
- Develops and implements strategies for effective knowledge translation and transfer between education and practice sectors.
- Provides transformational leadership to co create a vision for excellence in learning and professional practice environments.