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Nurse Perspectives on Family-Centred Rounds in Adult Critical Care Units

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By

Felicia Varacalli

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Nurse Perspectives on Family-Centred Rounds in Adult Critical Care Units

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ABSTRACT

Background: In critical care settings, family involvement in care is important. Family-centred rounds (FCR) are often seen as a component of family-centred care. Nurses have an important role in implementing FCR and their active participation is crucial. There is currently a lack of rigorous literature that explores nursing perspectives of FCR in adult critical care areas.

Purpose: This study explored nursing perspectives (n = 135) of FCR in six adult critical care units across four Southwestern Ontario hospitals.

Methods: A 56-question survey was distributed to critical care nurses currently working in one of the adult critical care units under study through an online Qualtrics® link. This research explored nursing perspectives of FCR, so nurses did not need to have experience participating in FCR to take part in this study.

Results: The descriptive results highlighted the structures and processes that nurses felt would best support them during FCR. Additionally, nurses noted the greatest advantage of FCR was that the healthcare team can update the family on the patient's condition, and the greatest barrier to FCR is the inconsistent or unknown timing of rounds. Tests of association revealed that nurses' overall supportiveness of FCR was statistically significantly related to their ethnicity (p = .01) and hospital site (p = <.001).

Conclusion: This research helps to fill the literature gap regarding nursing perspectives of FCR in adult critical care units. It contributes to the overall body of knowledge on this topic and will help future researchers develop evidence-based best practices for a higher quality, standardized family-centred rounding process.

DEDICATION

To critical care nurses, especially those who have persevered through the pandemic. Thank you for everything that you do. It does not go unnoticed.

To my mom, dad, Celina, and Andrew. I really could not have done this without you all.

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LIST OF ABBREVIATIONS/SYMBOLS

Abbreviation	Meaning	Page
BScN	Bachelor of Science in Nursing	11
CNO	College of Nurses of Ontario	28
FCC	Family-Centred Care	2
FCR	Family-Centred Rounds	4
ICU	Intensive Care Unit	1
PFCC	Patient- and Family-Centred Care	2
RN	Registered Nurse	1

CHAPTER 1

INTRODUCTION AND BACKGROUND

Critical care medicine is a multidisciplinary specialty that cares for patients who have or are at risk for sustained disease or injury (Canadian Medical Association, 2019). There are many types of critical care units, also known as intensive care units (ICUs), and each has its own specialties. These may include cardiac ICUs, medical ICUs, surgical ICUs, neonatal ICUs, or many others. Smaller hospitals may have a universal ICU that cares for all specialties. In general, patients who need critical care medicine require continuous, 24-hour observation and monitoring (Canadian Medical Association, 2019). The nurses who work in critical care units are generally registered nurses (RNs) with specialized critical care training. For the purpose of this thesis, the term *nurse(s)* refers specifically to RNs with critical care training. Nurses who work in critical care units are typically only assigned to care for one or two patients, depending on the severity of the patient's illness.

Critical care patients frequently undergo diagnostic investigations and laboratory monitoring, and they may require multiple surgeries or procedures as well (Rajsic et al., 2021). These patients often require several interventions as part of their treatment, which puts them at a higher risk for complications, infections, and multi-organ failure (Stoeppel et al., 2014). Critical care patients are usually medically unstable and often need life-sustaining measures such as mechanical ventilation (Stoeppel et al., 2014). Patients who require life support typically also need medications for pain and sedation to ensure comfort and efficient ventilation (Green & Staffileno, 2021). Patients who receive these medications often become drowsy and are at an increased risk of developing delirium (Barr et al., 2013; Pollack et al., 2016). Patients who are

drowsy, delirious or require life support are often unable to speak rationally, making communication between patients and healthcare team members very difficult (Tate et al., 2013).

Families are an essential aspect of routine care in the critical care setting. Many patients in critical care units cannot speak for themselves for various reasons (Simon et al., 2021). This leaves the family to communicate and make decisions on their behalf, so communication with the family is one of the most crucial aspects of critical care (Curtis, 2008). Patients who can speak often rely on family members to assist them in making healthcare decisions and involve them in their care (Simon et al., 2021). For these reasons, it is vital to establish good communication between healthcare providers and families. In critical care units, nurses are the primary contact to communicate critical information about the patient to their families and offer psychosocial support (Doucette et al., 2019). It is essential to keep families involved due to the rapidly changing status of patients in critical care. As participants in the decision-making process, these families require more frequent updates and thorough explanations of tests and procedures as patients' diagnoses and prognoses can change at any time. In circumstances where patients are alert and awake, patient- and family-centred care is of utmost importance (Simon et al., 2021). Patient- and family-centred care (PFCC) is defined as an approach "that is grounded in a mutually beneficial partnership between healthcare providers, patients, and families" (Institute for Patient- and Family-Centered Care, n.d., para 1). It focuses on shifting the role of patients and families from passive healthcare receivers to active, collaborative members of the care team with mutual power (Thirsk et al., 2021).

In critical care settings, many patients cannot speak for themselves, stressing the importance of family involvement in care (Wong et al., 2020). Since families assume the lead role in care planning and decision-making in these situations, the term family-centred care (FCC)

is sometimes used. FCC is very similar to PFCC in that they both focus on respecting and being responsive to each family's values and needs to provide the best patient care (Davidson et al., 2017). PFCC and FCC are often used interchangeably in the literature as their focus and goals are essentially the same. For this thesis, the term FCC will be used due to the variable amount of patient involvement in critical care settings. There are several components that may be considered FCC initiatives and there are many factors that can act as facilitators or barriers to these initiatives. These may vary across different healthcare settings and different patient populations. For this thesis, the focus will be on best practices for FCC initiatives in adult critical care settings.

It is important to note that the COVID-19 pandemic has greatly affected adult critical care units and FCC initiatives over the last few years. Critical care units were overwhelmed with patients, leading them to be short-staffed and mitigating this nursing shortage with other nurses who were not critical care trained at times (Canadian Institute for Health Information [CIHI], 2021). There were also critical shortages of personal protective equipment, and procedures, surgeries and treatments were limited to those that were urgent or lifesaving (CIHI, 2021). Due to the lack of space in critical care units, many patients were diverted long distances to get a critical care bed. Many hospitals also had restricted visitation and vaccination policies for visitors (Centers for Disease Control and Prevention, 2020). Due to visitation restrictions and patients' diversion, many families could not visit their loved ones. This left virtual platforms as the new way of visitation and communication with families (Rasheed et al., 2021). This also resulted in the inability to implement many FCC initiatives. It is worth noting that many nurses are very burnt out from this pandemic, resulting in decreased motivation to put forth the extra effort to include families in virtual care (Galanis et al., 2021).

Bedside rounds are an important aspect of critical care. These are a daily practice in which the interprofessional team meets to review clinical information about the patient, discuss the patient's clinical status and formulate a clinical impression (Au et al., 2017). They then use this information to make decisions regarding the patient's treatments and plan of care (Au et al., 2017). Bedside rounds take place on most units in a hospital; however, they are more thorough and detailed in critical care units as patient statuses are more complex. Bedside rounds that take place in critical care units are also referred to as critical care rounds. In the critical care setting, the interprofessional team typically consists of the physician, bedside critical care nurse, unit manager, respiratory therapist, dietitian, pharmacist, physical therapist, social worker, and any other important members of the team (Allen et al., 2017; Santiago et al., 2014). However, those who attend rounds may vary based on individual availability, standard practice in that unit, or specialized unit members. Bedside rounds are important for the team to meet and review the current patient status, update each discipline's daily accomplishments, and discuss new goals for each patient.

Family-centred rounds (FCR) are often seen as a component of FCC, reflecting the same benefits and barriers to implementation (Gooding et al., 2012). FCR are generally defined as "interdisciplinary work rounds at the bedside in which the patient and family share in the control of the management plan as well as in the evaluation of the process itself" (Sisterhen et al., 2007, p. 320). The main difference between FCR and regular bedside rounds is the presence and participation of the family during rounds (Sisterhen et al., 2007). Family presence and participation allow families to contribute to the rounding process and clinical decision-making regarding their loved one's treatment plan (Au et al., 2017). This important opportunity to participate in rounds reinforces collaboration between the family and the healthcare team and

contributes to family member empowerment and positive patient outcomes (Heydari et al., 2020).

There is a lack of literature that explores nursing perspectives of FCR in adult critical care areas, and the present literature lacks rigour (Kydonaki et al., 2021). A recent integrative review discovered that available articles only come from Canada or the United States and are of moderate to poor quality (Kydonaki et al., 2021). Although the literature demonstrates the positive outcomes that implementing FCC initiatives, including FCR, have in the clinical setting, many hospitals still do not include FCR as part of their daily practice (Kleinpell et al., 2019). It has been demonstrated through research that nurses and nursing culture can significantly influence how well these practices are implemented (Kleinpell et al., 2019; Thirsk et al., 2021) Although any healthcare provider can invite the family to join FCR, nurses are the provider who most often communicates with the family in critical care units (Doucette et al., 2019). Additionally, nurses are seen as the ideal healthcare provider to orientate the family to FCR (Au et al., 2021). Nurses have an essential role in the execution of FCR, and their engagement can either enhance or hinder family presence and participation in FCR. Therefore, this thesis explored nursing perspectives of FCR in six adult critical care units across four Southwestern Ontario hospitals. The specific research questions were:

1. What are nurses' perspectives of the structures (i.e. staff-to-patient ratios, location of rounds) that support best practices for FCR?
2. What are nurses' perspectives of the processes (i.e. unit culture of FCR, degree of family participation) that support best practices for FCR?
3. What do nurses perceive as the greatest advantages to implementing FCR?
4. What do nurses perceive as the greatest barriers to implementing FCR?

5. Is there a relationship between nurse-related factors (i.e. age, gender, years of experience) and nurses' overall supportiveness of FCR?

Conceptual Framework

The Donabedian Framework was used to guide this study. This framework is focused on three concepts – structure, process, and outcome – that work together to assess the quality of care (Donabedian, 1988). Donabedian defines the *structure* as "the conditions under which care is provided" (Donabedian, 2003, p. 46). This may consist of material resources such as equipment, or human resources such as the number or qualifications of professional staff (Donabedian, 2003; Donabedian, 1988). The organizational structure may also fall into this category, and it can include characteristics of the organization or the nursing staff, performance reviews or financial attributes (Donabedian, 2003). The *process* is defined as "the activities that constitute health care" (Donabedian, 2003, p. 46). This may include patient activities to seek or implement care, as well as practitioner activities to diagnose, recommend treatments, or physically treat the patient (Donabedian, 1988). Lastly, Donabedian defines the *outcome* as "the effects of care on the health status of patients and populations" (Donabedian, 1988, p. 1745). Donabedian states that these effects can be desirable or undesirable and may include changes in health status, patient/family knowledge, patient/family behaviour, and patient/family satisfaction with care and its outcomes (Donabedian, 2003). The changes in patient/family knowledge and behaviour may influence their care and health status in the future (Donabedian, 2003).

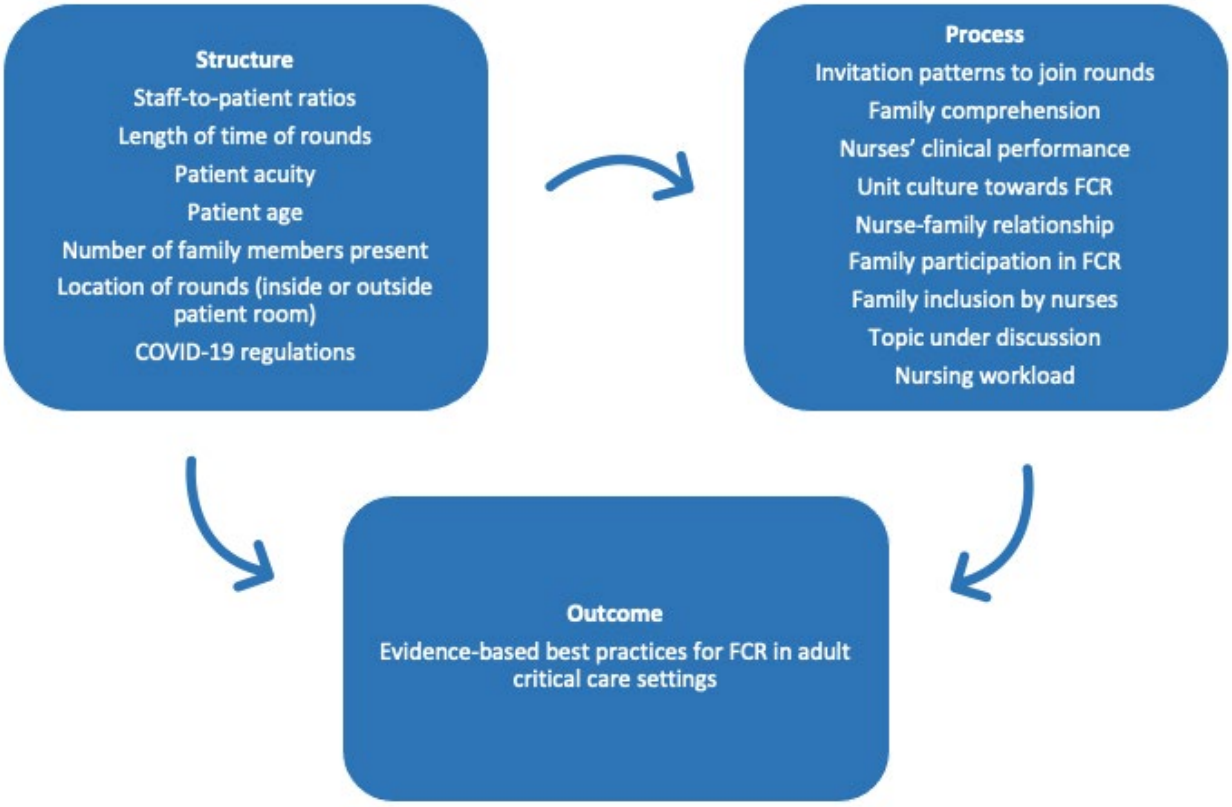
In nursing, the Donabedian Framework has been applied to many situations to guide research and practice in providing quality care. For example, it has been used to assess nursing quality of care and how factors such as nursing burnout affect this (White et al., 2022). It has also been used to evaluate the patient's perspective of quality nursing care as Donabedian

emphasizes the importance of patient satisfaction (Kobayashi et al., 2011). More recently, it has guided nurses in responding to the COVID-19 pandemic in emergency hospital settings (Binder et al., 2021). From a broader perspective, the Registered Nurses Association of Ontario used the Donabedian Framework as a guideline to evaluate the quality of care in their toolkit to implement best practice guidelines (Registered Nurses Association of Ontario, 2012). The versatility of this framework is a key strength as it has even been used to guide nurses in implementing person-centred care (Santana et al., 2018) as well as PFCC (Ahmed et al., 2019; Stelfox et al., 2013) in the healthcare setting.

This research focused on how the concepts of structure, process and outcome related to FCR in adult critical care settings to implement quality FCC. Some of the *structure variables* for this research are the staff-to-patient ratios, length of time of rounds, patient acuity, patient age, number of family members present, the location of rounds (inside or outside the patient room), and COVID-19 regulations. Some *process variables* are the invitation patterns to join rounds, family comprehension, nurses' clinical performance, unit culture towards FCR, nurse-family relationships, family participation in FCR, family inclusion by nurses, the topic under discussion, and nursing workload. The *primary outcome* is to determine evidence-based best practices for FCR in adult critical care units. This research explored the structure and process variables in more depth to contribute to the overall knowledge about the outcome variable. Figure 1 demonstrates the concept variables used in this study.

Figure 1

Donabedian Framework Adapted to Current Study



CHAPTER 2

REVIEW OF LITERATURE

Search Strategy

A thorough review of the current literature was performed. Articles were identified using the keywords “family,” “family-centred,” “family-centered,” “round,” “perceptions,” “experiences,” “views,” “attitudes,” “nurse,” “critical care,” “intensive care,” and “ICU” in a variety of forms. Literature was searched through CINAHL, MEDLINE, Proquest and Pubmed. Ancestry search methods were also used to find additional relevant articles. Inclusion criteria consisted of studies that investigated nurses’ perspectives, took place in an adult critical care unit, had family presence or participation during bedside rounds, were published in English, and included full-text articles. Exclusion criteria included articles that were focused on pediatric or neonatal populations. Given the sparsity of literature, articles were not excluded based on publication year, resulting in no identified date range limitations. However, emphasis was placed on literature published within the last ten years. After applying inclusion and exclusion criteria, five articles were considered very relevant to this thesis topic and used in this literature review (Allen et al., 2017; Au et al., 2017; Roze des Ordons et al., 2020; Santiago et al., 2014; Stelson et al., 2016). Due to the lack of relevant articles, articles that did not meet the inclusion and exclusion criteria are discussed in this literature review to further contribute to this topic through the lens of other perspectives and different populations. A university librarian was also consulted to enhance the rigour of the search strategy.

Family-Centred Care

Components of FCC differ between institutions; however, it may include family care conferences, family information pamphlets or videos, patient and family advisory groups, family

orientation, flexible visitation hours, family presence during resuscitation, involvement in providing patient care, family-centred rounds, or family meetings (Kleinpell et al., 2019; Ludmir & Netzer, 2019; Thirsk et al., 2021). It also may include environmental components, such as having a family waiting room for visitors or family conference rooms for meetings (Thirsk et al., 2021). Each family member is different and may only want to be involved in FCC by visiting the patient. In contrast, others may want to be more involved and perform basic personal care or hygienic practices. Family members' willingness to participate may be influenced by age, education, socioeconomic status, number of family members, relation to the patient, current mental distress, or personal preference (Heydari et al., 2020). Healthcare providers need to recognize the spectrum of family member involvement and be supportive of family members on all aspects of the spectrum by adjusting patient and family care plans according to their level of comfort in participation (Heydari et al., 2020).

There is a wide range of preparatory education that nurses can obtain to assist them with involving the family in their practice, and this education can be formal or informal. Some nurses completed formal courses that focused on family nursing in their Bachelor of Nursing degree or took in-services offered in their unit (Thirsk et al., 2021). Others took it upon themselves to learn more about family nursing on their own time (Thirsk et al., 2021). Notably, most nurses who learned about family nursing through courses in their Bachelor of Science in Nursing (BScN) degree found it inapplicable to their care as it lacked hands-on practice and they were not being taught by nurses with experience dealing with families in critical care settings (Thirsk et al., 2021). It is noted that nurses who have advanced nursing degrees are more likely to promote family engagement in care (Hetland et al., 2017).

In critical care settings, FCC is known to improve the quality and safety of patient care (Thirsk et al., 2021). Family participation in critical care activities is shown to improve physical, emotional, and psychological outcomes for the patient (Heydari et al., 2020; Wong et al., 2020). Patient and family satisfaction with care also improves as families help with physical care and decision-making, increasing the perceived quality of care (Heydari et al., 2020; Thirsk et al., 2021). Making decisions can help family members feel empowered as a participant in care, reducing their stress and anxiety (Heydari et al., 2020). It can also improve healthcare providers' satisfaction with the care they are delivering (Thirsk et al., 2021). Families usually want to be involved in patient care to ensure their loved one receives the best care possible (Wong et al., 2020). Often, this includes families wanting frequent updates on any changes in the patient's status and helping in any way they can at the bedside (Wong et al., 2020). Families can also advocate for patients, which is especially important for those who cannot speak for themselves or make their own decisions. These patients rely on family members to make decisions on their behalf based on their values and wishes since they are usually the ones who know the patients the best (Wong et al., 2020). For patients who are awake, families can advocate for their health by encouraging them to comply with treatments and interventions, as well as providing physical, psychosocial, and emotional care to that patient (Wong et al., 2020). Additionally, FCC can decrease institutional costs and reduce the overall burden on the healthcare system (Heydari et al., 2020; Thirsk et al., 2021).

Many institutions still have not embraced FCC practices even though it is shown to positively impact healthcare (Kleinpell et al., 2019). Of the institutions that do implement FCC practices, healthcare providers are inconsistent in their execution (Kleinpell et al., 2019). Some clinicians find it challenging to carry out these initiatives, and they are therefore not being fully

implemented in critical care units (Kleinpell et al., 2019). Many factors can influence the quality of FCC in critical care units, including the healthcare staff, family members, unit culture, and organizational aspects. Families are more likely to be more involved when nurses and other staff invite them to participate in care (Wong et al., 2020). Some nurses feel that patients' acuity level changes their perception of the family's participation in care (Hetland et al., 2017). Also, nurses state that extending an invitation to join FCC activities often depends on the approachability of the family and family dynamics (Thirsk et al., 2021). For example, nurses stated that some family members are incredibly supportive and help to calm the patient, whereas other family members were challenging to work with or abusive towards nurses (Thirsk et al., 2021). This can influence the degree of FCC that would be implemented toward these different family members.

Some nurses who are older and have more critical care experience are noted to be more inclusive of FCC in their practice (Hetland et al., 2017). This could be due to experienced nurses having more self-confidence to know how to include families better or from maturity in their own lives to understand how to relate to families (Thirsk et al., 2021). However, some of the more experienced nurses are said to be less inclusive of FCC since it was a foreign concept when they first began nursing and have established their own set views on family participation in care (Thirsk et al., 2021). These nurses may be resistant to change and can hinder the culture of a specific nursing unit. Novice nurses are often seen as task-focused, reducing the amount of FCC in their practice (Thirsk et al., 2021). However, once novice nurses become more comfortable, they include FCC much earlier in their career due to the increased significance placed on it now compared to many years ago (Thirsk et al., 2021).

Nurses must be given adequate organizational resources to overcome ethical conflicts that may arise while initiating FCC. The organizational resources, or lack of, can facilitate or

create barriers for nurses to include family. If nurses perceive their resources as inadequate, they can depersonalize the patient and family, decreasing overall FCC activities (McAndrew et al., 2019). This can be especially harmful to patients and their families in critical care units as they heavily rely on nurses to include them in their care during this unpredictable time. Hospitals should have an inviting atmosphere so families are more likely to feel welcome to participate in care (Heydari et al., 2020). Supportive organizational resources may include sufficient staffing and reasonable nurse-to-patient ratio assignments (Thirsk et al., 2021). A lack of these resources may also influence the culture of a nursing unit to reduce FCC initiatives (Thirsk et al., 2021). Nurses find it helpful to keep the same patient assignment if they work multiple shifts in a row to ensure continuity of care for both the patient and family. However, there must be a balance in nurse rotation for what they consider to be emotionally exhausting patients and families to ensure the best FCC (Thirsk et al., 2021).

Other facilitators to maintaining FCC initiatives in hospitals include regular check-in meetings with management and senior leaders to ensure there is continued momentum in improving unit culture (Kleinpell et al., 2019). Management must address staff resistance to implementing FCC initiatives, which may act as barriers to changing the unit culture (Heydari et al., 2020). Additionally, having highly engaged staff, the support of management, and a unit that is ready for change are other facilitators for implementing FCC (Kleinpell et al., 2019). It is noted that having specific staff members acting as FCC "champions" are also beneficial for implementing FCC initiatives (Kleinpell et al., 2019). These champions help to change the unit culture to be more accepting of FCC activities (Kleinpell et al., 2019). Other facilitators may include a healthy relationship between nursing staff and family members, timely relay of patient information to the family, and appropriate guidance and support for the family by staff (Heydari

et al., 2020). Some staff may be unaware of how to better include families in their care, so offering staff education and developing specific FCC approaches to include family participation may be helpful (Heydari et al., 2020).

Barriers to implementing FCC may include the lack of ability to promote culture change in a critical care unit, lack of staff interest, lack of funding and resources to support the FCC initiatives and the lack of support to manage the workload of the implementation (Kleinpell et al., 2019). Nurses who are not satisfied with their current nursing position and those who work in a unit with a culture that does not view the family as part of the care team are less likely to involve the family in their care (Hetland et al., 2017). Having too many new initiatives that are being implemented simultaneously in a critical care unit may be seen as overwhelming for staff and may impede the effort put toward FCC (Kleinpell et al., 2019). Also, a shortage of nursing staff or poor staffing ratios may hinder support for FCC initiatives (Heydari et al., 2020; Kleinpell et al., 2019). Environmental barriers to FCC may include the lack of physical space and the considerable amount of equipment present in the patient's room (Heydari et al., 2020). It is shown that families who perform basic personal care for the patient help improve patient outcomes (Heydari et al., 2020). However, some families opt out of performing personal care out of fear that they will interfere with this equipment or inflict further pain on the patient (Wong et al., 2020).

During the COVID-19 pandemic, the implementation of FCC initiatives had been challenged. The highly contagious COVID-19 virus caused hospitals to restrict the number of visitors and visiting hours and sometimes prohibited visitors across the globe to reduce exposure (Rasheed et al., 2021). This left many hospitals adapting to new ways to include family in their everyday care. Video-call applications, phone calls, and other forms of virtual communication

quickly became the unfortunate norm for many during this time (Rasheed et al., 2021). Hospital staff often had to update families over the phone rather than in person, and families could not participate in physical care at the bedside or by attending rounds. While visitation was prohibited or restricted, families could "visit" the patient by video-calling them to reduce the anxiety of being unable to physically be at the bedside (Rasheed et al., 2021). Nurses had to prepare families for what they saw through the screen because families were often unaware of the patient's severe condition due to their inability to be with them through their healthcare journey up to the critical care unit. Additionally, due to the influx of patients and lack of visitation, many hospitals hired a telecommunication facilitator to assist with virtual communication methods (Rasheed et al., 2021). These telecommunication methods are helpful even post-pandemic for families who are unable to visit for various reasons such as proximity to the hospital or transportation barriers. This way, families can still see their loved ones and receive regular updates.

Nursing Perspectives of FCR

Reports of nursing perspectives on FCR in adult critical care settings are limited in the literature, and perceived benefits and barriers seem inconsistent. Overall, some studies suggest that nurses are open and welcoming to FCR, while others are shown to disagree with this practice (Allen et al., 2017; Santiago et al., 2014; Schiller & Anderson, 2003). Some nurses believe that FCR offers better communication with the family (Allen et al., 2017; Roze des Ordons et al., 2020), which can lead to a better understanding of the plan of care for that patient (Allen et al., 2017; Stelson et al., 2016). Some nurses feel that FCR reduces their workload as families are updated during rounds rather than having nurses provide updates to the family after rounds have taken place (Allen et al., 2017). Nurses also believe that family meetings are less

frequent and shorter in duration (Au et al., 2017; Santiago et al., 2014). However, some nurses think that FCR leads to longer rounding times (Au et al., 2017; Santiago et al., 2014) and it may threaten patient confidentiality (Roze des Ordons et al., 2020; Santiago et al., 2014). They also feel that there is less discussion and honesty about poor patient prognoses and sensitive information when the family is present (Au et al., 2017; Roze des Ordons et al., 2020; Santiago et al., 2014; Stelson et al., 2016). Some nurses worry that FCR can increase family stress and confusion; however, others believe that family presence can decrease family stress and increase understanding (Au et al., 2017). Nurses also tend to underestimate families' interest in attending rounds (Au et al., 2017). Across different studies, nurses are inconsistent in their support of family invitation to daily rounds (Au et al., 2017) or invitation in general (Santiago et al., 2014). Some nurses are comfortable with families being present during rounds (Au et al., 2017), while other nurses expressed feeling uncomfortable (Santiago et al., 2014). Some nurses think that families should be asked to leave if they are present when rounds are about to begin (Santiago et al., 2014). Of all disciplines, nurses reported the most discomfort in having family at the bedside, possibly due to feeling like the intermediary between family and physicians (Santiago et al., 2014). Some nurses think that FCR can benefit students or other learners by setting an example of how family interactions should go, which also helps to keep families informed (Roze des Ordons et al., 2020). When the family is present, nurses believe there is increased professionalism within the interdisciplinary team (Roze des Ordons et al., 2020). There are also differences reported in perspectives on FCR between less experienced nurses and nurses with more experience. Less experienced nurses are shown to be more positive towards FCR (Schiller & Anderson, 2003) and report fewer negative experiences with family members during their presence (Santiago et al., 2014). More experienced nurses express greater concerns with FCR

(Schiller & Anderson, 2003). Some do not support giving families the option to attend rounds and strongly feel that FCR constrains how negative medical information is conveyed (Santiago et al., 2014).

To the authors' knowledge, only one article thoroughly discussed nursing perspectives on best practices for FCR (Au et al., 2017); however other articles briefly discussed specific topics. It is important to remember that depending on the physician facilitating the rounds, differences may occur in how rounds are executed and how the family is involved (Roze des Ordons et al., 2020). At the beginning of rounds, nurses believe that family should be acknowledged, and the interdisciplinary team should do quick introductions to improve family relations and help them to feel included (Roze des Ordons et al., 2020). In terms of structure, nurses think that only first-degree biological relatives or the primary contact person for the patient should be invited to rounds, and attendance should be limited to two family members (Au et al., 2017). Some nurses express concern when too many family members join rounds, which also increases disruptions and decreases the efficacy of rounds (Roze des Ordons et al., 2020). Nurses prefer to host rounds outside the patient room if the patient is unconscious, and host rounds inside the patient room if the patient is awake (Au et al., 2017). Au et al. (2017) reported that their standard of practice included family members asking questions at the end of rounds, which families reported a preference for as well. Nurses believe that discussing diagnoses and the plan of care are appropriate topics to include in FCR (Au et al., 2017). However, goals of care, prognosis and emotional support were seen as more appropriate topics to discuss in family meetings rather than during rounds (Au et al., 2017). Allen et al. (2017) noted that most nurses found it beneficial and appropriate for goals of care discussions to take place during rounds rather than in family meetings. Most nurses believe that the role of the family during FCR is to listen, share patient

information and ask questions, and only some nurses think they should participate in decision-making (Au et al., 2017). Those nurses with less experience feel more strongly that families should participate in decision-making and question-asking compared to those with more experience (Au et al., 2017). Other articles also reported that nurses consider advocating for the patient as a role of the family if patients cannot advocate for themselves (Roze des Ordons et al., 2020; Stelson et al., 2016). However, nurses worry that family members may provide inaccurate or misleading information (Roze des Ordons et al., 2020). Nurses believe that the information that families provide may assist in making clinical decisions or identifying gaps in patient care (Roze des Ordons et al., 2020). At the end of rounds, nurses find it helpful to provide a summary to the family using nonmedical terminology (Roze des Ordons et al., 2020).

Other Healthcare Perspectives of FCR

Physicians had their own opinions regarding FCR. Most physicians feel that FCR is beneficial for the patient and helps to achieve positive patient outcomes (Ingram et al., 2014; Ludmir et al., 2018). Some physicians believe that FCR does not prolong rounding time and it does not threaten patient confidentiality (Ingram et al., 2014). In contrast, others feel that it does increase rounding time and decreases the efficacy of rounds (Ludmir et al., 2018). Some physicians think that FCR reduces teaching time for students and residents (Au et al., 2017; Roze des Ordons et al., 2020), while others disagree (Ingram et al., 2014). Physicians feel that FCR can decrease family anxiety levels and improve communication between healthcare providers and the family (Ludmir et al., 2018). Also, they consider patient safety to be improved, and nurses are more satisfied when families participate in rounds (Ludmir et al., 2018). It is noted that physicians with more experience strongly believe that families should be active participants in decision-making during FCR compared to less experienced physicians (Ludmir et al., 2018).

Physicians who participate in FCR regularly are more comfortable with family presence and have a more positive perspective on family outcomes of FCR (Ingram et al., 2014). In a study by Allen et al. (2017), one physician mentioned that on the handover day between different physicians, it is particularly difficult to include family in rounds because of the increased time required to learn about all the patients on rounds. Another study noted that on initiation of FCR, staff members were reluctant to change their typical rounding behaviours, including the use of medical jargon and minimal discussion or teaching (Simon et al., 2021). However, as FCR continued, staff members, especially physicians, naturally adapted to become more inclusive in using layman's terms and family-oriented teaching during FCR even though this was not coached or encouraged (Simon et al., 2021).

Unit managers believe that FCR increases communication with the family, gives them a better idea of the plan of care, and decreases the frequency and duration of family meetings (Gooding et al., 2012). Some managers feel that FCR does not prolong rounding time (Gooding et al., 2012). This is supported by Brown et al. (2014) who timed bedside rounds in an adult ICU and found that family presence on rounds did not prolong rounding time. However, other articles measured rounding times and found that FCR does take longer, demonstrating conflicting information and the need for larger-scale studies (Au et al., 2018; Simon et al., 2021). In the study by Santiago et al. (2014), managers and physicians all agree that families should be invited to attend rounds daily. Overall, different healthcare provider perspectives have been inconsistent throughout the literature.

Family Perspectives of FCR

Families also had conflicting thoughts on FCR; however, the consensus is that families had positive perspectives of FCR (Cody et al., 2018; Kang et al., 2020; Kydonaki et al., 2021;

Mangram et al., 2005). Families believe that FCR improves communication and transparency with them and gives them a better understanding of what the plan of care is for their loved ones (Cody et al., 2018; Jacobowski et al., 2010). They also find that FCR gives staff the opportunity to provide emotional support to families (Weber et al., 2018). Families think physicians take the appropriate amount of time with them during FCR and are given relevant information (Mangram et al., 2005). Family members feel that FCR is helpful as it allows them to ask questions and address any pending concerns (Cody et al., 2018; Jacobowski et al., 2010; Kang et al., 2020; Mangram et al., 2005). This opportunity helps families to gain more trust in the healthcare team (Kang et al., 2020; Roze des Ordons et al., 2020; Stelson et al., 2016) and improve their relationship with healthcare providers (Au et al., 2017). Some families want the opportunity to speak to the attending physician and they are satisfied that FCR achieves this (Kang et al., 2020; Weber et al., 2018). Other families are grateful that they can understand the perspectives of the different disciplines involved in their care (Kang et al., 2020). However, some families feel that there is no increase in satisfaction when participating in rounds compared to not participating (Weber et al., 2018).

Families feel that seeing the interdisciplinary team work together to create this plan for their loved ones decreases the stress and anxiety that they are experiencing (Au et al., 2017; Cody et al., 2018; Kang et al., 2020; Roze des Ordons et al., 2020). However, other family members think using medical jargon can lead to increased confusion, anxiety and stress, and healthcare providers agree with this (Roze des Ordons et al., 2020; Stelson et al., 2016). When medical jargon is avoided during FCR, families express that they understood the discussion better during rounds (Kang et al., 2020). When healthcare providers whisper to have a private conversation during rounds, this can increase family stress and anxiety by causing them to think

that something is wrong (Reeves et al., 2015). Families also find it more challenging to engage in rounds when healthcare providers have heavy accents or speak in a lower tone of voice (Roze des Ordons et al., 2020). Families also expressed frustration about the inconsistency in the timing of FCR. Due to this inconsistency and lack of notice, they cannot attend rounds even though they want to (Cody et al., 2018; Stelson et al., 2016). Some families reported differences in the structure and depth of rounds, which often depended on the attending physician or the time of day that rounds took place (Stelson et al., 2016). Families who have language barriers also tend to struggle when participating in FCR, creating potential communication gaps (Roze des Ordons et al., 2020). However, having medical interpreters present during rounds who simultaneously translate to the family what healthcare providers are saying is shown to increase provider and family satisfaction, improve family engagement and understanding of the care plan, and decrease communication gaps (Lloyd & Kosack, 2020). During FCR, families often believe that their role is more passive, primarily by listening and providing patient information when asked, so clarifying family roles is important for FCR (Au et al., 2017). It is of note that some studies reported having mostly female family participants in FCR (Cody et al., 2018; Simon et al., 2021; Weber et al., 2018)

Pediatric and Neonatal Populations

There is minimal current research examining nursing perspectives on FCR in pediatric and neonatal critical care units as well. Most research is dated; however, there is more consistency in the research findings, unlike in adult populations. It is important to note that many pediatric and neonatal research articles focus on parental presence rather than general family presence during rounds. Parental presence during rounds is viewed as a positive experience for most nurses (Levin et al., 2015) and most nurses endorse FCR (Rappaport et al., 2012). Nurses

propose multiple benefits to FCR including parental empowerment, addressing family concerns, increased family understanding of the plan of care, and added value and personal information to rounds (Cameron et al., 2009; Levin et al., 2015). Many nurses agree that parents should be consistently invited to join rounds (Cameron et al., 2009; Levin et al., 2015). Nurses also state some drawbacks to FCR, such as limited patient discussion and prolonged rounding time (Levin et al., 2015). Nurses, physicians, and medical residents agree that it is easier to manage rounding time when the family is present, and family contributions to rounding are helpful (Rappaport et al., 2012).

Families of pediatric and neonatal populations are eager to participate and very satisfied with having FCR compared to regular rounding (Cameron et al., 2009; Rappaport et al., 2012). Families believe that FCR increases the transparency in the information given to the families and provides an enhanced communication method between families and healthcare providers (Cameron et al., 2009). Families reported that FCR helps them to better understand their child's condition and allows them to be more involved in treatment planning and decision-making (Cameron et al., 2009). FCR is a time for many families to have their questions answered, which they appreciate (Cameron et al., 2009). Depending on the family, stress and anxiety levels can either increase or decrease when the family is present during rounds (Cameron et al., 2009). Some studies reported that rounding time could decrease when the family is present during FCR (Rappaport et al., 2012), and some reported that it might increase (Cameron et al., 2009). Others reported that it does not change the amount of time spent rounding (Phipps et al., 2007).

Given that parents are typically the substitute decision-makers in pediatric and neonatal populations, the application of FCR research findings to the adult critical care population is limited. Identifying the substitute decision-makers in the adult population can often become

complicated. Additionally, due to the large parental involvement in general pediatric and neonatal care, nurses are more likely to encourage and have positive outlooks on FCR in these populations as it is typically a standard component of all other aspects of care. Parents of pediatric and neonatal populations are also more willing to try everything needed to give their child the best chance at survival. With adult populations, again, this can be complicated by the patient's age, comorbidities, and quality of life if they were to survive.

COVID-19 Pandemic

The COVID-19 pandemic has greatly affected the ability of family members to physically attend rounds in adult critical care units due to visitor restrictions across many institutions. However, pre-pandemic, both healthcare providers and family members were open to telemedicine to ensure that the family attended rounds if they wanted to be present but were not physically at the bedside when rounds took place (Stelson et al., 2016). Telemedicine is seen as more convenient for family members by eliminating travel to the hospital, especially for those families who live a long distance away (Stelson et al., 2016). It allows the family to participate in rounds while coordinating other prior commitments such as work or family obligations (Stelson et al., 2016). Telemedicine could also strengthen communication between providers and increase families' understanding of the plan of care (Stelson et al., 2016). During the pandemic, families reported that it was essential to continue participating in rounds using telemedicine (Rogers et al., 2020). Families also felt that seeing the healthcare providers through rounds helped them to interpret body language and feel like they were being directly spoken to (Rogers et al., 2020). However, general discomfort and provider and family inexperience with technology are seen as drawbacks to using telemedicine (Stelson et al., 2016). Also, having additional personal protective equipment made it difficult for families to hear healthcare providers, although that

barrier could be easily overcome by using headphones when speaking (Rogers et al., 2020). Allen et al. (2017) reported limited use of telemedicine during their study but did not comment on provider or family perspectives regarding its use.

Gaps and Limitations

There are some gaps in this literature review. There are very few articles that explored nursing perspectives on FCR in adult critical care settings. Therefore, articles that briefly mentioned nursing perspectives regarding FCR were included for additional evidence. Additionally, articles that examined different views were included due to the lack of nursing perspectives. In addition, some articles were included in this review that were greater than ten years from the publication date and therefore may be considered outdated. Lastly, some articles embedded nurses into a "healthcare providers" umbrella term, so this thesis assumed that nurses' perspectives align with healthcare providers unless stated explicitly in the article.

CHAPTER 3

METHODOLOGY

Design

This research aimed to explore nursing perspectives of FCR in adult critical care units. Therefore, the design of this research is mainly descriptive in nature. Tests of association were also used to determine which nurse-related factors are related to nurses' overall supportiveness of FCR. A 56-question survey delivered through a cross-sectional design was used to gather data to describe and analyze these findings. Survey designs are deemed appropriate to answer both descriptive research questions and research questions about the relationship between variables as they give a quantitative description of opinions, attitudes, and tests of association (Creswell & Creswell, 2018).

Questionnaire Selection

The chosen survey was adapted from Au et al. (2017), Hetland et al. (2017) and Hetland et al. (2018). Permission was granted for the use of the survey from Au et al. (2017) via email from the corresponding author and from RightsLink through the publisher, Elsevier. The corresponding author granted permission via email to use the survey in Hetland et al. (2017) and Hetland et al. (2018). Au et al. (2017) did not report any reliability or validity testing. Hetland et al. (2017) and Hetland et al. (2018) reported a Cronbach's alpha for each subscale. However, these subscales were adapted to fit the research topic, and therefore only some questions were used from each subscale. Therefore, Cronbach's alphas from their research are not considered valid in the adapted form. Major adjustments to these surveys included rephrasing questions to improve flow, adding or rephrasing questions to better answer the proposed research questions, and expanding the demographics section. Questions were also added to this survey based on the

literature review findings to better answer the research questions from a broader scope than the original survey (Allen et al., 2017; Cody et al., 2018; Kydonaki et al., 2021; Rasheed et al., 2021; Roze des Ordons et al., 2020; Santiago et al., 2014; Stelson et al., 2016). See Appendix A for a copy of the survey distributed for this research.

Face validity for the revised survey was assessed by three current critical care nurses who did not participate in data collection for the study. This helped to achieve flow and ensure that questions were easily understood. These nurses provided feedback based on their critical care experience. This also helped to determine the approximate survey completion time of 20 minutes.

This survey explored the research question "What are nurses' perspectives of the structures that support best practices for FCR?" Questions 14, 16, 17, 19, 21-25, 27, 30-32, 41, and 50 in the survey were designed to investigate these structures and included concepts such as staff-to-patient ratios and patient acuity. These questions contributed results used in descriptive analysis. To answer the research question "What are nurses' perspectives of the processes that support best practices for FCR?" questions 4, 6-13, 18, 26, 28, 29, 33, 34, and 40 were directed towards exploring nurses' perceptions of these processes. Processes included concepts such as the unit culture of FCR and invitation patterns to join rounds. These questions contributed results used in descriptive analysis. These structures and processes align with the concepts included in the conceptual framework and seek to contribute to developing best practices for FCR. To answer the research question "What do nurses perceive as the greatest advantages to implementing FCR?" question 35 was designed to focus on major advantages. Question 37 focused on answering the research question, "What do nurses perceive as the greatest barriers to implementing FCR?" The original surveys did not have a question that assessed barriers, thus

question 37 was designed to investigate the possible barriers that the literature revealed (Cody et al., 2018; Kydonaki et al., 2021; Rasheed et al., 2021; Roze des Ordons et al., 2020; Stelson et al., 2016). This research yielded descriptive results regarding the advantages and barriers of FCR. Lastly, to answer the research question "Is there a relationship between nurse-related factors and nurses' overall supportiveness of FCR?" questions 2, 3, 5, 43-49, and 51-55 focused on these factors. This research question was focused on relating different factors between nurses that may affect their general perception of FCR. Many demographic questions were used as nurse-related factors, such as nurses' age, gender, ethnicity, education, and years of experience. This research question yielded results used in analyses of association. Questions 20, 36, 38, 39, and 42 were optional open-ended questions that will be used for further context in potential research beyond this thesis.

Setting and Sample

The setting of the research took place at four Southwestern Ontario hospitals, comprised of [redacted]. This included five adult ICUs, consisting of both Level Two and Level Three ICUs, and one adult cardiac care unit. To de-identify hospital sites, critical care units were randomly labelled as hospital sites one through six for analyses. These six critical care units serve different regions within Southwestern Ontario with differing populations and population densities. To the author's knowledge, none of these sites formally and consistently use FCR.

The target sample for this study was critical care RNs currently working in an adult critical care unit at one of the four Southwestern Ontario hospitals being surveyed. To participate in the study, nurses must have been entitled to practice with no restrictions with the College of Nurses of Ontario (CNO) and understand the English language. The CNO has minimum English language requirements, so language barriers were likely not an issue in this study. The focus of

this research explored nursing perspectives of FCR; therefore, nurses did not need to have experience participating in FCR in order to participate in this study.

Exclusion Criteria

Nurses who were critical care trained but not currently working in an adult critical care unit were not studied as these nurses may be integrated into different units and may be difficult to isolate. Also, these nurses may not have worked in a critical care unit for an extended period which can alter their perception of current rounding practices. To reduce the risk of including nurses who did not currently work in the selected sites for the study, a question at the beginning of the survey asked participants "Are you a critical care trained registered nurse **currently** working in an adult critical care unit at one of these four hospitals [redacted]?" If the participant answered "no", skip logic was used and they were directed to the end of the survey. One respondent did not meet the inclusion criteria screening question.

Ethics Considerations

Ethics clearance was obtained from the University of Windsor (REB# 22-177), [redacted] (REB# 23-457), [redacted] (REB# 22-177), [redacted] (REB# 22-177) and [redacted] (REB# 30JAN2023) research ethics boards (Appendix B). There were minimal expected risks associated with this research and participants were made aware of the risks before consenting to participate. The only risk that was considered medium is that there may have been dual/multiple relationships between the principal researcher and a group of study participants, as the principal researcher is currently employed in a critical care unit included in this study. To reduce this risk, the principal researcher's name was clearly stated on the consent form before participants began the survey. This allowed participants not to complete the survey if they felt this risk was too significant. If participants had questions or concerns about the research and were worried about

dual/multiple relationships with an investigator, contact information for all three investigators was available to participants so they could choose which investigator they were most comfortable contacting. There were no direct recruitment strategies implemented by any of the researchers to participants. Participants were also made aware that their answers to the survey were confidential and not tied to their identity. Participation in this research did not affect the participants' employment status. The data was also deidentified and reported in aggregate form to protect participants.

Data Collection Procedure

Data were collected between February and April 2023. The survey was accessed through an online link utilizing the University of Windsor Qualtrics® platform. The survey link was distributed to qualifying participants through their institutional email addresses by a designated manager or director for each hospital. Each institutional manager or director had agreed via email to distribute recruitment emails. There was one initial recruitment email with two subsequent reminder emails, each sent two weeks apart, within a study period of six weeks per hospital site (See Appendix C). The emails indicated that university researchers were collecting the research and clearly identified the researchers and the research ethics boards which cleared the study prior to survey distribution. Flyers were also posted around the eligible units with a QR code that participants could scan to complete the survey (See Appendix D).

An informed consent form was provided to each participant at the beginning of the survey and participants must have consented to participate before beginning the survey (see Appendix E). All participants were able to provide their own consent. The consent form outlined the purpose of the study, the activities required for participation, the potential benefits and risks of participation and assurance that their data was confidential and participation was voluntary

and that they could withdraw at any point until their data was submitted. The consent form also notified participants that their choice to participate or not, and how they answered the survey questions, had no effect on their current employment. The consent form was written in non-technical language. Participants could exit the survey at any point if they wished to no longer participate. The survey was not timed, thus participants could review the information before being asked to provide consent and submit their answers. Participants could leave the survey and return at any point within the six-week study period for their institution. A final survey question asked participants if they wished to submit their survey responses, and if "yes" was selected, the survey was submitted and interpreted as complete. Participants were told in the informed consent form that they may withdraw their participation and their data at any point and for any reason until the survey was submitted. Once submitted, participants could not withdraw from the survey because the data was anonymous. Participants who chose not to complete or submit a completed survey suffered no consequences as they were not known to the investigators. There were 16 incomplete survey responses, which were excluded from the data analysis. If a participant decided to withdraw from the survey at any point before submission, the option to receive a gift card as compensation for their time was not offered.

To lower the risks of any perceived influence from dual relationships with the participants, the names and contact information of all three research coordinators were clearly written at the beginning of the recruitment information and informed consent form. They were available to contact if participants had any questions related to the research prior to, during, or following their participation in the study, and this was stated on the consent form. Contact information for the research ethic board offices at [redacted] and the University of Windsor were

also provided for participants to contact with any questions or concerns that they might have had as a research participant, and this was also stated on the consent form.

The data was collected following ethics clearances from the University of Windsor and all four hospitals. Only the research team had access to the data. In the body of the invitation email, participants were given a link to complete an online questionnaire through the Qualtrics® platform. Surveys took approximately 20 minutes to complete, however since participants were able to leave and return to the survey at any time within the six-week period, an accurate average survey completion time was not gathered. As compensation for participating in the study, participants were given the option to receive a $15 gift card to Tim Hortons or Starbucks. This amount was determined by taking the average RNs' wage of about $45 per hour (Ontario Nurses Association, 2021) and dividing it by three since the survey completion time was approximately 20 minutes. Information provided to distribute gift cards was collected through a separate Qualtrics® link and was not associated with participant responses on the survey to maintain anonymity. Participants also had the option to leave contact information if they consented to be contacted for future research on this topic. This information was collected through another separate Qualtrics® link that was not associated with participant responses on the survey or with information collected to distribute gift cards.

The survey itself was anonymous, and participant data collected for further research interests and gift card distribution was confidential. While the survey was anonymous, there was a potential risk of triangulation for reidentifying deidentified participant data, given that the primary investigator is an employee in one of the critical care units under study. To mitigate this risk, demographic information including age, gender, ethnicity, and hospital site, was optional if participants did not feel comfortable answering these questions. This was specifically stated in

the consent form. When disseminating results, data were reported in aggregate format to protect the risk of triangulation or identification of participants.

Data Analysis

Data was transferred into a Microsoft Excel spreadsheet from the Qualtrics® survey website. Microsoft Excel and IBM Statistical Package for the Social Sciences (SPSS) Version 28 were used to organize and analyze the data, respectively. A statistician was also consulted. Results will be posted on the Research Ethics Board and Leddy Library collaborative site at the University of Windsor.

Data analysis took place in two phases. First, all study variables, presented in order of the research questions, were analyzed using descriptive statistics, including frequencies and percentages for categorical variables, and means, standard deviation, and minimum/maximum values for continuous variables. The analysis ended with descriptive results for the first four research questions. Next, the data from the fifth research question underwent a series of bivariate analyses to test for associative findings. Bivariate tests (chi-square test of association, independent samples t-test, Mann-Whitney U test) were used to determine if nurse-related factors, such as gender, ethnicity, or years of experience, were associated with nurses' overall supportiveness of FCR. Only one statistically significant bivariate result could have been entered into a regression model, so therefore, a binary logistic regression model was created for this association and odds ratios were formulated. All test assumptions were met relating to parametric testing, including normality, linearity, and no undue influence of outliers scores. In cases where test assumptions were not met, nonparametric testing was used.

Data was initially screened for missing data. Most questions were force-response. Only 1.5% of data were missing for *Age* ($n = 2$). However, three respondents wrote that they were in

their "40's," increasing the missing data for *Age* to 3.7% (n = 5). Also, 0.7% of data was missing for gender (n = 1), and 0.7% of data was missing for the hospital site (n = 1). One response (0.7%) was missing for the question *Does the age of the patient affect your decision to invite the family to critical care patient rounds?* and one response for the *Number of Years in Critical Care* was indecipherable with letters and numbers, so therefore, this single response (0.7%) was excluded from the analysis. The percentage of missing data from each category is less than 5%, and data analysis proceeded for all questions using a completed case analysis (Jakobsen et al., 2017). The missing data were missing completely at random (Mack et al., 2018).

Regarding the final research question, the independent nurse-related factors that were studied included *Age*, *Number of Years as an RN*, *Number of Years in Critical Care*, *Experience with FCR, Gender*, *Ethnicity*, *Hospital Site*, *Highest Level of Education*, if they took a *Family Nursing Course in School*, if they felt their *Education Prepared Them for FCR*, and if they had any *Intention to Leave* their current critical care position within six months. The question *Have you taken a course or training unrelated to your education listed above that has helped to prepare you for family member presence during critical care rounds?* was intended to be included. However, due to low responses for the *Yes* category, this question could not be adequately analyzed.

For data analysis of the nursing factors, variables *Age*, *Number of Years as an RN*, and *Number of Years in Critical Care* were used as continuous variables, with the rest being dichotomous or categorical. Some categorical questions had small responses within certain groups, so they were combined or eliminated for data analysis. This included the elimination of the *Other* category for *Gender* as there was only one response, and the combination of *Masters*, *Nurse Practitioner* and *Other* categories for *Highest Level of Education*. For *Ethnicity*, categories

were combined to be dichotomous as either *White* or *Other*. Also, the *Family Nursing Course in School* variable was dichotomized into *Yes* and *No* given the small sample of those who said *Yes, in graduate studies*. Lastly, the question asking if their *Education Prepared Them for FCR* combined *Very prepared* and *Somewhat prepared*, and *Very unprepared* and *Somewhat unprepared* to create a dichotomous variable of *Prepared* or *Unprepared*, respectively.

The dependent variable that determined nurses' overall supportiveness of FCR was created by combining the following three survey questions:

1. I believe that family members should be provided with the option of joining critical care rounds daily.
2. I am comfortable having family members present during critical care rounds.
3. Do you believe that family-centred rounds should be implemented (or reimplemented) in your institution?

Questions one and two were measured on a Likert scale, and the third question was a dichotomous *Yes/No* question. To combine the answers to these questions, the first two Likert scale questions were converted to a dichotomous *Agree*/*Disagree* by combining *Strongly Agree, Agree* and *Somewhat Agree*, and *Strongly Disagree, Disagree* and *Somewhat Disagree* respectively. The internal consistency of these three questions was measured by determining Cronbach's Alpha ($\alpha = 0.78$). Participants were considered *Unsupportive* by answering *Yes* or *Agree* to zero or one of the questions, and they were considered *Supportive* by answering *Yes* or *Agree* to two or three of the questions. The *Supportiveness* dependent variable was therefore created to be a dichotomous variable with items of *Supportive*/*Unsupportive*.

Power Analysis

After consultation with a statistician, a posthoc power analysis was only required for the most advanced statistical test completed in this thesis, which was a binary logistic regression model. In terms of statistical power regarding the dependent variable *Supportiveness (Supportive/Unsupportive)*, the Power and Precision software program indicated that a medium-large effect size (OR = 4.701) would be detected between *Hospital Site 1, 2 and 3* and *Supportiveness* (with a projected event rate of .8) and a large effect size (OR = 5.404) would be detected between *Hospital Site 4 and 6* and *Supportiveness* (with a projected event rate of .82) using a binary logistic regression model with power set at .80 and alpha set at .05, using a sample size of 88 study participants. Therefore, the current sample of 135 participants in this study provides sufficient statistical power for the current analysis.

CHAPTER 4

RESULTS

Survey Response Rate

There were 303 RNs in total from all four hospitals who were eligible to participate and sent the recruitment email, and 135 participants met the inclusion criteria and fully completed the survey. This resulted in a 45% overall response rate. The response rates from each hospital site are as follows: Site 1 (38%), Site 2 (51%), Site 3 (18%), Site 4 (24%), Site 5 (82%) and Site 6 (30%).

Hospital Sites 3, 4, and *6* all had low response frequencies. Hospital sites were combined based on similarities in their ICU level designation, the population size of the area it served, and the geographical location. Therefore, *Hospital Sites 1, 2 and 3*, as well as *Hospital Sites 4 and 6* were combined for data analysis.

Survey Sample Characteristics

Table 1 presents the descriptive analysis of categorical study variables, and Table 2 for descriptive analysis of the continuous study variables. These study variables, which mainly consist of demographic data, are used as independent variables in the bivariate analysis below. In summary, there were a total of 135 participants in this sample. Most of the sample identified as female (n = 115, 85.2%), white (n = 121, 89.6%) and had a BScN as their highest level of education (n = 93, 68.9%).

Table 1

Descriptive Analysis of the Sample by Categorical Study Variables (n = 135)

Variable	***n***	**%**
Gender		

Male	18	13.3
Female	115	85.2
Other	1	0.7
Missing	*1*	*0.7*
Ethnicity		
White	121	89.6
Filipino	3	2.2
Latin American	1	0.7
Southeast Asian	3	2.2
South Asian	5	3.7
Other	2	1.5
Hospital Site		
1	34	25.2
2	36	26.7
3	6	4.4
4	4	3
5	41	30.4
6	13	9.6
Missing	*1*	*0.7*
Highest Level of Education		
Diploma in Nursing	30	22.2
Bachelor's (BScN)	93	68.9
Masters (MN/MScN)	5	3.7
Nurse Practitioner (PHC-NP)	1	0.7
Other*	6	4.4
Did your schooling provide you with a course that focused on family nursing?		
Yes, in undergraduate studies	64	47.4
Yes, in graduate studies	5	3.7
No	66	48.9
To what extent do you believe your education prepared you to participate in family-centred rounds?		
Very prepared	13	9.6
Somewhat prepared	69	51.1
Somewhat unprepared	37	27.4
Very unprepared	16	11.9
Have you taken a course or training unrelated to your education listed above that has helped to prepare you for family member presence during critical care rounds?		
Yes	6	4.4
No	129	95.6

Do you intend to leave your current critical care nursing position in the next six months?		
Yes	15	11.1
No	120	88.9

* Other highest levels of education mostly consisted of Master's degrees outside of nursing

The average age of the sample was 37.25 years, ranging from 22 to 61 years. The sample age was compared with the age of the population of RNs that are registered with the CNO in 2022. The overall age of the sample was relatively similar to those RNs registered with the CNO (College of Nurses of Ontario, 2022).

Table 2

Descriptive Analysis of Continuous Study Variables (n = 135)

Variable	M (SD)	Minimum/ Maximum	Skew (SE)	Kurtosis (SE)
Age in Years (*n = 130, 5 missing*)	37.35 (10.11)	22-61	.54 (.21)	-.74 (.42)
Number of Years as an RN	13.73 (10.14)	1-39	.69 (.21)	-.44 (.41)
Number of Years in Critical Care (*n = 134, 1 missing*)	10.01 (9.47)	.16-36	.93 (.21)	-.28 (.42)

Note. M = Mean. SD = Standard Deviation. SE = Standard Error.

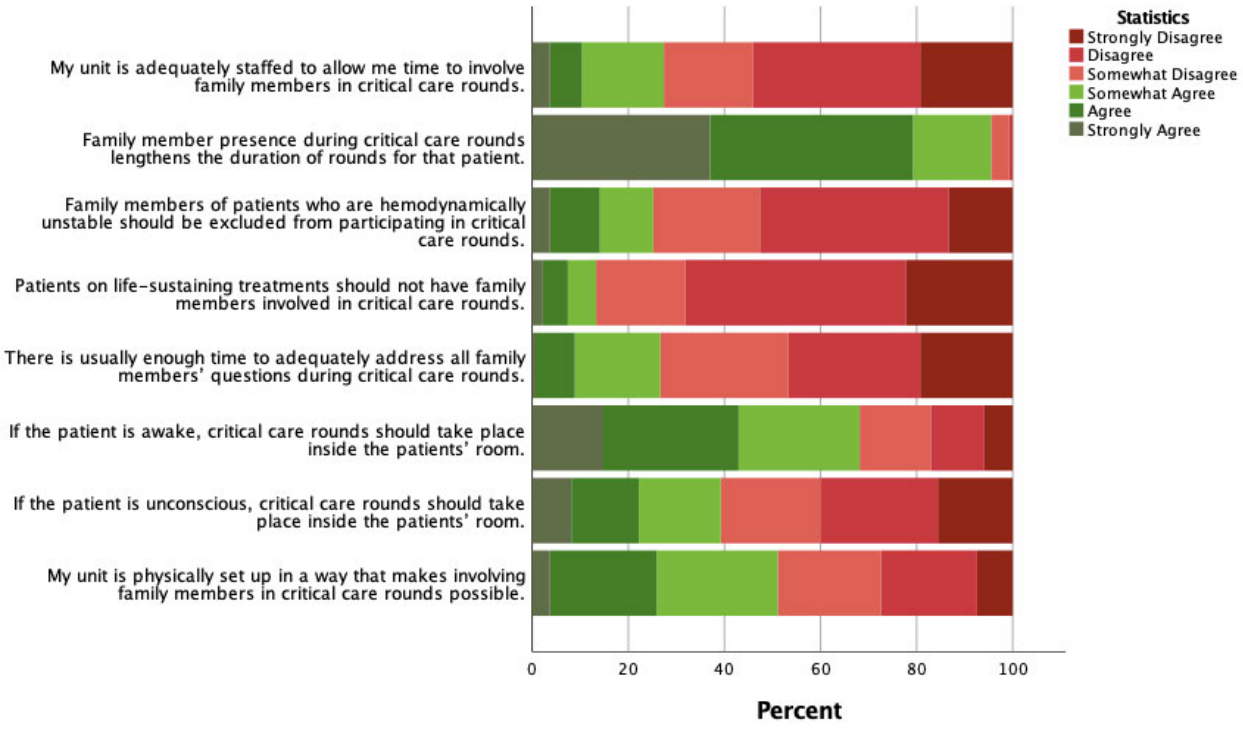
Structures that Support Best Practices for FCR

To answer the research question, "What are nurses' perspectives of the structures that support best practices for FCR?" a combination of Likert scale questions, multiple-choice questions, and select-all-that-apply questions were used. See Figure 2 for the Likert scale results. In summary, only 27.4% (n = 37) of nurses feel that their unit is adequately staffed to allow them time to involve family members in critical care rounds, and 26.7% (n = 36) of nurses feel there is enough time to adequately address family members questions during critical care rounds. An

overwhelming 95.6% (*n* = 129) of nurses feel that family presence during critical care rounds lengthens the duration of rounds for that patient. Almost three-quarters (*n* = 101, 74.8%) of nurses feel that patients who are hemodynamically unstable should have family present in critical care rounds, and 86.7% (*n* = 117) of nurses think that patients on life-sustaining treatments should have family present in critical care rounds. If the patient is awake, 68.1% (*n* = 92) of nurses think that FCR should take place inside the room, however only 39.3% (*n* = 53) of nurses think that FCR should take place inside the room when the patient is unconscious.

Figure 2

Structures of FCR Likert Scale Questions



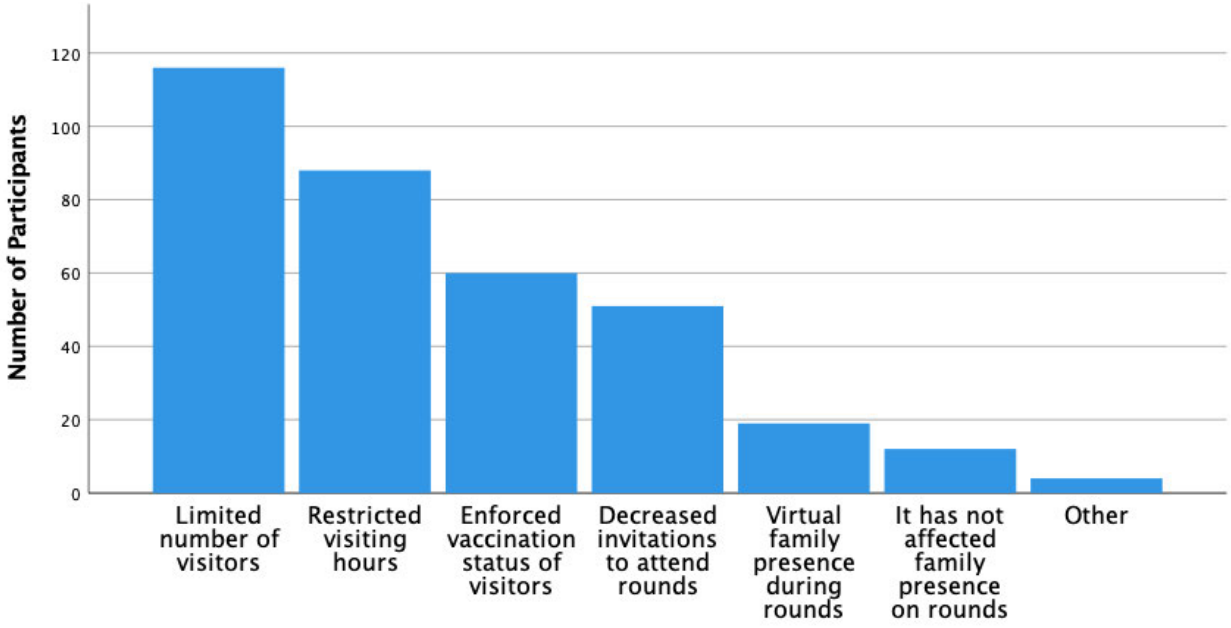
Of 135 participants, 74.1% (*n* = 100) believe that the only "family members" that should attend rounds are those that are specified by the patient or primary family contact. The remaining 25.9% (*n* = 35) believe that only close, biological relatives (spouse, parents, children, siblings) should attend rounds. The maximum number of family members that nurses are comfortable

having at the bedside were as follows: *0* (*n* = 5, 3.7%); *1* (*n* = 22, 16.3%); *2* (*n* = 92, 68.1%); *3* (*n* = 9, 6.7%); *4* (*n* = 4, 3%); *as many can comfortably fit in the rounding space* (*n* = 3, 2.2%). Exactly 80% (*n* = 108) of nurses felt that asking questions at the end of rounds was most appropriate, whereas 8.9% (*n* = 12) preferred family asking questions anytime during rounds, 3.7% (*n* = 5) were comfortable with questions at the beginning of rounds, and 7.4% (*n* = 10) felt it was appropriate to ask questions at another time outside of critical care rounds. An overwhelming 90.4% (*n* = 122) of participants feel that the age of the patient does not affect their decision to invite the family to critical care rounds. However, 5.2% (*n* = 7) feel that family should be more present for younger patients, and 3.7% (*n* = 5) feel that family should be more present for older patients. One participant did not answer this question (0.7%). Only 64.4% (*n* = 87) of participants feel that the acuity of the patient does not affect their decision to invite family members to critical care rounds. This left 33.3% (*n* = 45) of participants believing that family should be more present for higher acuity patients, and 2.2% (*n* = 3) feeling that family should be more present for lower acuity patients. The nurse-to-patient ratio most often assigned to participants was one nurse to two patients (*n* = 121, 89.6%), with 5.2% (*n* = 7) stating they are most often assigned one nurse to one patient and an additional 5.2% (*n* = 7) stating they are most often assigned one nurse to three patients.

The top three ways that nurses felt the COVID-19 pandemic affected family presence during critical care rounds were: the limited number of visitors (*n* = 116), restricted visiting hours (*n* = 88) and enforced vaccination status of visitors (*n* = 60). Figure 3 displays the results of this select-all-that-apply question where each participant selected their top three options.

Figure 3

Impact of the COVID-19 Pandemic on Family Presence During Rounds



Note. This is a select-all-that-apply question and each participant selected their top three options.

Processes that Support Best Practices for FCR

To answer the following research question, "What are nurses' perspectives of the processes that support best practices for FCR?" various Likert scale questions (Figure 4) and select-all-that-apply questions (Figures 5, 6, 7) were used. In summary, 82.2% (n = 111) of nurses feel that family members want to be invited to critical care rounds daily, 75.6% (n = 102) feel that FCR strengthen their relationship with the family and 75.6% (n = 102) feel FCR improve families' comprehension of the patient's conditions and treatments. Only 34.1% (n = 46) of nurses feel that their clinical performance is affected by family presence during critical care rounds. About three-quarters (n = 101, 74.8%) of nurses believe that families who are involved in FCR are better able to make care decisions for their loved ones. Lastly, 72.6% (n = 98) feel that

FCR decrease the frequency of formal family meetings and 66.7% (n = 90) feel they decrease the duration of formal family meetings.

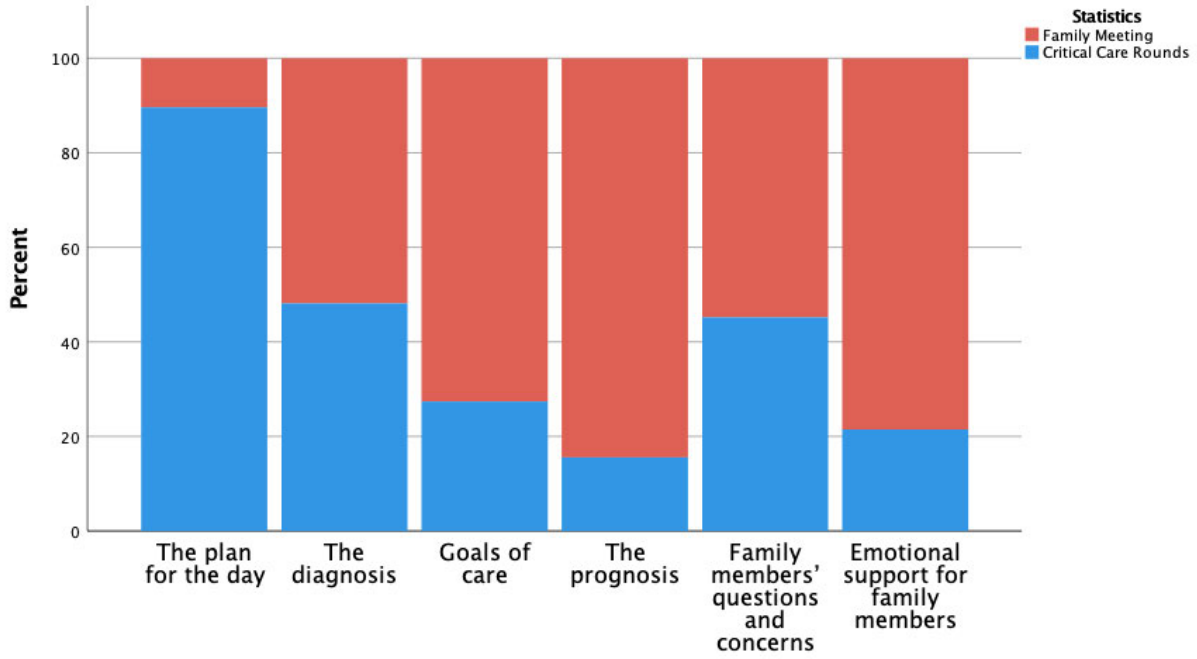
Figure 4

Processes of FCR Likert Scale Questions

Participants in this survey were asked about the most appropriate setting for discussing specific topics with families. The majority of nurses (n = 121, 89.6%) feel that the plan for the day was most appropriate to discuss in critical care rounds. Almost half (n = 65, 48.1%) of nurses believe the diagnosis could be discussed in critical care rounds, and 45.2% (n = 61) believe the same for family questions and concerns. However, only 27.4% (n = 37), 15.6% (n = 21) and 21.5% (n = 29) believe that critical care rounds are the best setting for discussions about goals of care, the prognosis, and emotional support for families respectfully (Figure 5).

Figure 5

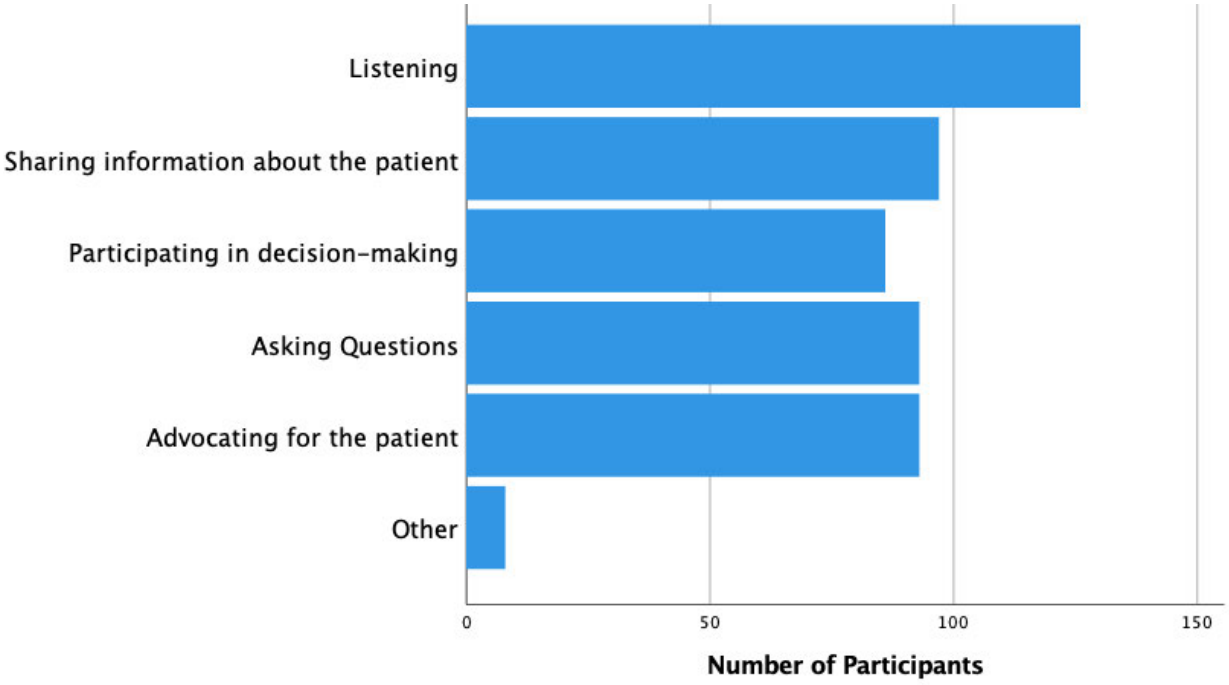
Topics to Discuss in Critical Care Rounds vs Family Meetings



In a select-all-that-apply question, nurses were asked what they believe the role of the family should be during critical care rounds. The top answer selected was listening (n = 126). Other common selections included: sharing information about the patient (n = 97), participating in decision-making (n = 86), asking questions (n = 93) and advocating for the patient (n = 93) (Figure 6).

Figure 6

Role of Family Members During Critical Care Rounds

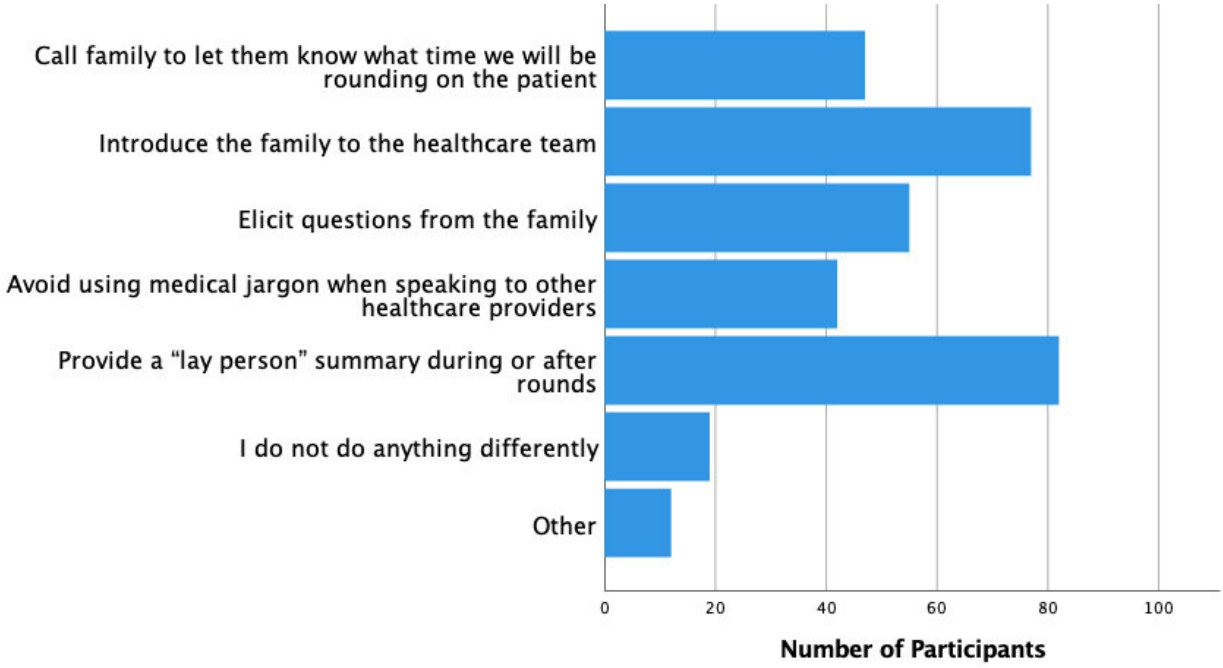


Note. This is a select-all-that-apply question.

In a select-all-that-apply question, nurses were asked to select what they do to incorporate family into critical care rounds (Figure 7). The top two answers were to provide a "lay person" summary during or after rounds (n = 82) and to introduce the family to the healthcare team (n = 77).

Figure 7

How Nurses Incorporate Family into Critical Care Rounds



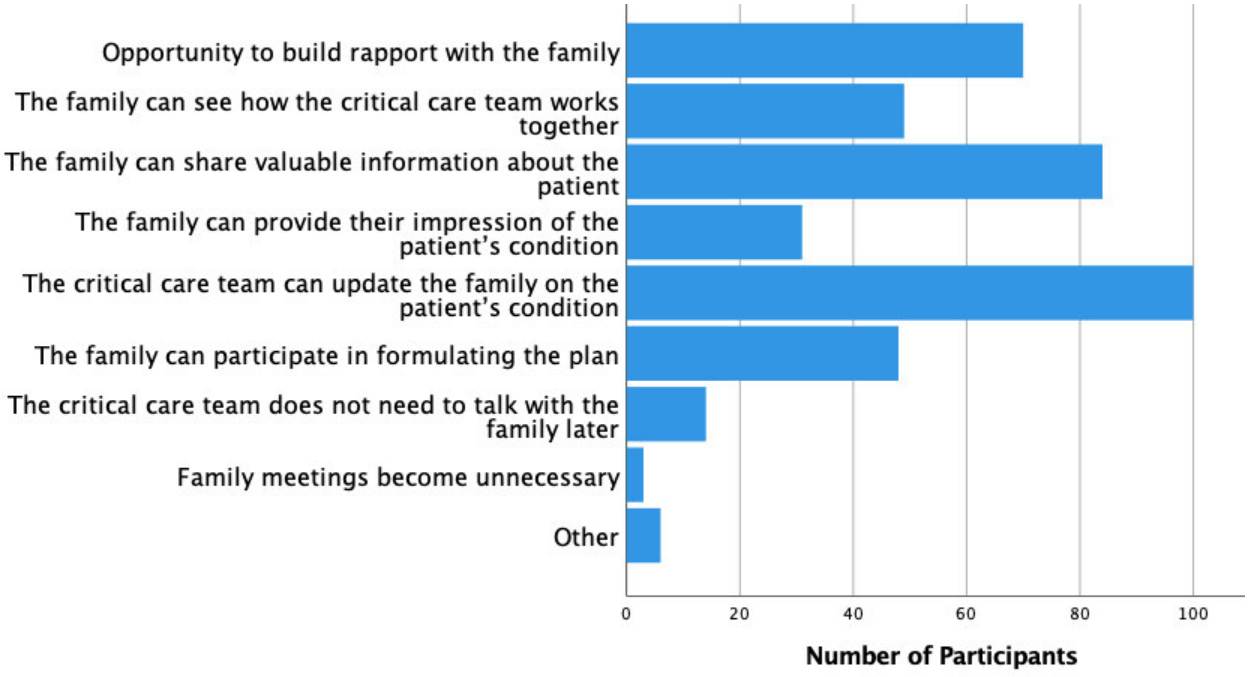
Note. This is a select-all-that-apply question.

Advantages and Barriers to FCR

To answer the research question "What do nurses perceive as the greatest advantages to implementing FCR?" a select-all-that-apply question asked participants to select the top three items they find to be valuable about FCR (Figure 8). The three items that were most chosen were: the critical care team can update the family on the patient's condition (n = 100), the family can share valuable information about the patient (n = 84), and there is the opportunity to build a rapport with the family (n = 70).

Figure 8

Value in Family Joining Critical Care Rounds

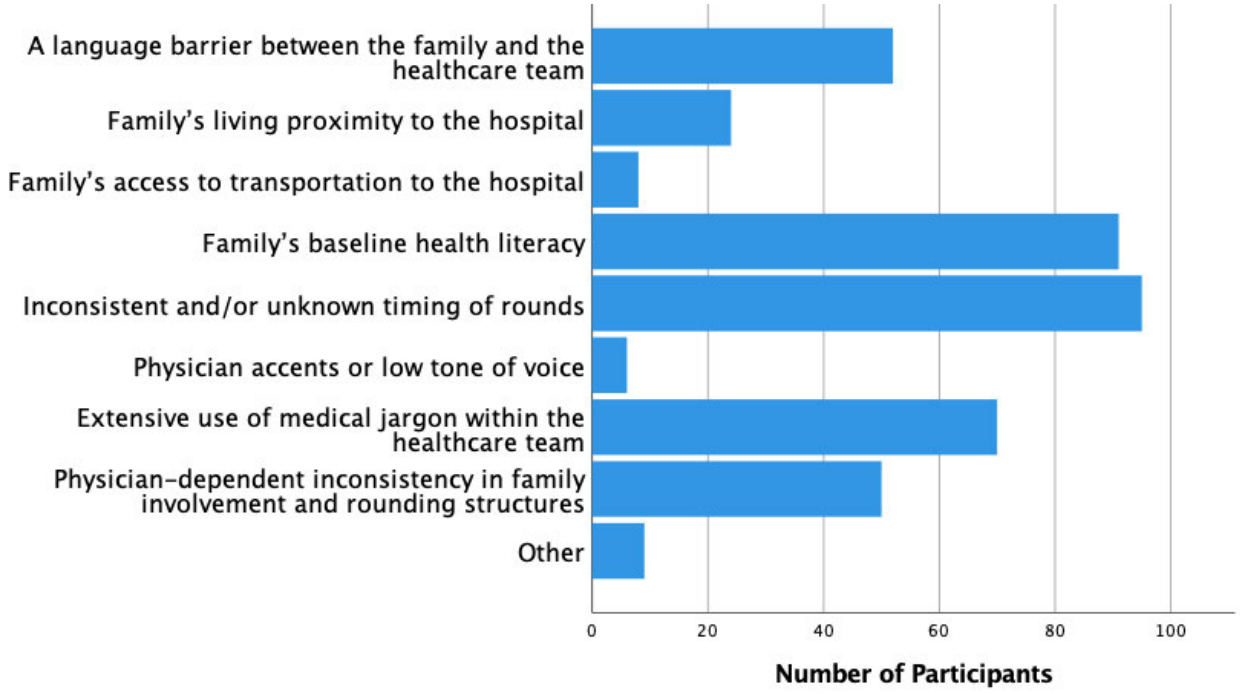


Note. This is a select-all-that-apply question and each participant selected their top three options.

To answer the research question "What do nurses perceive as the greatest barriers to implementing FCR?" a select-all-that-apply question asked participants to select their top three barriers to FCR (Figure 9). The three items that were most chosen were: inconsistent and/or unknown timing of rounds (n = 95), family's baseline health literacy (n = 91), and extensive use of medical jargon within the healthcare team (n = 70).

Figure 9

Greatest Barriers for Families to Join Critical Care Rounds



Note. This is a select-all-that-apply question and each participant selected their top three options.

The Relationship Between Nurse-Related Factors and Nurses' Supportiveness of FCR

To answer the research question "Is there a relationship between nurse-related factors and nurses' overall supportiveness of FCR?" descriptive and associative analyses were completed. See Table 1 for a descriptive analysis of the categorical study variables and Table 2 for a descriptive analysis of the continuous study variables.

Overall, 71.1% (n = 96) of participants believe that families should be provided with the option of joining rounds daily, 73.3% (n = 99) of participants feel comfortable having family members present during critical care rounds, and only 59.3% (n = 80) believe that FCR should be implemented in their institution. Once combined to create the *Supportiveness* variable, 70.4% (n

= 95) of participants were determined to be supportive of FCR, and 29.6% (n = 40) were considered unsupportive.

Dichotomous and categorical variables were examined first, as shown in Table 3. Chi-square tests for association and Fisher's Exact tests were conducted for these variables. Analysis revealed that *Supportiveness* was not statistically related to *Experience with FCR* ($\chi^2(1) = 2.493$, $p = .114$), *Gender* ($\chi^2(1) = .024$, $p = .887$), *Family Nursing Course in School* ($\chi^2(1) = 2.808$, $p = .094$), or *Education Prepared Them for FCR* ($\chi^2(1) = .013$, $p = .909$). All expected cell frequencies were greater than five for the above variables. The analysis also revealed that *Supportiveness* was not statistically related to their *Highest Level of Education* ($\chi^2(2) = .961$, $p = .619$). One cell did not have an expected frequency greater than five.

A Fisher's Exact test revealed that *Supportiveness* was not statistically related to *Intention to Leave* ($p = .376$, Phi = .080). However, a Fisher's Exact test revealed a statistically significant association between *Ethnicity* and *Supportiveness* ($p = .01$, Phi = .221). Participants in the *Other* category are more supportive of FCR compared to those in the *White* category. There was one cell that had a count of zero, so therefore, further statistical testing could not be conducted for this variable.

Table 3

Chi-Square and Fisher's Exact Table of Nurse-Related Factors (n = 135)

Variable	Unsupportive *n* (%)	Supportive *n* (%)	χ^2 (df)	Phi	*p*
Experience with FCR			**2.493 (1)**		**.114**
Yes	24 (25.5)	70 (74.5)			
No	16 (39)	25 (61)			
Gender (*n = 134, 1 missing*)			**.024 (1)**		**.887**
Male	5 (27.8)	13 (72.2)			
Female	34 (29.6)	81 (70.4)			

Ethnicity				**.221**	**.010**
White	40 (33.1)	81 (66.9)			
Other	0 (0)	14 (100)			
Hospital Site (*n=134, 1 missing*)			**16.02 (2)**		**<.001**
Site 1, 2 and 3	15 (19.7)	61 (81.3)			
Site 4 and 6	3 (17.6)	14 (82.4)			
Site 5	22 (53.7)	19 (46.3)			
Highest Level of Education			**.961 (1)**		**.619**
Diploma	11 (36.7)	19 (63.3)			
BScN	26 (28)	67 (72)			
Other	3 (25)	9 (75)			
Family Nursing Course in School			**2.808 (1)**		**.094**
Yes	16 (23.2)	53 (76.8)			
No	24 (36.4)	42 (63.6)			
Education Prepared Them for FCR			**.013 (1)**		**.909**
Unprepared	16 (30.2)	37 (69.8)			
Prepared	24 (29.3)	58 (70.7)			
Intention to Leave				**.080**	**.376**
Yes	6 (40)	9 (60)			
No	33 (28.3)	86 (71.7)			

Note. A significance level of .05 was used.

A chi-square test revealed that *Supportiveness* was statistically significantly related to the *Hospital Sites* ($\chi^2(2) = 16.02$, $p = <.001$). All expected cell frequencies were greater than five. A binary logistic regression model was then used to further analyze the *Hospital Sites* and *Supportiveness*, as shown in Table 4. The binary regression model used *Hospital Site 5* as the reference group. The overall model was statistically significant ($\chi^2(2) = 15.406$, $p = <.001$). Data were categorized correctly 72.4% of the time. The model demonstrates that participants from *Hospital Sites 1, 2, and 3* are 4.7 (95% CI = 2.045-10.844, B =1.549, SE = .426, Wald χ^2 = 13.253, p <.001) times more likely to be supportive of FCR compared to those from *Hospital Site 5*, and participants from *Hospital Sites 4 and 6* are 5.4 (95% CI = 1.346-21.691, B =1.687, SE = .709, Wald χ^2 = 5.660, p = .017) times more likely to be supportive of FCR compared to those from *Hospital Site 5*.

Table 4

Bivariate Relationship Between Hospital Site and Supportiveness (n = 134)

Variable	*n* (%)	B (SE)	Wald (χ^2)	Odds ratio	95% CI	*p*
Hospital Site 5 (Reference Group)	41 (30.4)					
Hospital Site 1, 2 and 3	76 (56.3)	1.549 (.426)	13.253	4.701	2.045-10.844	<.001
Hospital Site 4 and 6	17 (12.6)	1.687 (.709)	5.660	5.404	1.346-21.691	.017

Note. *n* = 134 as one participant left the *Hospital Site* blank. A significance level of .05 was used in the bivariate analysis. SE = Standard Error. CI = confidence interval.

Next, continuous variables were analyzed. Refer to Table 2 for the descriptive analysis of the continuous variables. An independent samples t-test was used to analyze both *Age* and *Number of Years as an RN* versus *Supportiveness* (Table 5). Normal distribution was achieved as the standard error was approximately three times or less the value of the skewness and kurtosis. Visual assessment of a histogram with the normal curve for each variable also showed the data was relatively normally distributed. There were no outliers for both variables. There was homogeneity of variances, as assessed by Levene's test for equality of variances for *Age* (p = .128) and *Number of Years as an RN* (p = .441). The independent samples t-test revealed no significant difference between *Age* and *Supportiveness* (p = .412) or between *Number of Years as an RN* and *Supportiveness* (p = .301).

Table 5

Independent Samples T-Test Analysis Examining Supportiveness by Independent Variables (n = 135)

Variable	*n* (%)	M(SD)	t(df)	*p*
Age in Years (*n = 130, 5 missing*)			**.823(128)**	**.412**
Unsupportive	39 (30)	38.46 (11.278)		
Supportive	91 (70)	36.87 (9.592)		
Number of Years as an RN			**1.037 (133)**	**.301**
Unsupportive	40 (29.630)	15.13 (10.893)		
Supportive	95 (70.370)	15.14 (9.811)		

Note. A significance level of .05 was used. M = Mean. SD = Standard Deviation.

When analyzing the *Number of Years in Critical Care* and *Supportiveness*, the standard error was more than three times the skewness, and visual interpretation of a histogram with a normal curve did not demonstrate a normal distribution of this data. With outliers adjusted for, the data was still not normally distributed. Therefore, a nonparametric Mann-Whitney U test was used (Table 6). Distributions of the *Number of Years in Critical Care* for those who were *Supportive* and *Unsupportive* were not similar, assessed by visual inspection. Participants' *Number of Years in Critical Care* was not statistically significantly different between those who were supportive (mean rank = 64.82) or unsupportive (mean rank = 73.80), $U = 145$, $z = -1.229$, $p = .219$.

Table 6

Mann-Whitney U Test Analysis Examining Supportiveness by Independent Variable (n = 134)

Variable	Unsupportive Mean Rank	Supportive Mean Rank	*U*	*z*	*p*
Number of Years in Critical Care	73.80	64.82	145	-1.229	.219

Note. *n* = 134 as one participant had an indecipherable answer for the *Number of Years in Critical Care*. A significance level of .05 was used.

The descriptive results of this research highlighted the structures and processes that nurses felt best support them during FCR. The length of time of FCR was noted to be a substantial structural barrier for nurses. Nurses noted the greatest advantage of FCR was that the healthcare team can update the family on the patient's condition, and the greatest barrier to FCR is the inconsistent or unknown timing of rounds. Tests of association revealed that nurses' overall supportiveness of FCR is statistically significantly related to their ethnicity ($p = .01$) and their hospital site ($p = <.001$). The next section will discuss these findings in further detail.

CHAPTER 5

DISCUSSION

The aim of this quantitative research was to explore nursing perspectives of FCR in six adult critical care units across four Southwestern Ontario hospitals. Nurses did not need to have experience participating in FCR in order to participate in this study because it focused on their overall perspectives of FCR. A survey design was chosen because it is an appropriate research method to answer research questions targeting both descriptive data and tests of association since it can produce a quantitative description of opinions, attitudes, and tests of association (Creswell & Creswell, 2018).

This survey had a nursing response rate of 45% (n = 135), which is comparable to the response rate of 43% in Au et al. (2017), although they had a larger sample size (n = 258). Also, even though this response rate was slightly lower than the response rate of 72% in Santiago et al. (2014), the sample sizes were comparable (n = 160). Some literature did not report their response rate, however, Allen et al. (2017) had a sample of 47 and 49 nurses in their pre- and post-survey respectively, and Hetland et al. (2017) had a sample of 433 nurses. Therefore, this survey had a reasonable sample size and response rate to compare to the existing literature.

The results of this study demonstrate that most nurses are supportive of FCR overall. Donabedian explained the *structure* to be the condition of the caregiving setting, such as material or human resources, and the *process* as the activities constituting healthcare, including patient activities to seek or implement care, and practitioner activities to administer care (Donabedian, 2003; Donabedian, 1988). The structures and processes investigated demonstrate the areas of FCR in which nurses feel supported or could use additional support to provide quality care. Major advantages and barriers to FCR are also discussed. Using the Donabedian Framework

(Donabedian, 1988), these structures and processes can be explored further to develop evidence-based best practices for FCR in adult critical care units. The goal of this research is to contribute to the body of knowledge for nurses to implement quality FCR and to develop evidence-based best practices.

Structures that Support Best Practices for FCR

When exploring the structures that nurses believe support best practices for FCR, there were some factors that most nurses expressed better supported FCR. Most nurses felt that patients who are hemodynamically unstable or are on life-sustaining treatment should have family involved in critical care rounds. It is of note that most critical care patients in general are either hemodynamically unstable or on life-sustaining treatments (Stoeppel et al., 2014). Interestingly, an overwhelming 90.4% of nurses felt that the patient's age did not affect their decision to invite family to FCR, but only 64.4% of nurses felt that the patient's acuity did not affect this decision. Most nurses who felt that acuity affected their decision felt that family should be more present for patients with higher acuity. Hetland et al. (2017) found that there was a significant direct relationship between nursing attitudes toward family engagement in care in the ICU and higher levels of patient acuity.

Most nurses (61%) preferred to host rounds outside the patient's room if the patient is unconscious, and 68% preferred to host rounds inside the patient's room if the patient is awake. This is similar to what Au et al. (2017) found in their study, as 62% preferred to host rounds outside the patient's room if the patient is unconscious, and 59% preferred to host rounds inside the patient's room if the patient is awake. Also, most nurses (68%) believe that family members present during FCR should be limited to a maximum of two people, which is similar to 55% of healthcare providers in Au et al. (2017). About three-quarters (74%) of participants felt that

family members attending rounds should only include those that are specified by the patient or primary family contact. Au et al. (2017) found that only 57% limited family members to include those specified by the patient or primary family contact, with more of their providers (39%) feeling comfortable having first-degree biological relatives present. These structural factors should be considered when developing evidence-based best practices as they are easy to implement and encompass nursing preferences, as nursing support is important to successful implementation.

There was no previous literature to the authors' knowledge quantitatively investigating how the COVID-19 pandemic affected FCR, as this may be the first quantitative post-pandemic study to investigate nursing perspectives of FCR. It is worth noting that some hospitals may have had FCC initiatives, including FCR, implemented regularly pre-pandemic. However, the pandemic affected how well FCR were sustained due to the hospital regulations and restrictions regarding visitors (Sheehan, 2023).

Nurses feel that the COVID-19 pandemic mainly affected FCR by limiting the number of visitors and visiting hours. Other literature reinforces that the restricted number of visitors and visiting hours were in effect across Canada (CIHI, 2021). Therefore, these factors likely affected FCR across Canada, and they made it difficult for families to be present during FCR (Sheehan, 2023). Some literature reported using telemedicine pre-pandemic (Rogers et al., 2020; Stelson et al., 2016) and intra-pandemic (Sheehan, 2023). Throughout the pandemic, nurses expressed that telemedicine could increase connectedness and assist with the lack of visitation during FCR, however, there were also some challenges associated with using technology (Sheehan, 2023). Few nurses (n = 19) in this study reported using telemedicine during the pandemic to include families in FCR. However, almost half of the nurses (n = 60) reported that an enforced

vaccination status of visitors affected their presence during FCR throughout the pandemic. To the author's knowledge, there is no current literature that can be compared to this finding.

Time was a major structural barrier that nurses identified. Most nurses stated that their unit was not adequately staffed to allow them the time to involve the family in rounds, involving the family in rounds lengthens the duration of rounding time, and that there usually is not enough time to adequately address all family members' questions during rounds. Adequate staffing in critical care units is not a newly identified problem in nursing (Thirsk et al., 2021), especially throughout the COVID-19 pandemic (CIHI, 2021). However, supporting nurses through adequate staffing can assist them in involving families in critical care rounds, as the literature demonstrates that this is true for other FCC initiatives (Hetland et al., 2017; Thirsk et al., 2021). Most nurses reported being assigned one nurse to two patients, so the staffing ratio was relatively consistent for nurses across this study. However, decreased nurse-to-patient ratios reduce nurses' workload, allowing them to better involve families in FCC initiatives (Hetland et al., 2017; Thirsk et al., 2021). Therefore, supporting nurses through adequate staffing may help them to better engage families in FCR specifically.

Participants in this study overwhelmingly reported that they believe FCR lengthens rounding time (96%), with 37% strongly agreeing with this statement. Santiago et al. (2014) also found that most nurses strongly agreed (44%) or somewhat agreed (37%) that FCR lengthens rounding. About half of the participants in Au et al. (2017) perceived that rounds were prolonged by 5 to 10 minutes when family members were present for FCR, although this was not timed. Hetland et al. (2017) found that overall, inadequate time affected nurses willingness to involve families in FCC initiatives. Additional support for nurses is clearly needed to allow them the time to involve families in FCR. Decreased staffing and increased patient acuity could increase

nursing workload, ultimately leading to less time for nurses to engage families in their care (Hetland et al., 2017).

Developing a standardized structure for FCR may also be helpful in managing rounding time for nurses, other interdisciplinary staff, and families so that all parties have an expected timeline in mind. This could include having dedicated time to ask questions during rounds and limiting the amount of time dedicated to families' questions. Most nurses in this study (80%) believe asking questions is best at the end of FCR. Au et al. (2017) found that 87% of their physicians gave family members the opportunity to ask questions at the end of FCR as their standard practice, and it was well received by most family members with 62% preferring this practice. If families have many questions, it may be best to consider having a separate family meeting dedicated to answering all their questions so that rounding times are not severely extended.

Processes that Support Best Practices for FCR

This study also explored the processes that nurses felt best supported FCR. Most nurses (82%) in this study believed that families wanted to be invited to rounds. In other studies, families also expressed wanting this invitation (Au et al., 2017). Therefore, family involvement should be an easy, supportive process to obtain. However, it is worth noting that Au et al. (2017) found that nurses underestimated how often families wanted to be invited to FCR, so there is likely more interest from families than nurses anticipate.

Many nurses found that family presence during rounds did not affect their clinical performance, which is similar to Hetland et al. (2017) findings regarding nursing perspectives on FCC. About 75% of nurses also felt that their relationship with the family strengthened when they were present during FCR. Au et al. (2017) had comparable results in their study, with 72%

of nurses feeling this way. Most nurses believe that involving families in FCR can help them to understand patients' conditions and treatments and allow them to make better care decisions for their loved ones. Conversely, Au et al. (2017) found that some nurses had reservations about FCR because they felt that they confused families more than they improved their understanding. However, is shown that families who help to make decisions in their loved one's care feel more empowered, which in turn, increases their perceived quality of care (Heydari et al., 2020). Most nurses in this study also feel that the overall quality of care increases when families are present during FCR. Increasing the perceived quality of care is an extremely supportive process for the implementation of FCR and is the main reason why this research is guided by the Donabedian Framework (Donabedian, 1988).

Interestingly, nurses in this study felt that listening was the main role for families during FCR. Families in the literature also may consider themselves to be passive listeners, which reinforces this perceived role (Au et al., 2017). Although listening is important, Au et al. (2017) suggest that role clarification is a needed process that should be implemented when introducing families to FCR. Nurses should encourage families to be more involved in FCR, and many of the nurses also felt that sharing information about the patient, participating in decision-making, asking questions, and advocating for the patient are relevant roles for families during FCR. This was also the case in the published literature (Roze des Ordons et al., 2020; Stelson et al., 2016), with nurses in Au et al. (2017) ascribing more of these roles to families than families perceived themselves to have. Most nurses took steps to include families in FCR by introducing the family to the health care team at the beginning of rounds (n = 77) and by providing a "lay person" summary for them during or after rounds (n = 82). Most physicians in Au et al. (2017) introduced

the team (52%) and provided a “lay person” summary to families (83%) as part of their standard practice.

Nurses in this study were divided on if they felt that FCR increased stress, anxiety and fear in families, and the literature also shows this divide (Au et al., 2017). The increase in knowledge may help these families to better understand their condition, however, it seems that nurses worry that this increase in understanding might inflict fear or stress on families. Nurses were also relatively divided on how they felt about FCR threatening patient confidentiality, with just over half of nurses saying that they felt it was not threatened. This is contrary to what the current literature has found (Roze des Ordons et al., 2020; Santiago et al., 2014), however, it is of note that many of these nurses felt that family members present in rounds should be limited to those specified by the patient or the main contact person. This could explain why these nurses were less apprehensive about threatening patient confidentiality compared to other studies. Nurses also appeared undecided on whether they think FCR decreases teaching to medical students and novice nurses. Although this topic was not investigated specifically among nurses in the literature, healthcare providers also were divided with some feeling that it decreased teaching (Au et al., 2017; Roze des Ordons et al., 2020), while others disagreed (Ingram et al., 2014).

Most nurses felt that there is decreased discussion of unfavourable information during FCR, and this seems to be unanimous across much of the present literature (Au et al., 2017; Roze des Ordons et al., 2020; Santiago et al., 2014; Stelson et al., 2016). Typically, unfavourable information is encompassed in discussions that include prognosis and goals of care. Most nurses felt that patients’ prognosis, goals of care, and emotional support to the family should be discussed in a family meeting setting rather than during FCR. Au et al. (2017) also found these topics better to discuss in a family meeting. Many nurses believed that the plan for the day is a

very appropriate topic during FCR, and the patients' diagnosis and family questions or concerns can comfortably occur in either setting. By preemptively deciding what topics are appropriate to discuss during FCR, critical care units could gain increased support from nurses to implement FCR in their daily practice.

Nurses believed that family meetings are less frequent and shorter in duration when FCR take place, and this is supported by both Au et al. (2017) and Santiago et al. (2014). Having shorter and less frequent family meetings may better support the rounding process as it frees up more time in both the nurses' and other interdisciplinary team members' days that would otherwise be spent in these meetings.

The nurses in this study had divided opinions on if they felt their unit culture was supportive of implementing FCR. This division could be detrimental to implementing FCR, as the support of the unit, including managers, directors, interdisciplinary staff, and other nurses, is crucial to successful implementation. A positive unit culture has been shown to support nurses in implementing many different FCC initiatives (Kleinpell et al., 2019; Thirsk et al., 2021). As previously mentioned, the unit culture can be influenced by an abundance of items, including the nursing culture specifically, resistance to change, lack of support from upper management, and a lack of organizational resources such as short staffing or high nurse-to-patient ratios (Heydari et al., 2020; Kleinpell et al., 2019).

Most nurses in this study found that FCR increased their workload. This is similar to what Hetland et al. (2017) found, stating that FCC initiatives, in general, significantly increase nursing workload in critical care units. Conversely, Allen et al. (2017) found that FCR actually decreases nurses' workload. Family inclusion is important in all aspects of care, including in FCR, and should be considered in the workload associated with the staffing levels and nurse-to-

patient ratios assigned to nurses each shift. Additional support may be necessary to relieve the nursing workload in other aspects of care so that they are able to manage including families in FCR. It is worth noting that although the age and years of experience as an RN of the participants were relatively normally distributed in this study, the years in critical care were quite skewed toward having less experience (*Mean* = 10.01, SD = 9.47, range .16-36). This lack of critical care experience in the participants could increase their perceived workload (McInnis et al., 2017), and this was likely heightened by the effects of the COVID-19 pandemic over the last few years (Doleman et al., 2023).

Advantages and Barriers to FCR

To the authors' knowledge, the previous literature that investigates what nurses perceive to be the greatest advantages and barriers to FCR is limited to only one study (Roze des Ordons et al., 2020). The nurses in this study ranked the top three advantages and barriers that they feel are present with FCR. The top advantage that nurses identified was that the critical care team can update the family on the patient's condition. Regardless of FCR, families usually want frequent updates on the patient, especially if their status is changing (Wong et al., 2020). Having this daily access to information is beneficial for both nurses and families (Roze des Ordons et al., 2020).

Nurses also felt that FCR is a time when the family can share valuable information about the patient. Valuable patient information from the family could lead the direction of care and clinical decision-making for these patients (Roze des Ordons et al., 2020). Some nurses worry that family members could provide inaccurate or misleading information (Roze des Ordons et al., 2020). This concern did not arise in this study; however, it was not an objective of the study.

Lastly, nurses valued that there was the opportunity to build a rapport with the family. Roze des Ordons et al. (2020) also found this in their study, and Au et al. (2017) found that

families value this rapport as well. Building a rapport with the family is beneficial as it can help families to gain trust and confidence in the healthcare team (Roze des Ordons et al., 2020). This can contribute to developing a strong nurse-family relationship which may also positively influence other aspects of care.

The most prevalent barrier nurses identified to hosting FCR was the inconsistency or unknown timing of rounds. Nurses in this study previously mentioned timing as a major barrier, so this is a relatively expected finding. Healthcare providers have identified that family members can be frustrated with this unpredictability (Roze des Ordons et al., 2020), and families themselves have expressed frustration with this as well (Cody et al., 2018; Roze des Ordons et al., 2020; Stelson et al., 2016). This barrier may be difficult to overcome depending on the other responsibilities of the physician aside from rounding. However, having a dedicated window for rounding time may be helpful. Also, increasing the amount of physician coverage and dispersion of responsibilities may be helpful in developing a more consistent timing of rounds overall.

Secondly, nurses found that the baseline health literacy of families is a barrier to FCR. The differing levels of health literacy in family members can change the way in which they engage in FCR and decision-making, and low levels of health literacy could negatively affect these processes (Kydonaki et al., 2021). To the author's knowledge, this has only been highlighted as a barrier in one study (Kydonaki et al., 2021).

Lastly, nurses also indicated the extensive use of medical jargon within the healthcare team as another barrier to FCR. The literature shows that some interdisciplinary staff members are quite reluctant to decrease the use of medical jargon (Simon et al., 2021), which families find to be confusing and stressful (Roze des Ordons et al., 2020; Stelson et al., 2016). In these cases,

supporting the staff through the above structures and processes to develop a change in the overall unit culture may be helpful.

The Relationship between Nurse-Related Factors and Nurses' Perception of FCR

Many nurse-related factors were compared to nurses' overall support towards FCR. Many of the factors did not reveal significant results, however, the results are still worth acknowledging and interpreting beyond statistical significance. The study sampled nurses who did and did not have experience participating in FCR and compared their supportiveness towards FCR. Those who did not have experience were instructed to continue answering the questions with their perspectives on including families in FCR. Statistical analysis revealed that there was not a significant difference in the overall supportiveness between these two groups. To the author's knowledge, only nurses with FCR experience have been previously researched on their perspectives. This result demonstrates that after experiencing FCR, perspectives do not significantly change. This finding may be positive because it is noteworthy that the barriers nurses revealed in this study have not overtaken the value they see in implementing FCR.

Gender also did not have a significant effect on the supportiveness of nurses towards FCR. The sample in this study consisted of mostly females (85.2%). The Canadian Nurses Association (2021) found that about 91% of all Canadian RNs are female, so this sample is relatively representative of the population. Some similar studies in the literature collected the gender or sex of their RN participants (Au et al., 2017; Roze des Ordons et al., 2020; Santiago et al., 2014), but to the author's knowledge, there were no articles that reported any differences in perspective between groups.

Ethnicity was statistically significantly related to supportiveness towards FCR, with a more positive perspective coming from ethnicities other than white. There were no participants

who identified as non-white who were unsupportive of FCR. The participants in this study mainly identify as white (89.6%). However, Canadian RNs are disproportionately white (Jefferies et al., 2019) and only about 15% of all Canadians in the nursing profession, including head nurses, RNs, and nursing aids, are a visible minority (Premji & Etowa, 2014). The literature also mentions that visible minority RNs in Canada are less concentrated in advanced practice or specialty nursing areas (Premji & Etowa, 2014), even though there is little to no difference in the knowledge or skills used between Caucasian and visible minority RNs (Cruz & Sawchuk, 2021). Therefore, the ethnicity of these study participants may be relatively representative of the population. To the author's knowledge, no articles compared the ethnicity of RNs to their overall perspective of FCR in adult critical care units. One study collected the ethnicity of their participants, but they did not report any differences in their perspectives (Stelson et al., 2016).

This study also investigated if education contributes to nurses' overall supportiveness of FCR. All three areas of education covered in this study had nonsignificant results in relation to supportiveness. Nurses' highest level of education, experience taking a family nursing course in school, and their level of preparedness for FCR from their education were all investigated. The literature demonstrated that those with more advanced nursing degrees were more likely to incorporate family into their standard care (Hetland et al., 2017). Although not statistically significant, there is a trend of increasing supportiveness of FCR from those nurses with a Diploma (63.3% supportive), a BScN (72% supportive) and other degrees including master's and nurse practitioner degrees (75% supportive). Notably, those who held a BScN or higher levels of education more often reported taking a family nursing course in school. One study mentioned that RNs felt their BScN family nursing course was inapplicable to their care in critical care settings (Thirsk et al., 2021).

Nurses' job satisfaction was briefly assessed in this study by asking if nurses intended to leave their current critical care nursing position in the next six months, and this did not show a significant relationship to their supportiveness of FCR. Hetland et al. (2017) stated that those who planned on leaving their current critical care nursing position were less supportive of FCC initiatives. Although not statistically significant, there was a higher percentage of nurses that were supportive of FCR if they intended to stay in their current position (71.7%) compared to those who intended to leave (60%). Job satisfaction can be influenced by an abundance of factors, although higher job satisfaction could lead to increased support in all aspects of FCC, including FCR. Units that are looking to implement FCR should work towards increasing the job satisfaction of their RNs for more effective implementation.

There was a significant relationship between which hospital site nurses worked at and their overall supportiveness of FCR. The nurses employed at *Hospital Sites 1, 2, 3, 4 and 6* were statistically significantly more supportive of FCR compared to those at *Hospital Site 5*. Interestingly, *Hospital Site 5* had a very high response rate (82%) compared to the other hospital sites. This could indicate that different hospital sites may better support FCC initiatives, including FCR, in their daily practice. They could also be separated by differing levels of access to structural resources that promote FCR, such as higher staffing levels, decreased nursing workloads, decreased patient acuity through lower ICU level designations, and a more supportive unit culture. They may also have more support staff present which could help nurses to coordinate having family present during FCR. This study did not gather site-specific data regarding all pertinent details of the organizational and unit structures. It is therefore unclear what is causing this discrepancy between institutions, although, this could indicate that the

inconsistencies in nursing support of FCR across the published literature may be institutionally dependent (Allen et al., 2017; Au et al., 2017; Stelson et al., 2016).

The age of participants, years of experience as an RN and years in critical care all had no significant effect on nurses' supportiveness towards FCR. Conversely, previous literature found nurses with less experience to be more positive toward FCR (Santiago et al., 2014; Schiller & Anderson, 2003) and support a more inclusive role for the family during FCR (Au et al., 2017). This could indicate that the culture of nurses who had less experience at the time of these studies may have more experience at the time of the current study. Therefore, the overall age and experience may be beginning to shift to become more inclusive of FCR.

Implications for Nursing Education, Practice and Policy

Education

This research suggests that promoting advanced nursing education may contribute to nurses' overall supportiveness of FCR in adult critical care units. Current educational programs could benefit from including a family nursing course within their curriculum if they do not already. Of those curriculums with a family nursing course, they may benefit from adjusting their course to ensure students are prepared to incorporate families into their care in advanced or critical care settings, including during the rounding process.

After rounds, nurses usually provide a "lay person" summary to families. Some nurses may find it difficult to try to break down topics into basic information. It may be helpful to provide continuing education to critical care nurses on different ways to explain these foundational medical concepts, especially to those families who have low baseline health literacy. This education may even be helpful to all interdisciplinary staff so they could learn how to avoid medical jargon when talking to families.

Practice

Although it is known that the families of critical care patients want to be invited to FCR (Cody et al., 2018; Kang et al., 2020; Kydonaki et al., 2021; Mangram et al., 2005), it is not standard practice in many hospitals. Adult critical care units should work towards formal implementation of FCR as most nurses support this practice and feel that family members benefit from FCR. The results of this study are based on the perspectives of nurses, and not experience. Therefore, nurses who have never participated in FCR were included in this study and still support the implementation of FCR.

For nurses currently working in adult critical care settings, it is important to advocate for FCR practices to be implemented and sustained. Providing constructive feedback about advantages and barriers to management may be useful to address active barriers that can be easily overcome with minor practice changes, such as the use of medical jargon. Critical care units should support nurses through the FCR process and work collaboratively to address these barriers.

Only one study reinforces this study's findings that the baseline health literacy of families acts as a barrier to FCR (Kydonaki et al., 2021). If this continues to arise as a barrier in future studies, implementing practice standards that help the family to better understand the process may be useful. For example, this could include making it standard practice to provide a "lay person" summary after rounds to ensure the family understood what occurred during rounds.

Policy

The body of knowledge in the current literature regarding best practices for FCR in adult critical care units is limited. This research will help guide future researchers to develop evidence-based best practices for FCR in adult critical care settings by contributing knowledge about the

structure and process variables that support nurses in implementing FCR. Although this research supports this body of knowledge, more valid and reliable research is needed to develop these evidence-based best practices. Additional exploratory, qualitative research may be beneficial as well to further explain some of the findings from this study, which could also guide the development of evidence-based best practices. Once evidence-based best practices for FCR are developed, a policy regarding FCR should be created in each critical care unit. This could describe the units' standard practices during FCR so that families new to the unit know what to expect from rounds.

Future Research

Although the sample in this study was relatively representative of the population in terms of gender and ethnicity, it was still predominantly female and white. It would be beneficial for future research to take place in a more gender and ethnically diverse region or with a larger sample size to support these findings. It is unclear why other ethnicities in this study are more supportive of FCR, however, more insight could be obtained through a qualitative lens. It would also be beneficial for future research to investigate which of these other ethnicities are the most supportive, as non-white ethnicities were grouped together for statistical analysis due to their limited representation.

The focus of this study was on the perspectives of nurses regarding FCR in adult critical care units. Therefore, nurses who have never experienced FCR participated in this study and reported their perspectives. Future research should focus on the perspectives of nurses who have all experienced FCR, or on the same participants after FCR become standard practice in the units under study.

Nurses in this study consistently mentioned that a major barrier to FCR was their increased time, however, they also mentioned that family meetings become shorter and less frequent with FCR. This was the nurses' perception of time and not all nurses in this study had experience with FCR, so the timing of rounds and meetings were not measured in this study. It would be interesting to research if there is a difference in timing between hosting FCR and having shorter, less frequent family meetings or hosting regular rounds with longer, more frequent family meetings. However, this would be difficult to accurately assess this due to the inability to capture family meetings that do not take place due to having family present on rounds.

Future research is needed to confirm if there is a difference in supportiveness of FCR between those with more or less experience, as previously published research indicates there is a difference between these groups (Au et al., 2017; Santiago et al., 2014; Schiller & Anderson, 2003), but this study indicates that there is no significant difference.

Future research could also further investigate why nurses are divided on if their unit culture is supportive of FCR. Investigating the root of why the unit culture may not be fully supportive of FCR is an incredibly important first step to successful, sustainable implementation. It would be useful to learn about what factors nurses feel contribute to this finding and how hospitals could sustain a more positive unit culture, ultimately leading to increased structural support for FCR. This research could align with learning which institutional factors specifically affect nurses' overall support towards FCR as there is a clear divide between institutions in this study but it is unclear what is causing this divide between institutions. This research may likely be best represented through a qualitative lens.

Limitations

There were many limitations in this study. A major limitation of this study is that it focused on nursing perspectives of FCR, so there were some participants who had never experienced FCR who participated in this study. This lack of experience may have impacted their perspectives of FCR. The sample only represents Southwestern Ontario, and therefore, results may not be generalizable to the rest of Ontario, Canada, or other countries. The sample in this study predominantly identified as female and white, so even though it may be representative of the population, it is difficult to generalize findings to the minority groups.

Participants who responded to the survey self-reported that they met the inclusion criteria, and given that there was an incentive associated with the completion of the survey, participants could have been dishonest about meeting the inclusion criteria. This was mitigated by having contact personnel only send an email invitation to eligible participants and by posting flyers only within eligible hospital sites. A question at the beginning of the survey also screened that participants met the inclusion criteria.

The survey tool itself has limitations, as it underwent limited reliability and validity testing. This was due to the survey design being mainly descriptive in nature. A Cronbach's alpha was determined in creating the S*upportiveness* variable, and face validity was obtained by three different critical care RNs regarding the overall survey.

Since many of the questions within this survey were adapted or developed based on previous literature, there is a risk that participants may have misinterpreted some questions. Face validity was obtained to reduce this risk; however, it is still possible. Also, participants may have felt the need to respond in a positive and socially desirable manner, especially since the primary investigator is employed at one of the hospital sites under study. However, the survey was

delivered electronically rather than face-to-face and was made anonymous to help reduce the risk of social desirability.

Conclusion

This study highlighted nursing perspectives of FCR in six adult critical care units across four Southwestern Ontario hospitals. Most critical care nurses in this study were overall supportive of FCR. This study investigated various structures and processes that nurses find support FCR. Nurses need to feel supported with appropriate structural supports, such as adequate staffing, to allow them adequate time to include families in FCR. Nurses in this study reported that the increased length of time of FCR was a large structural barrier. Also, supportive processes, such as the unit culture towards FCR, can make an impact on how well nurses are able to incorporate families into FCR. Nurses noted that the greatest advantage of FCR was that the healthcare team can update the family on the patient's condition, and the greatest barrier to FCR is the inconsistent or unknown timing of rounds. Finally, it highlighted that participants' ethnicity and the hospital site they are employed at have significant relationships with their overall supportiveness of FCR. Results from this research can help to inform the BScN curriculum to ensure that nursing students are taught how to incorporate FCC practices in advanced nursing settings. This research helped to fill the literature gap regarding nursing perspectives of FCR in adult critical care units. It contributed to the overall body of knowledge on this topic and will help future researchers develop evidence-based best practices for a higher quality, standardized family-centred rounding process.

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APPENDICES

Appendix A

Healthcare Provider Survey

This survey was adapted from the Healthcare Provider Survey used in Au et al. (2017) and from the QFIFE survey used in Hetland et al. (2018) and Hetland et al. (2017).

1. Are you a critical care trained registered nurse currently working in an adult critical care unit at one of these four hospitals [redacted]?

☐ Yes
☐ No

For the purpose of this research, <u>family-centred rounds</u> are defined as critical care patient rounds where family members are present and actively participating.

2. Have you had the opportunity to participate in family-centred rounds?

☐ Yes
☐ No

If yes, please continue to tell us about your experience with family-centred rounds. If no, please continue and tell us your thoughts and expectations of family-centred rounds.

3. I believe that family members should be provided with the option of joining critical care rounds daily.

☐ Strongly disagree
☐ Disagree
☐ Somewhat disagree
☐ Somewhat agree
☐ Agree
☐ Strongly agree

4. Family members want to be invited to critical care rounds daily.

☐ Strongly disagree
☐ Disagree
☐ Somewhat disagree
☐ Somewhat agree
☐ Agree
☐ Strongly agree

5. I am comfortable having family members present during critical care rounds.

☐ Strongly disagree
☐ Disagree
☐ Somewhat disagree
☐ Somewhat agree

☐ Agree
☐ Strongly agree

6. Allowing family members to join in critical care rounds increases my nursing workload.
☐ Strongly disagree
☐ Disagree
☐ Somewhat disagree
☐ Somewhat agree
☐ Agree
☐ Strongly agree

7. My clinical performance is affected by the presence of family members during critical care rounds.
☐ Strongly disagree
☐ Disagree
☐ Somewhat disagree
☐ Somewhat agree
☐ Agree
☐ Strongly agree

8. Family member presence during critical care rounds strengthens my relationship with the family.
☐ Strongly disagree
☐ Disagree
☐ Somewhat disagree
☐ Somewhat agree
☐ Agree
☐ Strongly agree

9. Family member presence during critical care rounds improves family comprehension of the patient's condition and treatments.
☐ Strongly disagree
☐ Disagree
☐ Somewhat disagree
☐ Somewhat agree
☐ Agree
☐ Strongly agree

10. Allowing family members to participate in critical care rounds increases their levels of stress, anxiety, and fear.
☐ Strongly disagree
☐ Disagree
☐ Somewhat disagree
☐ Somewhat agree
☐ Agree
☐ Strongly agree

11. Family members who are involved in critical care rounds are better able to make care decisions for their loved ones.
☐ Strongly disagree
☐ Disagree
☐ Somewhat disagree
☐ Somewhat agree
☐ Agree
☐ Strongly agree

12. Involving family members in critical care rounds increases overall quality of care.
☐ Strongly disagree
☐ Disagree
☐ Somewhat disagree
☐ Somewhat agree
☐ Agree
☐ Strongly agree

13. Family presence during critical care rounds threatens patient confidentiality.
☐ Strongly disagree
☐ Disagree
☐ Somewhat disagree
☐ Somewhat agree
☐ Agree
☐ Strongly agree

14. My unit is adequately staffed to allow me time to involve family members in critical care rounds.
☐ Strongly disagree
☐ Disagree
☐ Somewhat disagree
☐ Somewhat agree
☐ Agree
☐ Strongly agree

15. My unit culture is supportive of family members' presence during critical care rounds.
☐ Strongly disagree
☐ Disagree
☐ Somewhat disagree
☐ Somewhat agree
☐ Agree
☐ Strongly agree

16. Which "family" members should attend critical care rounds?
☐ Close biologic relatives only (including spouse, parents, children, and siblings)

☐ Close and extended biologic relatives (including cousins, grandchildren, aunts and uncles)
☐ All biologic relatives and close friends
☐ Only those specified by the primary family contact or patient

17. What is the maximum number of family members that you are comfortable with joining critical care rounds?
☐ 0
☐ 1
☐ 2
☐ 3
☐ 4
☐ 5
☐ As many as can fit into the physical rounding space comfortably

18. What is the role of family members who join critical care rounds? (Select all that apply)
☐ Listening
☐ Sharing information about the patient
☐ Participating in decision-making
☐ Asking questions
☐ Advocating for the patient
☐ Other (please specify): _____

19. At what time is it appropriate for family to ask questions during critical care rounds?
☐ At the beginning of rounds
☐ At any time during rounds
☐ At the end of rounds
☐ At another time outside of rounds

20. How do you determine which family members should be invited to critical care rounds? (Optional)

21. Does the age of the patient affect your decision to invite the family to critical care patient rounds?
☐ Yes, I think that family should be more present for **younger** patients
☐ Yes, I think that family should be more present for **older** patients
☐ No, the age of the patient does not affect my decision to invite family to critical care patient rounds

22. Does the acuity of the patient affect your decision to invite the family to critical care patient rounds?
☐ Yes, I think that family should be more present for **higher** acuity patients
☐ Yes, I think that family should be more present for **lower** acuity patients
☐ No, the acuity of the patient does not affect my decision to invite family to critical care patient rounds

23. Family member presence during critical care rounds lengthens the duration of rounds for that patient.
- ☐ Strongly disagree
- ☐ Disagree
- ☐ Somewhat disagree
- ☐ Somewhat agree
- ☐ Agree
- ☐ Strongly agree

24. Family members of patients who are hemodynamically unstable should be excluded from participating in critical care rounds.
- ☐ Strongly disagree
- ☐ Disagree
- ☐ Somewhat disagree
- ☐ Somewhat agree
- ☐ Agree
- ☐ Strongly agree

25. Patients on life-sustaining treatments should not have family members involved in critical care rounds.
- ☐ Strongly disagree
- ☐ Disagree
- ☐ Somewhat disagree
- ☐ Somewhat agree
- ☐ Agree
- ☐ Strongly agree

26. Family member presence during critical care rounds decreases the likelihood of discussing unfavourable information.
- ☐ Strongly disagree
- ☐ Disagree
- ☐ Somewhat disagree
- ☐ Somewhat agree
- ☐ Agree
- ☐ Strongly agree

27. There is usually enough time to adequately address all family members' questions during critical care rounds.
- ☐ Strongly disagree
- ☐ Disagree
- ☐ Somewhat disagree
- ☐ Somewhat agree
- ☐ Agree
- ☐ Strongly agree

28. Family member presence during critical care rounds decreases the **frequency** of formal family meetings.
- ☐ Strongly disagree
- ☐ Disagree
- ☐ Somewhat disagree
- ☐ Somewhat agree
- ☐ Agree
- ☐ Strongly agree

29. Family member presence during critical care rounds decreases the **duration** of formal family meetings.
- ☐ Strongly disagree
- ☐ Disagree
- ☐ Somewhat disagree
- ☐ Somewhat agree
- ☐ Agree
- ☐ Strongly agree

30. If the patient is awake, critical care rounds should take place inside the patients' room.
- ☐ Strongly disagree
- ☐ Disagree
- ☐ Somewhat disagree
- ☐ Somewhat agree
- ☐ Agree
- ☐ Strongly agree

31. If the patient is unconscious, critical care rounds should take place inside the patients' room.
- ☐ Strongly disagree
- ☐ Disagree
- ☐ Somewhat disagree
- ☐ Somewhat agree
- ☐ Agree
- ☐ Strongly agree

32. My unit is physically set up in a way that makes involving family members in critical care rounds possible.
- ☐ Strongly disagree
- ☐ Disagree
- ☐ Somewhat disagree
- ☐ Somewhat agree
- ☐ Agree
- ☐ Strongly agree

33. Family member presence during critical care rounds decreases the amount of teaching to medical students and novice nurses provided by the healthcare team during rounds.

☐ Strongly disagree
☐ Disagree
☐ Somewhat disagree
☐ Somewhat agree
☐ Agree
☐ Strongly agree

34. When comparing talking to families during critical care rounds to a family meeting, which setting is better for discussing the following? (check one box per item):

Topic	Critical Care Rounds	Family Meeting
The plan for the day	□	□
The diagnosis	□	□
Goals of care	□	□
The prognosis	□	□
Family members' questions and concerns	□	□
Emotional support for family members	□	□

35. What do you perceive as the value of having family join critical care rounds? (Select your top three)

☐ Opportunity to build rapport with the family
☐ The family can see how the critical care team works together
☐ The family can share valuable information about the patient
☐ The family can provide their impression of the patient's condition
☐ The critical care team can update the family on the patient's condition
☐ The family can participate in formulating the plan
☐ The critical care team does not need to talk with the family later
☐ Family meetings become unnecessary
☐ Other (please specify): _____

36. What factors help you to involve family members in critical care rounds? (Optional)

37. What do you perceive as the greatest barriers for families to join critical care rounds? (Select your top three)

☐ A language barrier between the family and the healthcare team
☐ Family's living proximity to the hospital
☐ Family's access to transportation to the hospital
☐ Family's baseline health literacy
☐ Inconsistent and/or unknown timing of rounds
☐ Physician accents or low tone of voice
☐ Extensive use of medical jargon within the healthcare team
☐ Physician-dependent inconsistency in family involvement and rounding structures
☐ Other (please specify): _____

38. What barriers do you face as a nurse when trying to involve family members in critical care rounds? (Optional)

39. What concerns you most about involving family members in critical care rounds? (Optional)

40. What do you do to incorporate family into critical care rounds? (Select all that apply)
☐ Call family to let them know what time we will be rounding on the patient
☐ Introduce the family to the healthcare team
☐ Elicit questions from the family
☐ Avoid using medical jargon when speaking to other healthcare providers
☐ Provide a "lay person" summary during or after rounds
☐ I do not do anything differently
☐ Other (please specify): _____

41. In what ways has the COVID-19 pandemic affected family members' presence during critical care rounds? (Select all that apply)
☐ Limited number of visitors
☐ Restricted visiting hours
☐ Enforced vaccination status of visitors
☐ Decreased invitations to attend rounds
☐ Virtual family presence during rounds
☐ It has not affected family presence on rounds
☐ Other (please specify): _____

42. How has the COVID-19 pandemic affected your perceptions of family-centred rounds? (Optional)

43. Do you believe that family-centred rounds should be implemented (or reimplemented) in your institution?
☐ Yes
☐ No

44. What is your age? (optional) ___

45. What gender do you most identify with? (optional) _____

46. What is your ethnicity? (optional)
☐ White
☐ South Asian (e.g., East Indian, Pakistani, Sri Lankan)
☐ Chinese
☐ Black
☐ Filipino
☐ Latin American
☐ Arab
☐ Southeast Asian (e.g., Vietnamese, Cambodian, Laotian, Thai)

☐ West Asian (e.g., Iranian, Afghan)
☐ Korean
☐ Japanese
☐ Indigenous (e.g., Metis, Inuq (Inuit), First Nations)
☐ Other (please specify): _____

47. Number of years in practice as a registered nurse: _____

48. Number of years in practice in critical care: _____

49. Which hospital site are you from? (optional)
☐ [redacted]
☐ [redacted]
☐ [redacted]
☐ [redacted]
☐ [redacted]
☐ [redacted]

50. What nurse-to-patient ratio is most often assigned to nurses on your unit?
☐ 1 nurse to 1 patient
☐ 1 nurse to 2 patients
☐ 1 nurse to 3 patients
☐ 1 nurse to 4 patients

51. What is your highest level of education?
☐ Diploma of Health Science in Nursing
☐ Bachelor of Science in Nursing Degree (BScN)
☐ Master of Nursing (MN)/Master of Science in Nursing Degree (MScN)
☐ Primary Health Care Nurse Practitioner Graduate (NP)
☐ Doctor of Philosophy Degree in Nursing (Ph.D.)
☐ Other (please specify): _____

52. Did your schooling provide you with a course that focused on family nursing? (Select all that apply)
☐ Yes, my undergraduate studies had a family nursing course
☐ Yes, my graduate or post-graduate studies had a family nursing course
☐ No

53. To what extent do you believe your education prepared you to participate in family-centred rounds?
☐ Very prepared
☐ Somewhat prepared
☐ Somewhat unprepared
☐ Very unprepared

54. Have you taken a course or training unrelated to your education listed above that has helped to prepare you for family member presence during critical care rounds?
☐ Yes – if so, please list the name of the course: _____
☐ No

55. Do you intend to leave your current critical care nursing position in the next six months?
☐ Yes
☐ No

56. Do you want to submit your answers to this survey?
☐ Yes
☐ No

57. Do you want to be contacted again for follow-up research in the future?
☐ Yes
☐ No

58. Would you like to receive a $15 Tim Hortons or Starbucks gift card as compensation for your time?
☐ Yes
☐ No

THANK YOU for participating in the survey, we highly value your opinions.

Appendix B

Research Ethics Board Clearances

REB Clearance

E **ethics@uwindsor.ca <ethics@uwindsor.ca>** Today at 12:18 PM

To: Gina Pittman; Jody Ralph; Felicia Varacalli; **Cc:** Office of Research Ethics

Today's Date: January 30, 2023
Principal Investigator: Ms. Felicia Varacalli
REB Number: 42469
Research Project Title: REB# 22-177: "Nurse Perspectives on Family-Centred Rounds in Adult Critical Care Units"
Clearance Date: January 30, 2023
Annual Renewal Date: January 30, 2024

This is to inform you that the University of Windsor Research Ethics Board (REB), which is organized and operates according to the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans and the University of Windsor Guidelines for Research Involving Human Participants, has granted clearance for the ethical acceptability of your research project.

An Annual Renewal/Progress Report must be submitted one (1) year after the clearance date for renewal of the project. The PI may request a modification in the annual report date to align with other annual reporting requirements. The REB may ask for monitoring information at some time during the project's approval period. A Final Report must be submitted at the end of the project to close the file.

During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the REB. Approval for modifications to an ongoing study can be requested using a Request to Revise Form.

Investigators must also report promptly to the REB:

a) changes increasing the risk to the participant(s) and/or affecting the conduct of the study;
b) all adverse and unexpected events that occur to participants;
c) new information that may affect the risks to the participants or the conduct of the study.

Forms for submissions, notifications, or changes are available on the REB website: www.uwindsor.ca/reb. If your data are going to be used for another project, it is necessary to submit a secondary use of data application to the REB.

Best wishes for your research project.

Sincerely,

Dr. Scott Martyn
Chair, Research Ethics Board
University of Windsor
2146 Chrysler Hall North
519-253-3000 ext. 3948
Email: ethics@uwindsor.ca

Request to Revise cleared

E ethics@uwindsor.ca <ethics@uwindsor.ca>
To: Felicia Varacalli; Cc: Office of Research Ethics

Monday, February 6, 2023 at 10:58 AM

February 06, 2023

Our File No: **42469**
Project Title: **REB# 22-177: "Nurse Perspectives on Family-Centred Rounds in Adult Critical Care Units"**
Status: **Active**

Dear Ms. Varacalli,

Thank you for submitting your request to revise for "REB# 22-177: "Nurse Perspectives on Family-Centred Rounds in Adult Critical Care Units"".

This request has been reviewed and you are now cleared to proceed with the proposed changes to the REB contact person at [redacted] has been replaced by [redacted] as the REB Administrator at [redacted]

PLEASE NOTE - Any revisions to the cleared protocol should generally be submitted on the Request to Revise form to the University of Windsor REB.

If we can be of any further assistance, please do not hesitate to contact our office.

Sincerely,

Dr. Scott Martyn
Chair, Research Ethics Board
University of Windsor
2146 Chrysler Hall North
519-253-3000 ext. 3948
Email: ethics@uwindsor.ca

[redacted]

Research Ethics Board

[redacted]

Meeting Review Date:	February 22, 2023
Project Title:	Nurse Perspectives on Family-Centred Rounds in Adult Critical Care Unit
Principal Investigator	Felicia Varacalli
REB File Reference:	REB # 23-457

Submission Documents Reviewed:

- Ethics Submission Form for Chart Abstraction
- Consent Form
- Recruitment Emails, Flyers
- Study Questionnaire
- Departmental Impact

Type of Approval:	**Category A – Full Approval**
Annual Renewal Date:	February 22, 2024

The [redacted] is constituted and operated in accordance with the Tri-Council Policy Statement for Ethical Conduct of Research Involving Humans (TCPS2) 2022, Canadian Food & Drug Regulations, Division 5 (Clinical Trials), ICH Good Clinical Practice Guidelines E6, U.S. Code of Federal Regulations Title 21 & 45, Federal Wide Assurance (FWA) with the U.S. Office of Human Research Protection, and the Personal Health Information Protection Act, 2004 (PHIPA).

A quorum was present and only voting Research Ethics Board members who are independent of the investigator(s) conducting the study participated in decisions relating to this research.

Your project received a Category A – full approval your research project (granted clearance for ethical acceptability).

An **Annual Renewal Request** must be submitted one (1) year after the approval date for renewal of this project. The REB may additionally ask for monitoring information during the project's approval period, if necessary. A final **Study Completion Report** must be submitted at the end of the project to close the file.

During the course of the research, no deviations from, or changes to, the protocol/proposed project as submitted or documents as approved (i.e. consent form, data collection form, surveys, etc) may be initiated without prior written approval from the [redacted] REB (except when necessary to eliminate hazard(s) to study

[redacted]

participants and [redacted] REB should be notified of these changes promptly after the change is made). Changes to study team members should also be reported to [redacted] REB as amendments. Approvals for modifications to an ongoing study may be requested using an **Amendment Request form**.

Investigators must also promptly report to the REB:

a) Changes increasing the risk to the participant(s) and/or affecting the conduct of the study;
b) All adverse and unexpected events that occur to participants;
c) New information that may affect the risks to the participants or the conduct of the study.

All [redacted] REB forms are available on the website [redacted] If you have any questions or concerns, please contact [redacted]

All correspondence to the Research Ethics Office can be forwarded to, [redacted] or [redacted] Do not hesitate to contact us if you have any questions, and best of luck on your project.

Sincerely,

[redacted]

February 22, 2023

_____

Date

[redacted]

[redacted]

March 2, 2023

Research Project Title: Nursing Perspectives on Family-centred Rounds in Adult Critical Care Units

Principal Investigator: Felicia Varacalli
varacalf@uwindsor.ca

Copies To: Dr. Gina Pittman
gina.pittman@uwindsor.ca
Dr. Jody Ralph
jody.ralph@uwindsor.ca

[redacted]

The Research Project noted above was granted approval on behalf of the [redacted] This approval is granted for a one-year period from the date of this letter.

A Status Report and/or Final Report is due within 30 days of the close of the research project, or when a request for annual renewal is submitted.

During the course of the research, no deviations from or changes to the protocol or consent form may be initiated without prior written approval from the ERB except when necessary to eliminate immediate hazards to the subject (e.g. increased risk). Also, when the changes involve only logistical or administrative aspects of the study (e.g. change in monitor, change in contact information). Expedited review of minor changes in ongoing studies will be considered.

We wish you every success in your research.

[redacted]

[redacted] Chair
[redacted]

External [redacted] - Nurse Perspectives on Family-Centred Rounds in Adult Critical Care Units

BR [redacted]>

Wednesday, February 22, 2023 at 7:48 AM

To: Felicia Varacalli

Good morning Felicia,

I would like to take this opportunity on behalf of the [redacted] to thank you for taking the time to submit your project "Nurse Perspectives on Family-Centred Rounds in Adult Critical Care Units" for consideration.
The above noted research application study was reviewed by the [redacted] Approval is granted to conduct the research project in accordance with the protocol specified in the application.

Requirements for ongoing approval:

a. Annual review of the submission will be undertaken by the [redacted] The annual review will coincide with your REB Annual Renewal Date.
b. Adverse events experienced by subjects enrolled in the trial must be reported to the [redacted]
c. Any changes in the protocol, information sheets, questionnaires, or informed consent documents must be reported to the [redacted] immediately.
d. The [redacted] shall be notified in writing by the principal applicant/office of the principal applicant when the study is complete. The Research Committee would be interested in receiving a short summary of the progress of the trial (i.e. number of patients enrolled, problems encountered, etc.) and a full report of study results, in a timely manner.
e. Should the applicant wish to renew the study for another term, written notice should be provided to the [redacted] two months in advance of commencement of the desired extension. Completion of another application form may be required.

If you have any questions or require additional information, please feel free to contact [redacted]

Congratulations! We look forward to hearing about your final project.

Appendix C

Recruitment Materials

Initial Email

Subject line: Participants needed for study on nursing perspectives on family-centred rounding in adult critical care units

Researchers at the University of Windsor (Ms. Felicia Varacalli, Dr. Jody Ralph and Dr. Gina Pittman) are looking to find out more about the perspectives and experiences of nurses on family-centred rounds in the critical care setting. If you are a registered nurse currently working in an adult critical care setting (ICU or CCU) at [redacted], please take approximately 20 minutes to complete this online survey. All participants will have the option to receive a $15 electronic gift card to Tim Hortons or Starbucks sent to their institutional (hospital) email address. Participation is completely voluntary, and your individual responses will be confidential. You may withdraw at any point in the survey until you choose to submit your responses at the end. Participation in this survey will not affect your current employment status.

[LINK TO SURVEY]

For questions concerning this study, please contact Ms. Felicia Varacalli at varacalf@uwindsor.ca, Dr. Jody Ralph at Jody.Ralph@uwindsor.ca, or Dr. Gina Pittman at Gina.Pittman@uwindsor.ca.

This study was cleared by the [redacted] and University of Windsor Research Ethics Boards.

Reminder Email #1

Subject line: Participants needed for study on nursing perspectives on family-centred rounding in adult critical care units

Researchers at the University of Windsor (Ms. Felicia Varacalli, Dr. Jody Ralph and Dr. Gina Pittman) are looking to find out more about the perspectives and experiences of nurses on family-centred rounds in the critical care setting. If you are a registered nurse currently working in an adult critical care setting (ICU or CCU) at [redacted], please take approximately 20 minutes to complete this online survey. All participants will have the option to receive a $15 electronic gift card to Tim Hortons or Starbucks sent to their institutional (hospital) email address. Participation is completely voluntary, and your individual responses will be confidential. You may withdraw at any point in the survey until you choose to submit your responses at the end. Participation in this survey will not affect your current employment status.

[LINK TO SURVEY]

For questions concerning this study, please contact Ms. Felicia Varacalli at varacalf@uwindsor.ca, Dr. Jody Ralph at Jody.Ralph@uwindsor.ca, or Dr. Gina Pittman at Gina.Pittman@uwindsor.ca.

This study was cleared by the [redacted] and University of Windsor Research Ethics Boards.

Reminder Email #2

Subject line: Participants needed for study on nursing perspectives on family-centred rounding in adult critical care units

Researchers at the University of Windsor (Ms. Felicia Varacalli, Dr. Jody Ralph and Dr. Gina Pittman) are looking to find out more about the perspectives and experiences of nurses on family-centred rounds in the critical care setting. If you are a registered nurse currently working in an adult critical care setting (ICU or CCU) at [redacted], please take approximately 20 minutes to complete this online survey. All participants will have the option to receive a $15 electronic gift card to Tim Hortons or Starbucks sent to their institutional (hospital) email address. Participation is completely voluntary, and your individual responses will be confidential. You may withdraw at any point in the survey until you choose to submit your responses at the end. Participation in this survey will not affect your current employment status.

[LINK TO SURVEY]

For questions concerning this study, please contact Ms. Felicia Varacalli at varacalf@uwindsor.ca, Dr. Jody Ralph at Jody.Ralph@uwindsor.ca, or Dr. Gina Pittman at Gina.Pittman@uwindsor.ca.

This study was cleared by the [redacted] and University of Windsor Research Ethics Boards.

Appendix D

Recruitment Flyer

Appendix E

Consent to Participate

CONSENT TO PARTICIPATE IN RESEARCH

Title of Study: Nurse Perspectives on Family-Centred Rounds in Adult Critical Care Units

You are being asked to participate in a research study conducted by Ms. Felicia Varacalli, Dr. Jody Ralph, and Dr. Gina Pittman at the University of Windsor.

If you have any questions or concerns about the research, please feel to contact Ms. Felicia Varacalli at varacalf@uwindsor.ca, Dr. Jody Ralph at Jody.Ralph@uwindsor.ca, or Dr. Gina Pittman at Gina.Pittman@uwindsor.ca.

PURPOSE OF THE STUDY
The purpose of this study is to explore nursing perspectives on family-centred rounds in six adult critical care units across four Southwestern Ontario hospitals.

PROCEDURES
If you volunteer to participate in this study, you will be asked to complete an online questionnaire asking about your perceptions of family-centred rounding. This survey should take approximately 20 minutes. Your participation is completely voluntary and confidential.

POTENTIAL RISKS AND DISCOMFORTS
There are minimal expected risks associated with this research. Some questions may cause distress or discomfort as they relate to sensitive issues or upsetting experiences. Additionally, there may be dual/multiple relationships between the principal researcher and a group of study participants. If you feel this risk is too significant, you may withdraw your participation at any point until you submit the questionnaire.

POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY
We will be using this data to better understand the perceptions of registered nurses on family-centred rounding practices in adult critical care settings. The information obtained in this survey may be shared with hospitals across Ontario and Canada in an effort to provide better family-centred care, investigate facilitators and barriers to implementation and contribute to the development of evidence-based best practices for family-centred rounds.

COMPENSATION FOR PARTICIPATION
All participants who opt to share their institutional (hospital) email address at the end of the survey will have the option to receive a $15 electronic gift card to Tim Hortons or Starbucks. Personal information will be collected through a separate link and will not be associated with your survey responses.

CONFIDENTIALITY

Surveys will be submitted online and your data will be confidential. This is a multi-site study which will decrease your risk of identification as a participant. Your employer will not be made aware of your responses or of your decision to participate. Any personal information that is obtained in connection with this study will remain confidential. For added protection, research data will not be identifiable upon collection and will be kept on a password-protected computer. All data will be kept in password-protected folders indefinitely and may be used for further studies. Furthermore, study participants will not be individually identified in any publications or presentations that may stem from this research; only aggregated data will be presented.

PARTICIPATION AND WITHDRAWAL

You can choose to participate in this research or not. If you chose not to participate, there will not be any consequences for you. Your employer will not be made aware of your responses or of your decision to participate. If you chose to be in this study, you may withdraw at any time until survey responses are submitted. If you participate in the study and submit a completed survey online, the survey will no longer be able to be withdrawn once it is submitted. Submission of survey responses implies consent for participation in this study.

FEEDBACK OF THE RESULTS OF THIS STUDY TO THE PARTICIPANTS

If you would like to be informed about the findings of this study, you may go to the following website once the findings are analyzed and disseminated.
Website address: https://scholar.uwindsor.ca/research-result-summaries/

SUBSEQUENT USE OF DATA

This data may be used to make recommendations to management at [redacted] to improve policies related to family-centred care and family-centred rounding. This data may also be used to train healthcare staff/students, published in academic journals, and presented at academic conferences.

RIGHTS OF RESEARCH PARTICIPANTS

If you have questions regarding your rights as a research participant, contact:
[redacted]
or
Office of Research Ethics, University of Windsor, Windsor, Ontario, N9B 3P4
Telephone: 519-253-3000, ext. 3948
e-mail: ethics@uwindsor.ca

It is recommended that you print a copy of this page for your records.

VITA AUCTORIS

NAME:	Felicia Varacalli
PLACE OF BIRTH:	Windsor, ON
YEAR OF BIRTH:	1998
EDUCATION:	General Amherst High School, Amherstburg, ON, 2016
	University of Windsor, B.Sc.N., Windsor, ON, 2020