INTERVENTIONS TO IMPROVE NURSE-FAMILY COMMUNICATION IN THE EMERGENCY DEPARTMENT: A SCOPING REVIEW

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Preface: Contributions to this Dissertation

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JC was the thesis supervisor for this dissertation. JC helped develop the research topic, providing feedback and valuable guidance throughout every process stage. JC reviewed, edited and approved every chapter of this dissertation.

ML and JT were part of the thesis advisory committee. They approved the protocol and offered important feedback and guidance for the review. ML and JT both reviewed and edited every chapter of this dissertation. JT also was the internal examiner for the thesis defense.

LB was the secondary reviewer for the scoping review. LB provided a secondary screen for the title and abstract and full text phase of the review as well as independently extracted data on the intervention being studied and verified the critical appraisal and other data extracted for accuracy.

VC helped guide the development of the search strategy used in the scoping review and provided feedback. VC also conducted a Peer Review of Electronic Search Strategy (PRESS) for the scoping review.

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Abstract

Background: Family members often accompany patients to the emergency department and play an important role in caring for the patient. Communication between nurses and family members has long been identified as a priority of care and an area needing improvement due to the increasingly busy nature of the emergency department. Good communication can improve patient outcomes, satisfaction with care and decrease patient and family anxiety.

Objective: To determine and describe what interventions exist to improve nurse-family communication during the waiting period of an emergency department visit.

Methods: A scoping review was completed following the Joanna Briggs Institution methodology: (1) identify the research question, (2) define the inclusion criteria, (3) use a search strategy to identify relevant studies using a three-step approach, (4) select studies using a team approach, (5) data extraction, (6) data analysis, and (7) presentation of results.

Results: The search yielded 1,771 articles of which 20 were included in the review. An additional 7 articles were found in the grey literature search. Results were analyzed using basic content analysis, reported using tables, figures, descriptive statistics and narrative synthesis and organized based on Peplau's Theory of Interpersonal Relations. A variety of pediatric and adult interventions were found targeting staff members and family members and took place worldwide. Two models were developed based on the results of this review: a communication model for triage nurses and one for all emergency department nurses.

Conclusion: Communication plays an essential role in emergency department nursing care. Communication skills training should be built into nursing curriculum, nursing orientation, triage training, and continuing education. Future research should focus on evaluating the effectiveness

of interventions using a standardized scale, understanding the specific needs of family members and effectively teaching communication skills to emergency department nurses.

Keywords

Emergency nursing, family nursing, nurse-family communication, waiting rooms, triage

Vignette: A Parent's Perspective Coming to the Emergency Department

It's 2 am, my daughter (8 years old) has been crying from stomach pain all night. The Tylenol I gave her didn't help. She just started vomiting. I rush to the nearest emergency department and get in line for triage. There are three other families ahead of me. I am trying to be patient, but my daughter won't stop crying. It is finally my turn; I rush to the nurse and explain that I am worried my daughter has appendicitis and she is in so much pain. The nurse stops me and says, "I will listen to everything in a minute, but I need your daughter's health card and her weight to start". Can't she see my daughter crying? I finally explain what has been going on, and the nurse does her exam. She gives my daughter a dose of Advil and sends us to the waiting room.

I am surrounded by other families. My daughter settled a little with the medicine the nurse gave her. I have no idea how long I will have to wait, and I have a thousand questions. Is it safe for my daughter to wait? I thought appendicitis was serious. The triage nurse didn't say anything about her exam. Is she going to get worse? How will I know if she is getting worse? Could she die while waiting? My daughter asked me for something to eat. Is she allowed to eat? What if she throws up again? Who can I ask?

A staff member walks through the waiting room. I try to get their attention but realize they are treating another patient who can't breathe and doesn't have time to answer my questions. I sit back down with my daughter, resigned that this will be a long, anxious night, and I hope my daughter will be okay.

Reflexivity Statement

I have chosen this topic in part because of my personal clinical experience. I currently work at the Children's Hospital of Eastern Ontario (CHEO) as a Registered Nurse in the emergency department. I have worked in that role for three years. During that time, I have identified the waiting period as challenging for patients, families, and nurses. Patients and families feel frustrated and anxious about waiting to see the doctor and don't understand the process. Nurses do not know how to address this optimally as they are not able to affect the wait times or solve their concerns adequately. This can lead to some avoidance of the waiting room due to, what they consider, difficult interactions.

During the Covid-19 pandemic, there was an uptake in non-emergent visits because of a lack of access to their community health care provider when restrictions were lifted. At CHEO, the volume of patients increased dramatically, and we were over capacity every day while suffering staff shortages due to isolation requirements. This has caused the wait times and families' frustration to increase.

I came up with this topic while working a night shift in the ambulatory zone, which is a lower acuity area with a very long patient wait time. I was frequently asked for updates from families about the wait times and the ED process, and their frustration increased the longer they waited. I wondered what strategies I could use to communicate better and address their concerns during this waiting period. While searching the literature, I found that my observations were supported and that this would be an important clinical issue to address and thus devised this research study.

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Chapter 1: Introduction

The Problem

Clear communication allows individuals to express needs and establish connections (Kourkouta & Papathanasiou, 2014). In nursing, communication is vital to establishing a therapeutic relationship and meeting the needs of the patient and family (Kourkouta & Papathanasiou, 2014). Good communication entails being able to convey messages in a clear and understandable way while allowing the other party to express their needs and feel heard and understood (Kourkouta & Papathanasiou, 2014). Good communication is especially important in the emergency department (ED) because of the nature of the environment. EDs are overcrowded and unpredictable, with a high rate of patient turnover (Graham & Smith, 2016). The relationships developed in the ED are short-term and time-pressured but nonetheless essential for patient safety and satisfaction (Pun et al., 2015). Family members are an important part of a patient's support system and often accompany them to the ED. Family members may even be the main contact for communication as patients in crisis may not be able to communicate their needs, such as in the case of pediatrics, delirium, mental health crises, or unconsciousness (Cerel et al., 2006). As such, communication with family members is as important as communication with the patient to ensure optimal patient outcomes and satisfaction for all involved (Ekwall, 2009). However, nurse-family communication in both pediatric and adult EDs has been identified as needing improvement by research dating back 20 years (Ammentorp et al., 2005; Bongale & Young, 2013; Bull et al., 2021; Taylor et al., 2006; Sonis et al., 2018; Young & Flower, 2002).

In the pediatric context, parents are dissatisfied with health care provider (HCP) communication in the ED. Patient experience data was extracted from August 2019 to December 2021 from the ED at the CHEO, and it was found that 23% of complaints were about nurse-

family communication (Bagshaw & Sullivan, personal communication, 2022). This parental dissatisfaction is well documented in the literature as well (Byczkowski et al., 2013; Wennberg-Capellades et al., 2021). Parents express wanting more information about the ED process, including how triage works, what the family is currently waiting for, the next steps, updates on their child's test results, and wait times (Byczkowski et al., 2013; Wennberg-Capellades et al., 2021). The waiting period is of particular concern as there is a lack of information regarding the ED and triage process, wait-time expectations, and the severity of the child's condition, compounded by infrequent updates about delays, thus increasing parental anxiety and frustration (Perret et al., 2017). Parents also want emotional support, shared decision-making, and the opportunity to ask questions while being listened to with compassion and respect (Byczkowski et al., 2016). They want the answers to those questions to be clear and understandable (Byczkowski et al., 2016; Wennberg-Capellades et al., 2021). Families are more satisfied with their care when they feel informed of the process and wait times and have clear explanations of treatment and care (Byczkowski et al., 2016; Wennberg-Capellades et al., 2021).

Data is similar in the adult context; the main factors that impact patient experience include staff communication, wait times, and staff attitude (Bongale & Young, 2013; Sonis et al., 2018). The unequal power dynamic between patients/families and staff could lead to patients feeling like a burden and questioning the validity of their ED visit (Bull et al., 2021). Patients and families wish to feel respected, valued and taken seriously (Bull et al., 2021). They are dissatisfied when they lack knowledge about the patient's health condition, how the ED works, and wait time expectations and when they lack support from the ED staff (Forsgärde et al., 2016). Patients and families are more satisfied when they feel informed about the triage process, wait times, and their care plan (Blackburn et al., 2019; Bull et al., 2021). They want clear

explanations of their treatment and the ability to ask questions (Blackburn et al., 2019; Bull et al., 2021). Specifically, during the waiting period of the ED visit, explanations of wait times, ED process, and a caring, respectful attitude from nurses are important in determining patient satisfaction (Burström et al., 2013).

The Importance of Nurse-Family Communication

Satisfaction with the care provided is an important indicator of hospital care quality as it impacts patient health outcomes. In both adult and pediatric contexts, when patients and families are satisfied with the care received, they are more likely to adhere to treatment guidelines (Byczkowski et al., 2013; Locke et al., 2011; Sonis et al., 2018). Communication, in particular, influences this because when the patients/families feel listened to, valued, and a partner in their care, they become more invested in the decisions and care plans (Byczkowski et al., 2013; Locke et al., 2011; Sonis et al., 2018). This increases the patient and family's trust in the health care provider/hospital (Al-Kalaldeh et al., 2020), the overall opinion about the hospital and the likelihood of recommending that facility for care (Ekwall et al., 2009). The opinions/ recommendations of important support people can influence the perceptions of others of the hospital. If family members are dissatisfied and do not recommend the hospital for care, this can influence the views of their friends, family, and their children (Andrew et al., 2014; Curley, 1997; Henson, 1997). Thus, impacting the future health care outcomes of a large group of individuals. It may also mean that the patient or family will not return to that ED the next time they need it, resulting in poor patient outcomes (Andrew et al., 2014).

Not only does communication improve satisfaction with care, but it also influences patient/family anxiety. Visiting an ED for care is stressful, and patients and families have a higher level of anxiety than normal, leading to poor coping skills and a decreased ability to

communicate effectively (Ekwall et al., 2009; Embong et al., 2020). Lack of communication increases the anxiety level of patients and family members (Bingöl & Ince, 2021; Ekwall, 2013). Anxiety triggers the stress response system, resulting in biological and psychological changes in the body (Ekwall et al., 2009). Anxiety can increase heart rate, respiration rate, and blood pressure (Myers & Dewall, 2015). It can cause headaches, dizziness, and body pain (Myers & Dewall, 2015). It can decrease working memory (Luethi et al., 2009) and the effectiveness of information processing (Felt et al., 2021). Anxiety can also increase aggression. In one study, lack of communication/poor communication was found to be the primary factor causing family members to perpetrate violence against HCPs due to increased anxiety levels (Bingöl & Ince, 2021). Furthermore, in another study, more than half of violent incidents occurred during triage or within 1 hour of arrival while waiting to be seen by a physician. Therefore addressing anxiety from the start of the visit is crucial (Lau et al., 2012).

Addressing patient and family anxiety levels through improved communication may also lead to increased satisfaction, decreased violence and improved patient outcomes (Ekwall et al., 2009; Lau et al., 2012). The families that spoke to nurses during the wait time had less anxiety and thus expressed being more satisfied with their care (Ekwall et al., 2009; Ekwall, 2013). Additionally, there is some evidence to suggest that parental anxiety may increase the anxiety of their child, which can increase the child's experience of pain, thus increasing the distress level of both parties (Sağlık & Çağlar, 2019). Reducing anxiety during the waiting period of the ED visit may also improve patient symptoms and make it easier for clinicians to diagnose (Musey et al., 2018; Kline et al., 2019). Additionally, since anxiety impacts the patient and family's ability to process information, addressing the anxiety through improved communication can increase their

ability to ask questions and retain important information about the treatment plan (Gignon et al., 2014).

Wait times are increasing worldwide as EDs become increasingly busy, staff shortages have become the new normal, and HCP burnout is high (Coughlan & Corry, 2007; Rozo et al., 2017; Phillips et al., 2022). The Covid-19 pandemic exacerbated these issues and some EDs faced closures due to staff shortages (Corlade-Andrei et al., 2022; Weeks, 2022). Triage nurses are often responsible for reassessing and caring for the waiting room in addition to their triage duties (Innes et al., 2015). Increasing volumes and staff shortages mean these reassessments get delayed or missed and there is little opportunity to reassure and communicate with families thus increasing anxiety and uncertainty of patients and families (Innes et al., 2021). With patients and families waiting longer, anxiety and frustration levels are increasing as waits hit unacceptable levels (Burström et al., 2013). This has led to an increasing number of patients who leave without being seen (LWBS) by a physician (Brar et al., 2018). Lack of communication from triage nurses about wait time expectations is one of the reasons that patients decide to leave (Brar et al., 2018). Patients who LWBS are at increased risk of adverse outcomes as they may not understand the severity of their illness or seek appropriate care alternatives (Rowe et al., 2006). Improved nurse communication about patient conditions, patient acuity, and wait time expectations may decrease this LWBS population (Rowe et al., 2006).

ED nurses have also identified communication with families as needing improvement. Nurses describe having frequent interruptions in the ED that impacts their communication with families and leads to worse care as it can lead to nurses missing important information (Johnson et al., 2021; Kwon et al., 2021). Poor nurse-family communication, in other words, being unable to convey messages effectively, can lead to nurses avoiding families where communication is

complex, which can also increase medical errors (Al-Kalaldeh et al., 2020). When faced with challenging interactions, poor communication skills may increase nurses' stress levels, impair their decision-making capacity, and lead to emotional exhaustion (Al-Kalaldeh et al., 2020). This, in turn, can lead to nurse burnout. ED overcrowding, increased wait times, patient/family frustration, violence against HCPs and staff shortages have all contributed to increased HCP burnout (Rozo et al., 2017). As burnout increases, so will ongoing poor communication, medical errors, and staff shortages as nurses leave the profession and ED demands increase (Rozo et al., 2017). Improving communication skills and ways to approach difficult situations can increase nurses' confidence and aid in building resilience against burnout (Philips et al., 2022). Establishing therapeutic relationships with families through good communication can also increase nurse satisfaction and decrease moral distress (Curley, 1997; Gunther, 2001).

Study Purpose

Communication has long been a priority of care for patients and their families. It is essential for patient satisfaction, positive patient outcomes and nursing satisfaction (Ammentorp et al., 2005; Byczkowski et al., 2013; Curley, 1997; Gunther, 2001; Locke et al., 2011; Sonis et al., 2018). Barriers such as the chaotic, unpredictable, and overcrowded nature of the ED (Graham & Smith, 2016) make nurse-family communication exceedingly challenging. The aim of this study is to determine and describe what interventions exist to improve nurse-family communication during the waiting period of an ED visit. A scoping review was completed to meet this goal. Synthesizing the available interventions will provide a greater understanding of what interventions currently exist and allow teams of clinical managers and researchers to further explore these interventions in different ED contexts, including pediatrics. This study intends to

contribute to improving nurse-family communication in the ED to increase family satisfaction levels, decrease family anxiety, and improve nursing practice.

Study Layout

This thesis consists of six chapters. The first chapter outlines the research problem and why that problem is important, as well as presents the aim of this study. The second chapter consists of a literature review that will present what has previously been studied in relation to the research topic and highlight gaps in the literature. Chapter three will discuss the philosophical underpinnings guiding this study and the theoretical framework used to help understand and explain the research findings. The fourth chapter will present the methodology used to complete this scoping review. The fifth chapter will describe the results of the scoping review. The sixth and final chapter will present a thoughtful discussion of the results and conclude this study by offering a brief synopsis of the study findings and clinical implications of this study.

Chapter 2: Literature Review

It is well established that communication is essential to quality ED care and the nurse-family relationship. The first step of this thesis was to complete a literature review, which acts as a preliminary step in the coming scoping review, to determine the landscape of the literature surrounding nurse-family communication and identify any gaps. The aim of this literature review was to identify family needs concerning visiting the ED and interventions that met those needs that could be applied to the ED. A scoping review will follow to thoroughly answer the research question of this thesis specifically. This literature review was conducted using Medline (Ovid) with the keywords (and variations of) "communication", "patient satisfaction", "emergency department", and "nurse-family relationship". There was no language or date limit. Discharge communication was not included as it impacts only one part of the visit and is often physician based. This review found few studies whose intervention and outcome measures were to improve nurse-family communication, particularly in the pediatric context. The included studies elucidated patient and family communication needs, targeted improving communication to improve patient satisfaction and aimed at improving patient safety and decreasing violence against HCPs that had improving communication as a component.

Pediatric Literature

Family Needs and Expectations

In the pediatric context, many studies were found that addressed family needs, one of those needs being communication. In the pediatric ED, seven studies were found that discussed improving patient and family satisfaction by meeting family needs and expectations. These studies were quantitative (n = 3) (Johnson et al., 2012; Keijzers et al., 2010; Locke et al., 2011), qualitative (n = 2) (Byczkowski et al., 2016; Peeler et al., 2019), and mixed methods (n = 2)

(Byczkowski et al., 2016; Wennberg-Capellades et al., 2021). General characteristics and results of these studies can be found in *Table 1*. As discussed in the previous section, the interaction between the HCPs and the family was an important indicator of family satisfaction (Byczkowski et al., 2013; Byczkowski et al., 2016; Johnson et al., 2012; Peeler et al., 2019; Wennberg-Capellades et al., 2021). The qualitative data revealed that information and communication (n = 4) (Byczkowski et al., 2013; Byczkowski et al., 2016; Peeler et al., 2019; Wennberg-Capellades et al., 2021), courtesy, respect and kindness (n = 3) (Byczkowski et al., 2013; Byczkowski et al., 2016; Wennberg-Capellades et al., 2021), and consideration of parents views and input (n = 3) (Byczkowski et al., 2013; Byczkowski et al., 2016; Peeler et al., 2019) were important indicators of parental satisfaction. These studies discussed communication strategies such as updating families frequently, treating the families with respect and courtesy, listening to their needs, and answering their questions in a clear and understandable way to improve these interactions (Byczkowski et al., 2013; Byczkowski et al., 2016; Peeler et al., 2019; Wennberg-Capellades et al., 2021). No concrete examples were given, and these strategies have not been evaluated in subsequent studies.

The quantitative data used hospital patient experience surveys (n = 3) (Byczkowski et al., 2013; Johnson et al., 2012; Locke et al., 2011), a care transition measure (n = 1) (Keijzers et al., 2010) and a family-centred care questionnaire (n = 1) (Wennberg-Capellades et al., 2021) to evaluate patient/parental satisfaction. No study used the same outcome measure. These studies identified the following as drivers of patient satisfaction: being kept informed about care (n = 2) (Johnson et al., 2012; Locke et al., 2011), pain management (n = 2) (Byczkowski et al., 2013; Locke et al., 2011), how well the health care team worked together (n = 1) (Byczkowski et al., 2013, wait times (n = 2) (Byczkowski et al., 2013; Johnson et al., 2012), approachability of staff

(n = 1) (Wennberg-Capellades et al., 2021), ability to ask questions and information provided from nurses and physicians (n = 1) (Wennberg-Capellades et al., 2021), nurses attentiveness to needs (n = 2) (Johnson et al., 2012; Locke et al., 2011), and staff introductions (n = 1) (Johnson et al., 2012). Though these were identified as important contributors to satisfaction, only two studies examined interventions to improve these factors. Keijzers et al. (2010) implemented a pediatric ED initiative (PEDI) team, which consisted of a dedicated pediatric physician and registered nurse (RN), to improve satisfaction. While the patients treated by this team had shorter length of stays, it was ineffective to improve satisfaction. Locke et al. (2011) trialed the health care team paying specific attention to patient/family communication during the visit and implemented a 24-hour post-discharge phone follow-up. This study did not identify specific strategies that the health care team could use to improve their communication with families. The post-discharge phone call (p = .002), being informed about delays (p = .001), and nurses' attention to needs (p = .001) were found to significantly improve patient satisfaction.

Two quantitative studies were found that addressed parental needs that were not evaluated by parental satisfaction. One pediatric hospital trialed a slide-presentation educational initiative in the waiting room to address family needs (Reid et al., 2017). This video explained the triage process, wait-time expectations and provided general information about common health concerns such as head injuries, fever, and gastroenteritis (Reid et al., 2017). Results showed that the video helped parents understand the ambulatory zone process (79.9%), but there was less uptake about common health concerns. Similarly, an app called InfoKids, was developed by another group of researchers that provides information about when to go the ED, how to get there, wait time expectations including real-time waits and acuity, ED process explanations and educational material for common health problems (Ehrler et al., 2018). It also

helped streamline the administrative process by allowing families to enter their information early. Once in ED, it also offered a messaging system for families of lower acuity, so they could leave the department and get notified when it was their turn (Ehrler et al., 2018). While there is no direct nurse-family communication, these interventions were implemented to meet the information needs of the families by answering commonly asked questions.

Communication Interventions

Four studies were found that examined meeting family's communication needs through specific communication interventions in the pediatric ED (Kuehnel et al., 2019; Marcilly et al., 2022; Tothy et al., 2016; Williams, 2017) though only three will be discussed in this section since the study by Tothy et al. (2016) will be presented as part of the scoping review results. Studies were quantitative (n = 1) (Kuehnel et al., 2019) and qualitative (n = 2) (Marcilly et al., 2022; Williams, 2017). General characteristics of the studies can be found in *Table 1.* One study focused on reducing the number of patients that LWBS by a physician by improving communication with families (Williams, 2017). This study trialed placing physicians and nurse practitioners at triage and having administrative leaders trained to provide medical prioritization round regularly in the patient waiting room to improve communication and decrease LWBS rates (Williams, 2017). However, the outcome being measured in this study was LWBS rates so while those rates did decrease (by 2.36 %) with this intervention, it is unclear whether communication improved as a result (Williams, 2017).

Another intervention found was an information tool designed in collaboration with parents to improve the ED experience (Marcilly et al., 2022). This information tool became an information screen that detailed the ED care process and where one was in the waiting queue. The only involvement of the nurse in this intervention was to let the child pick an avatar that

represents themselves in the waiting queue. This tool may improve perceived communication with families and address the informational needs of families, but communication was not an outcome measured. This information tool is purely theoretical currently, and the next step is to develop a prototype (Marcilly et al., 2022). It is unclear whether nurses will be involved with this tool in terms of updating where a family is in the queue.

One study aimed to improve nurse and physician communication scores; however, it did not collect data specific to addressing communication during the ED waiting period (Kuehnel et al., 2019). This study focused on team communication between HCPs in order to streamline communication with families (Kuehnel et al., 2019). They tested eight different interventions, among which they standardized language used to convey chief complaint, implemented whiteboards in patient rooms to introduce team members and the plan of care, distributed communication devices to physicians and nurses to facilitate contact, and distributed information to families describing team members, ED process, and average wait times and length of stay (Kuehnel et al., 2019). A full list can be found in *Table 1*.

Table 1

Characteristics of Pediatric Studies Included in Literature Review

First author, year	Study type	Aim	Participants	Results	Intervention
Byczkowski, 2013	Mixed methods	To develop a comprehensive view of aspects of care associated with parental satisfaction with pediatric ED visits.	2,442 parents were interviewed	Overall parental satisfaction was best predicted by how well physicians and nurses work together (90 % satisfied), wait times (96 % satisfied), and pain management (94 % satisfied). Themes from the qualitative data include: timelines/efficiency, information and communication, quality of medical care, courtesy/respect and kindness, attention to family and patients nonmedical needs, consideration of parents views and input, pain management, ability to calm the patient, talking directly to the patient, environment, and communication among HCPs.	None
Byczkowski, 2016	Qualitative	To identify and describe dimensions of family-centred care important to parents in pediatric EDs.	68 parents participated	Themes identified include: (1) emotional support (2) coordination (3) elicit and respect preferences and involve the family in care decisions (4) timely and attentive care (5) information, communication and education (6) pain management (7) safe and child-focused environment (8) continuity and transition	None

First author, year	Study type	Aim	Participants	Results	Intervention
Ehrler, 2018	Quantitative	To develop an e-health solution to provide a patient-centred experience intending to improve the entire emergency care process.	Unclear	The app provides information on when to go to the ED, how to get there, wait time expectations including real-time waits and acuity, ED process explanations and educational material for common health problems. It also lets parents enter administrative information to streamline their ED visit and offers a messaging system for low acuity families so they could leave the ED and get notified when it was their turn.	InfoKids: an app for parents, an ED flow module for parents, and a module for administration
Johnson, 2012	Quantitative	To identify specific patient experience variables that most strongly predict satisfaction as measured by the likelihood to recommend rating.	2,310 patient experience surveys analyzed	The variables that most strongly predicts likelihood to recommend was if the nurse or physician kept them informed while in the examination room ($p < 0.001$), staff introducing themselves ($p < 0.001$), and staff checked on you while in the lobby ($p < 0.001$). Median daily wait times and length of stay were controlled in this analysis as they had a significant impact on likelihood to recommend.	None
Keijzers, 2010	Quantitative	To evaluate the impact of a dedicated, free-floating, pediatric-targeted care delivery model on ED waiting times, parent satisfaction, and transition of care.	453 pediatric presentations were analyzed of which the PEDI (pediatric ED initiative) team treated 81 pediatric patients during the intervention period.	The intervention group had a significantly shorter length of stay in the ED ($p = 0.01$). There was no statistical difference in patient satisfaction or time to be seen by a physician.	PEDI team consisting of a mobile doctor and a registered nurse.

First author, year	Study type	Aim	Participants	Results	Intervention
Kuehnel, 2019	Quantitative	To increase proportion of families responding "always" when asked if they received consistent communication from nurses and providers from 52% to 80% and to increase family satisfaction.	Unclear	Interventions #1, 2, 4, and 7 were abandoned due to no improvement in patient ratings. Families responding "always" when asked if they received consistent communication between nurses and providers increased from 52% to 70% and family satisfaction increased from 62.5% to 75%.	20 person multidisciplinary workgroup met to discuss ways to improve communication and the following strategies were implemented: (1) Added diagnosis and planned tests to comments on patient track board. (2) Divided nursing and providers into teams based on location (3) standardise language included in nursing chief complaint (4) Used scripting during consultation to speak with ED in person prior to patient evaluation. (5) Used whiteboards in patient rooms to write team members names and care plan. (6) Standardised assignment of personalized communication devices to providers and nurses at the start of the shift. (7) Charge nurse and all ED providers huddle at shift change (8) Developed pictorial describing all team members, typical process, average times for visits, labs or imaging.

First author, year	Study type	Aim	Participants	Results	Intervention
Locke, 2011	Quantitative	To improve patient satisfaction scores by improving patient/family caregiver- provider communication and implementing a 24-hour post-discharge phone call.	456 surveys analyzed, with 60 % of caregivers receiving a 24-hour post-discharge phone call	Primary drivers of satisfaction, likelihood of returning and likelihood of recommending for care are being informed about delays ($p = 0.001$), ease of insurance process ($p = 0.001$), overall physician rating ($p = 0.001$), nurse attention to needs ($p = 0.001$), control of pain ($p = 0.001$), and successful completion of post discharge phone call ($p = 0.002$).	Attention to patient/family communication during ED visit and post-discharge phone follow-up.
Marcilly, 2022	Qualitative	To improve parents' experience in the pediatric emergency waiting room by means of an information tool designed during this study.	6 parent participants	An information screen that explained the ED care process and where one was in the waiting queue.	Theoretical informational tool
Peeler, 2019	Qualitative	To provide a description of the lived experiences of parents whose child had received care in a pediatric ED.	18 parents	Themes: (1) I can't imagine my life without them (2) Keeping me up to date with what was happening (3) They treated my child in a way that was toddler friendly (4) They had our child's best interest at heart (5) Working as a team (6) There were games and books in the waiting room	Strategies for positive interactions presented: open communication, competent staff, being seen in a timely manner and being cared for in a family-inclusive, child-friendly way.

First author, year	Study type	Aim	Participants	Results	Intervention
Reid, 2017	Quantitative	To understand parents' awareness of and reactions to a slide presentation based waiting-room educational initiative	520 surveys	68.9% of parents were aware of the slide presentation. 33.7% of parents were able to watch the whole presentation (20 minutes). 79.9% of parents felt the presentation helped them to understand how the ambulatory zone functions. 83.2% of parents appreciated the wait time information. General questions about common health concerns were answered correctly: 58.3% (fever), 56% (gastroenteritis), 50.5% (abdominal pain/constipation), 35.7% (earache) and 17% (head injury).	Slide presentation waiting room education
Wennberg-Capellades, 2021	Mixed methods	To examine perceptions of family-centred care, satisfaction, and quality of communication with health professionals during a pediatric ED visit and to evaluate the perceived usefulness of the information received and adherence to treatment recommendation after discharge.	385 caregivers completed surveys. 37 caregivers completed telephone interviews	Satisfaction with the visit was significantly related to the perception of family-centred care ($p < .001$). Follow up interviews showed that 45.9% of families did not follow treatment guidelines.	None

First author, year	Study type	Aim	Participants	Results	Intervention
Williams, 2017	Qualitative	To understand the primary reason that parents who bring their child to the ED leave without being seen (LWBS) and to engage and empower ED staff to develop and test possible solutions to lower the LWBS rate.	10 staff and family participants	2.36 % decrease in LWBS rate during the 30 day intervention period.	(1) Placing physicians and nurse practitioners in triage. (2) Administrative leaders (who have a role providing medical prioritization) rounding regularly in the patient waiting room.

Literature Gaps

There are several gaps that have been highlighted in this literature review. One, there is a scarcity of pediatric-specific communication interventions, and fewer have specific nurse-family communication interventions during the waiting period of an ED visit. Additionally, parental satisfaction and expectations have previously been explored but offer vague recommendations for addressing needs. Few studies exist that explored implementing changes based on those recommendations. There is also a variety of outcome measures used in the literature that was found. Patient satisfaction was the most common outcome measure, but no studies used the same patient satisfaction scale, and there were few shared items across the scales, making comparisons of interventions difficult. Furthermore, studies from the United States showed that caregivers who primarily completed surveys evaluating patient satisfaction were white, non-Hispanic individuals with private insurance (Lee et al., 2019; Nieman et al., 2014). No Canadian data on this subject was found. While this may not be representative of the world at large, it could indicate that these studies may not be representative of the whole population and more studies need to be completed to look at the experiences of minority groups as only one study reported race as a demographic (Byczkowski et al., 2013). The upcoming scoping review will offer an in-depth exploration of the nurse-family communication interventions available and a thorough exploration of the gaps in the literature and future directions for research.

Adult Literature

Family Needs and Expectations

In the adult context, there are a variety of studies (n = 8) that explore patient and family's experience in the ED and their subsequent needs and expectations for the visit (Blackburn et al., 2019; Bull et al., 2021; Burström et al., 2013; Cooke et al., 2006; Graham et al., 2016; Pytel et

al., 2009; Schouten et al., 2021; Shankar et al., 2013). Several studies address patient and family experience and satisfaction with their ED visit (*n* = 5) (Blackburn et al., 2019; Bull et al., 2021; Burström et al., 2013; Schouten et al., 2021; Shankar et al., 2013). The study by Blackburn et al. (2019) will be presented as part of the scoping review results. Of the four remaining studies, they consist of systematic reviews (*n* = 2) (Bull et al., 2021; Shankar et al., 2013) and qualitative studies (*n* = 2) (Burström et al., 2013; Schouten et al., 2021). Two studies focus specifically on the older adult population (Schouten et al., 2021; Shankar et al., 2013). The general characteristics of these studies are presented in *Table 2*. These studies report that patients and families wish to be treated with respect (*n* = 2) (Bull et al., 2021; Burström et al., 2013), listened to (*n* = 2) (Burström et al., 2013; Schouten et al., 2021), kept informed (*n* = 3) (Bull et al., 2021; Burström et al., 2013; Shankar et al., 2013), provided with quality medical and emotional care (*n* = 3) (Bull et al., 2021; Burström et al., 2013; Shankar et al., 2013), have adequate privacy (*n* = 3) (Bull et al., 2021; Burström et al., 2013; Shankar et al., 2013), reduced wait times and explanations for delays (*n* = 3) (Bull et al., 2021; Burström et al., 2013; Schouten et al., 2021).

Older adults use the ED more frequently due to their expanding population and increasing medical complexities, therefore they have unique needs (Terndrup et al., 2013). Older adults felt that ED staff should initiate the relationship (Shankar et al, 2013), communicate frequently, especially during prolonged waits (Schouten et al., 2021; Shankar et al., 2013), demonstrate friendliness and increased visibility with the waiting room (Schouten et al., 2021), minimize barriers to communication such as physical and mental disabilities (Shankar et al., 2013), and communicate with and involve caregivers (Shankar et al., 2013). Schouten et al. (2021) recommendations included implementing a time-out every 2 hours where HCPs can discuss the patient's status and update the patient to increase the frequency and clarity of

communication and manage wait time expectations. Unique to the older population was the emphasis the patients put on having clear discharge communication and planning (Schouten et al., 2021; Shankar et al., 2013). Transitions of care was a source of anxiety for patients, they wanted to be involved in the discharge planning (Schouten et al., 2013), and to have clear follow-up (Schouten et al., 2021; Shankar et al., 2013), a point of contact after discharge (Shankar et al., 2013) and written instructions (Shankar et al., 2013).

Two studies focused on identifying and meeting family's needs and expectations (Cooke et al., 2006; Pytel et al., 2009). Patients were found to place the highest importance on clear explanations of the reason for tests (Cooke et al., 2006; Pytel et al., 2009), explanations of test results and when to return to the ED (Cooke et al., 2006), the use of plain language (Cooke et al., 2006; Pytel et al., 2009), the ability to ask questions (Pytel et al., 2009), to be listened to (Pytel et al., 2009), to be treated with respect and compassion (Pytel et al., 2009), and to be updated frequently (Cooke et al., 2006; Pytel et al., 2009). Patients felt they should be updated every 30 minutes or less while in the waiting room (Cooke et al., 2006). They expect this to be done in person and using plain language rather than indirect communication through posters, videos, or pamphlets (Cooke et al., 2006).

One scoping review (n = 55 articles) was found to be on a similar topic but focused on factors that impacted communication between the HCP and patient, not specific communication interventions to be utilized by nurses (Graham et al., 2016). The review resulted in a conceptual framework called the T.IP.S framework (Team factors, Interpersonal factors, and Situational factors). This framework identified patient and HCP related facilitators and barriers to communication within the themes: teams, interpersonal and situational (Graham et al., 2016). Though this review focused mainly on the physician-patient relationship, relevant to the nurse-

family relationship are the interpersonal factors that affect communication. Patients and families desire introductions from personnel and that interactions are friendly, courteous, respectful, and empathetic. They want the ability to ask questions and have the answer in plain language. Patient factors that affect this interaction include the family's health literacy and the ED's unfamiliarity (Graham et al., 2016).

Table 2

Characteristics of Adult Studies Included in Literature Review

First author, year	Study type	Aim	Participants	Results	Interventions
Bull, 2021	Systematic review	To describe patient experiences in the ED from the patient's perspective.	54 studies included	Themes: (1) Relationships between ED patients and care providers (2) Spending time in the ED environment	Two interventions presented in the systematic review: (1) Fast tracking in the ED (2) Changing the environment in the ED of a maternity unit
Burgess, 2019	Quantitative	To compare current triage practice within a metropolitan ED with evidence-based practice guidelines and implement strategies to ensure triage is following best practice guidelines.	200 triage episodes were audited	Significant improvement with reassessment of patients waiting for treatment ($p = < 0.001$), and the time taken for each triage ($p = 0.017$).	(1) Meeting with senior nurses to discuss barriers and collaborate to come up with solutions (2) Creation of a formal Clinical Support Nurse role description to include support of triage and reassessment and care of waiting room patients. (3) Standardize documentation through mandatory completion of fields in the triage document (4) Changing the triage environment to include signs and privacy (5) Improving communication through discussion with nurses
Burström, 2013	Qualitative	To explore what is actually going on in an ED.	76 hours of participant observations 26 focus group staff participants	Themes: (1) Reduce non-acceptable waiting (2) Signs of non-acceptable waiting: physical densification, contact seeking and critical situations emerging.	(1) Increasing patient flow by structure pushing and shuffling around patients. (2) Changing the waiting experience by calming and informing, and feinting to cover up.

First author, year	Study type	Aim	Participants	Results	Interventions
Calder-Sprackman, 2021	Mixed methods	To describe and develop an understanding of the information needs of patients in the ED waiting room with respect to ED wait time notification.	240 questionnaire participants 7 focus group participants	Themes: (1) wait time definition (2) wait time notification (3) communication (4) education (5) patient expectations (6) utilization of the ED (7) patient behaviour (8) physical comfort (9) patient empowerment 81.3% of patients wanted to know ED wait times before arrival. 90.8% wanted ED wait times posted in the waiting room.	Wait time displays
Charrier, 2021	Qualitative	To identify strategies implemented by emergency care providers when facing tension and interpersonal violence from patients and their friends and family	38 participants	Themes: Origins of interpersonal difficulties: (1) Patients' lack of understanding of how EDs function (2) Deviant behaviour (3) Incivility, individualism, selfishness	Strategies for handling interpersonal difficulties: (1) avoidance and escape (2) communication strategies like appealing to reason, empathy, explanations, and seduction (3) confrontation strategies
Cohen, 2013	Qualitative	To examine how ED staff attribute the source of patient frustrations, communication with patients about their frustrations, and how efficacious they feel about their ability to mollify frustrations	18 participants	Themes: Staff understanding of patient perceptions of wait times: (1) Neglect (2) Misunderstanding patient prioritization	Strategies for handling frustrated patients: (1) making wait times appear more productive (2) explaining the ED prioritization process (3) exposing patients to others circumstances (4) redirecting less-urgent patients

First author, year	Study type	Aim	Participants	Results	Interventions
Cooke, 2006	Quantitative	To explore ED patient expectations regarding staff communication with patients, wait times, the triage process and information management.	847 surveys analyzed	Patients placed the highest importance on the explanation of test results (96.5%), the explanation of when to return to the ED (94.4%), the use of plain language (92.1%), and the reason for tests (90.8%). 76% of patients felt that ED staff should update them every 30 minutes or less. 51.3% of patients felt that low acuity patients should wait less than 1 hour.	None
Graham, 2016	Scoping review	To identify the current literature relating to routine patient provider communication processes in the ED and synthesise a new framework to enhance understanding.	55 articles included in review	T.IP.S Framework for facilitating communication: (1) Team factors: optimise team behaviour, identify ideal team communication practices, and evaluate team communication (2) Interpersonal factors: provider behaviour and bedside manner, clinical consultation skills, addressing patient distress, embracing novel ways of working, patients' health literacy (3) Situational factors: information provision	T.IP.S framework
Irwin, 2019	Quantitative	To improve patient satisfaction and patient-centred care based on a PICOT (patient/problem, intervention, comparison, outcome, time) approach.	112 participants	Average satisfaction score increased from 23.23 to 31.52.	AIDET communication protocol: (1) Acknowledge patients by name with a smile (2) Introduce yourself (3) Duration: explain estimated wait times (4) Explanation: written information explaining change project (5) Thank each patient at the end of the visit.

First author, year	Study type	Aim	Participants	Results	Interventions
Johnson, 2021	Quantitative	To use the Delphi Method to identify strategies used by triage nurses to effectively manage interruptions	9 participants	Strategies to address interruptions: (1) ensure nurses understand the impact of interruptions (2) ensure nurses understand consequences of interruptions on cognitive demands of HCPs that could influence behaviour and lead to errors (3) apologize to current patient before tending to interruption and give expectation of when you will return (4) triage the interruption and decide to ignore, acknowledge but delay or treat (5) identify urgent communication as anything clinically significant that impacts the patient immediately (6) use focused questions to clarify whether the interruption can wait (7) redirect nonpriority interruptions (8) finish safety-critical tasks near completion before tending to an interruption	Online, modified Delphi approach to generate successful strategies to address triage interruptions.
Khan, 2021	Mixed methods	To evaluate the effectiveness of a half-day training on de-escalation of violence against HCPs regarding prevention and management of violent incidents	200 HCP participants	Confidence coping with patient aggression and overall workplace satisfaction significantly improved post training ($p = .006$ and $p = < .001$ respectively) Qualitative data reports that HCPs perceive an improvement of communication skills	De-escalation of violence training consisting of 5 modules: (1) understanding violence (2) importance of active communication in health care (including how to improve) (3) de-escalating violence in health care (4) stress and post-traumatic stress disorder (5) rights and responsibilities of HCPs

First author, year	Study type	Aim	Participants	Results	Interventions
Pytel, 2009	Quantitative	To determine if patient/visitor communication needs were met during an ED visit.	64 nurses and 123 patient/visitors completed a communication needs survey	The top ten communication needs in order of importance are: (1) nurses keep you informed about what tests and treatments are done (95.8%) (2) nurses answer your questions (94.8%) (3) nurses listen to your concerns (94.1%) (4) nurses show you respect (92.2%) (5) nurses show compassion and genuine concern (92.2%) (6) nurses speak in a way that meets your language needs (89%) (7) nurses use terms you can understand (89.1%) (8) nurses give you frequent updates (84.6%) (9) nurses appear as if they have time to listen (83.9%) (10) nurses provide comfort (83.9%) Nurses met communication expectations for the top ten categories > 80% of the time.	None
Rathagirishnan, 2022	Scoping review	To quantify the number of Canadian EDs with online wait time displays and describe the features and type of information provided.	60 Canadian EDs	Characteristics of wait time displays include “average” wait time (95%), graphical trend data (32%), number of patients waiting (33%), longest wait time (12%) and expected length of stay (10%)	Wait time displays

First author, year	Study type	Aim	Participants	Results	Interventions
Riess, 2014	Literature review	To define the EMPATHY checklist and justify its utility through an evaluation of the literature on non-verbal communication.	Unclear	Unclear	The EMPATHY checklist. (1) Eye contact (2) Muscles of facial expression (3) Posture (4) Affect (5) Tone of voice (6) Hearing the whole patient (7) Your response
Sandlin, 2014	Quantitative	To enrich the patient experience in the perioperative area by incorporating the AIDET communication protocol.	Unclear	Unclear	The AIDET communication protocol
Schouten, 2021	Qualitative	To determine the experiences and perspectives of older patients with a return visit to the ED within 30 days.	13 participants ages 70 or older	Themes: (1) Before the initial ED visit (2) Initial ED visit (3) Between ED visits (4) Return ED visit (5) After return ED visit	Suggested strategies for ED staff: (1) Communicate the wait (2) Time-out every 2 hours where HCPs can discuss patient status and update them about progress. (3) Provide clear discharge communication using a written checklist (4) Involve patients in discharge planning
Shankar, 2013	Systematic review	To understand the elderly patients' views of their emergency care.	28 articles included	Themes: (1) Role of HCP (2) Content of communication and patient education (3) Barriers to communication (4) Wait times (5) Physical needs in the ED (6) General elder care needs	Suggested strategies for ED staff: (1) Assume a leadership role with both the medical and social needs (2) Initiate communication frequently (3) Minimize potential barriers to communication (4) Check on patients during prolonged periods of waiting (5) Attend to distress caused by physical discomforts in the ED (6) Address general elder care needs

First author, year	Study type	Aim	Participants	Results	Interventions
Soremekun, 2011	Literature review	Utilize concepts that have been applied in other service industries to conceptualize factors that impact patient satisfaction	Unknown	Patient satisfaction model: Patients are satisfied when their perception exceeds their expectations. (1) Concepts that impact perception of wait times: environment, early interactions during the wait period, occupied time vs. unoccupied time, uncertain waits vs known, finite waits, and starting a process earlier, regardless of the overall duration of the service interaction. (2) Expectations: individual-specific, pre-encounter, and intra-encounter	Patient satisfaction model: (1) Improve staff interpersonal and communication skills (2) Improve wait experience (3) Assess expectations (4) Adjust predictive expectations during the care process.
Sullivan, 2013	Qualitative	To examine ED nurses' perceptions of the benefits and challenges of hourly rounding to improve patient satisfaction and communication	9 nurses	Themes: (1) Benefits of hourly rounding (2) Barriers for hourly rounding (3) Shared plan of care (4) Staff attitudes	(1) Hourly rounding (2) Professional development and leadership training for charge nurses
Terndrup, 2013	Quantitative	To evaluate a multi-media education intervention as a method for informing independently living elders about ED care.	142 participants	There were significant improvements in the categories: number of tests expected ($p = < 0.0001$), number of providers expected ($p = < 0.0001$), communication with nurses/doctors ($p = < 0.0001$), and pre-hospital medical treatment ($p = < 0.0001$). 96% of elders felt that the video improved their ability to cope with an ED visit.	20 minute video that explained the process after a hypothetical 911 call for chest pain.

First author, year	Study type	Aim	Participants	Results	Interventions
Tran, 2002	Quantitative	To evaluate whether periodic personal provision of clinically based information to patients during an ED visit improves patients' perceptions of physicians' excellence and efficiency of patient care.	619 participants	Perceived length of stay was significantly shorter for the intervention group ($p = .027$). Physicians' excellency and technical skills were significantly higher in the intervention group ($p = .033$ and $p = .032$ respectively)	One research assistant (medical student) provided patients with ED process and medical information at 15 minute intervals starting at arrival and continuing until discharge.

Interventions that Address Family Needs

Different avenues have been explored to address the information needs of patients and their families that do not include communication through nurses. Characteristics of these studies can be found in *Table 2*. To manage the expectations of older adults, one research team conducted a multimedia campaign to educate older adults about what to expect during a hypothetical ED encounter following calling an ambulance (Terndrup et al., 2013). They found that there were significant improvements in understanding the ED processes ($p = < 0.0001$). To address wait time concerns, many hospitals display estimated wait times (Burgess et al., 2019; Calder-Sprackman et al., 2021; Rathagirishnan et al., 2022). Evidence suggests that patients want estimated wait times and wait time communication early in the visit help manage the anxiety and expectations of families (Burgess et al., 2019; Calder-Sprackman et al., 2021; Rathagirishnan et al., 2022). One hospital trialed giving clinical-based and process-related information during the waiting period in order to manage expectations and decrease anxiety (Tran et al., 2002). This information was patient condition-specific and delivered by a medical student every 15 minutes throughout the visit (Tran et al., 2002). This intervention significantly improved perceived length of stay ($p = .027$), physician excellency ($p = .033$) and physician technical skills ($p = .032$). There were no significant improvements in the perception of nurses' excellency or technical skills ($p = .613$ and $p = .998$, respectively).

There has also been some exploration into communication skills training for providers. For example, there is a communication training tool that was developed for physicians to improve non-verbal communication and expression of empathy, the EMPATHY tool (Riess & Kraft-Todd, 2014). The acronym EMPATHY stands for Eye contact, Muscles of facial expression, Posture, Affect, Tone of voice, Hearing the whole patient and Your response (Riess & Kraft-

Todd, 2014). This study was a literature review and therefore did not report the effectiveness of this tool. More research is needed to examine the effectiveness of this tool and whether it would be beneficial for nurse-family communication in the ED.

Communication Interventions

In terms of communication interventions, a variety of them (n = 11) have been studied, however not all have addressed nurse-family communication specifically, used communication as an outcome measurement or took place in the ED (Charrier et al., 2021; Cohen et al., 2013; Innes et al., 2021; Irwin et al., 2019; Johnson et al., 2021; Khan et al., 2021; Sandlin et al., 2014; Soremekun et al., 2011; Sullivan, 2013; Taylor et al., 2006; Westphal et al., 2021). Three of these studies will be presented in the results section of the scoping review (Innes et al., 2021; Taylor et al., 2006; Westphal et al., 2021). The characteristics of the studies included in this literature review can be found in *Table 2*. Some (n = 4) interventions addressed nurse-family communication to improve patient satisfaction (Irwin et al., 2019; Sandlin et al., 2014; Soremekun et al., 2011; Sullivan, 2013). Sullivan (2013) completed a qualitative study as part of a dissertation to examine nurses' perceptions of hourly rounding in the ED to improve communication, satisfaction, and safety. Nurses found hourly rounding valuable because it holds nurses accountable for checking in with their patients and keeping them up to date with their plan of care. Nurses felt that it increased safety, accountability and patient satisfaction and decreased call light use and interruptions. However, nurses found this difficult to implement due to the rapidly changing needs of the department, inadequate team communication, and poor staff training (Sullivan, 2013). Sullivan (2013) proposed implementing professional development training for charge nurses to improve their communication and leadership skills. Charge nurses

would then be expected to hold the nurses accountable for hourly rounding and updating their patients appropriately.

Soremekun et al. (2011) conducted a literature review and proposed the use of a patient satisfaction model commonly implemented in the customer service industry in the ED. They recommended improving ED staff's interpersonal and communication skills, improving the waiting experience, assessing the patients' expectations for the visit and adjusting those expectations during the care process. Positive interactions early in the visit can alter the perception of the wait time, thus the study recommended customer service training for all first-encounter staff, such as triage nurses. They also recommended that during the first encounter, family expectations be identified so that future encounters can effectively manage those expectations, thus contributing to improved consumer satisfaction (Soremekun et al., 2011).

Communication skills training was also explored in two quantitative studies (Irwin et al., 2019; Sandlin et al., 2014). These studied explored the effectiveness of implementing the AIDET (Acknowledge, Introduce, Duration, Explanation and Thank you) communication protocol to improve patient satisfaction in the context of a rural urgent care center and a perioperative hospital setting (Irwin, 2019; Sandlin et al., 2014). Using this protocol, the nurse acknowledges the patients by name, introduces themselves and their role, gives the patient the estimated wait time based on their level of urgency and where they can receive updates about the wait times, explains their care and thanks the patients upon discharge (Irwin, 2019). Though Sandlin et al. (2014) did not report the results of their study, Irwin et al. (2019) reported that the average satisfaction score increased from 23.23 to 31.52 after implementation of this protocol. Further research is required to examine the transferability and effectiveness of this training as it has not been studied in the context of an ED.

Communication skills training has also been studied as part of a program to decrease violence incidents towards HCPs. Khan et al. (2021) completed a mixed methods study that evaluated the effectiveness of de-escalation of violence training. This training consisted of five modules, one of which taught how to be an active communicator to proactively address potential violence. The components of the training manual were not described in the published article. This training significantly improved staff confidence, coping with patient aggression, and overall workplace satisfaction ($p = .006$). The qualitative data showed that staff perceived their communication skills with families improved post-intervention.

With a similar idea of proactively addressing potential violence, two qualitative studies were found that examined strategies nurses used to deal with frustrated/difficult patients or family members when typical de-escalation techniques may not work (Charrier et al., 2021; Cohen et al., 2013). Charrier et al. (2021) examined strategies used by ED nurses to communicate and manage difficult people, particularly those that are not aggressive but rude. Common strategies included attempting to inform them of the ED processes, appealing to reason, rational explanations, empathy and using extreme courtesy and kindness to diffuse the situation (Charrier et al., 2021). These results were similar to a study examining strategies ED staff used to manage frustrated patients (Cohen et al., 2013). The staff described expressing empathy, offering physical reassessments, and making patients feel occupied during the wait. They also educated patients about their health conditions, acuity, and appropriate alternatives to the ED, like primary care, to manage frustrated patients (Cohen et al., 2013). While these studies do not aim to improve communication with families, they offer valuable strategies that could be explored in future research to evaluate their effectiveness.

Finally, a quantitative study developed strategies to aid triage nurses in managing interruptions effectively, as interruptions can lead to errors and impact communication and the relationship with families (Johnson et al., 2021). Strategies include apologizing to the current patient and setting a timeframe for when they can expect the nurse's return, triage the interruption to determine its priority, after which the nurse can redirect nonpriority interruptions or attend to the emergency (Johnson et al., 2021). While this study presents strategies only for a specific interaction, evidence suggests that early interactions are essential for managing anxiety and increasing patient satisfaction (Lau et al., 2012; Soremekun et al., 2011). In fact, more than half of violent incidents occurred during triage or within the first hour of being in the ED, so optimal communication at triage is important (Lau et al., 2012).

Literature Gaps

This literature review demonstrated that although research is available to improve patient and family satisfaction as well as patient and nurse safety, there is less research specific to nurse-family communication during the waiting period of an ED visit and even fewer that use communication as an outcome measure. Furthermore, there are many studies that could be beneficial to ED nurse-family communication, should research on the transferability of findings be completed. The upcoming scoping review will help address this gap in knowledge by determining and describing the interventions that exist to improve nurse-family communication during the waiting period of an ED visit.

Chapter 3: Philosophical Underpinnings and Theoretical Framework

Pragmatic Paradigm

There are four main philosophical paradigms: positivist, constructivist, transformative, and pragmatic (Mackenzie & Knipe, 2006). Research paradigms influence how knowledge is interpreted, as it is how researchers view the world (Mackenzie & Knipe, 2006). Researchers within a paradigm share the same set of beliefs that influence the questions asked, the investigation and how that information is interpreted (Kelly et al., 2017).

This study is designed within the pragmatic paradigm. Pragmatism was developed in response to a perceived crisis in scientific research. Positivism, known for having strict methodology and believing that everything must be verifiable, had a profound influence on the scientific community, such that tenants of it are still in use today (Risjord, 2010). In the 1970s, nursing scholars defined theories based on the assumptions of positivism (Risjord, 2010). Parts of positivism particularly have an influence on how quantitative research is conducted today (Mackenzie & Knipe, 2006). However, positivism was felt to be too constricting due to the strict methodological processes, and many philosophers felt that there was no objective truth that could be verified (Habermas, 1966). In response to these critiques, Husserl, a philosopher, suggested a new way of thinking that developed into the constructivist paradigm and phenomenology (Habermas, 1966). This paradigm focuses on understanding the experience of individuals. In this way of thinking, it is believed that reality is socially constructed (Mackenzie & Knipe, 2006). Qualitative researchers generally align with this paradigm (Mackenzie & Knipe, 2006). One of the critiques of this paradigm is that there is no objective right or wrong and thus no way to differentiate between “good” science and nonsense (Irzik, 2001). Pragmatism was conceived as a response to both schools of thought (Kaushik & Walsh, 2019). Within this paradigm, researchers

do not aim for certainty but results that can reliably stand up to reason and critique (Misak, 2019).

Researchers who identify with the pragmatic paradigm focus on the “what” and “how” of the research problem (Mackenzie & Knipe, 2006). This means that they are not constrained by any specific methodology but can utilize any methods to answer the research question, including mixed methods (Mackenzie & Knipe, 2006). Pragmatism is problem centred and designed to answer real-world clinical practice questions. Pragmatism has been recently adopted by more and more nursing researchers (Dolan et al., 2022). Historically, nursing knowledge has been dominated by observable and verifiable knowledge, while nursing was fighting to become recognized as its own profession (Prud'homme, 2012). This is due, in part, to the influence of the biomedical model physicians traditionally follow. To be viewed as equals with physicians, nurses followed their established methodology and way of thinking (Prud’homme, 2012). Now that nursing is recognized as a respectable profession, nursing scholars have moved away from the traditional methodology as it does not represent the more intangible aspects of nursing such as caring, and pain (Dolan et al., 2022).

According to pragmatism, there are multiple realities based on the experiences of individuals with no absolute truth (Dolan et al., 2022). However, there are provisional truths that are discovered through problem-solving, stand up to reason and critique, and thus are verifiable in their own way (Dolan et al., 2022; Misak, 2019). This paradigm recognizes that there is no absolute objectivity, as researchers cannot completely remove their subjective influence (Dolan et al., 2022). Pragmatism within nursing contends that actions and problem-solving will overcome clinical practice challenges (Dolan et al., 2022). Nurses need to recognize the subjective experience of their patients and of their educators and mentors, as well as recognize

the importance of providing care that is backed by evidence (Dolan et al., 2022). The pragmatic paradigm allows nurses to do that.

A scoping review will be conducted, and while systematic and scoping reviews have traditionally used a postpositivist or constructivist approach, the pragmatic paradigm is designed to use any methods that match the purpose of the research, so it is an appropriate paradigm for scoping review research (Thomas et al., 2020). Additionally, this scoping review will use the methodology developed by the Joanna Briggs Institute (JBI) and JBI uses a pragmatic approach for their evidence synthesis (Aromataris et al., 2022). Furthermore, the research question being explored is "what interventions exist to improve nurse-family communication during the waiting period of the emergency department visit?". Communication and relationships are subjective, and one family's needs may not reflect another's needs (Kaushik & Walsh, 2019). Pragmatism allows this to be explored within the bounds of rigorous and reliable methodology and is best suited to interpret the knowledge gathered by this investigation.

Peplau's Theory of Interpersonal Relations

This study will use Peplau's Theory of Interpersonal Relations (Peplau, 1997) to organize and interpret the scoping review findings within the pragmatic paradigm. While paradigms influence how the world is interpreted, theories are designed to explain a specific phenomenon (Risjord, 2010). The phenomena explained can be abstract or more concrete (Risjord, 2010). Peplau's Theory of Interpersonal Relations is a middle-range theory. It is more concrete than grand theories that cover more abstract topics, and more generalizable than micro theories that explain something specific (Risjord, 2010). Nursing theories can be useful to guide research because it helps nurses clarify values and inform approaches to care (Younas & Quennell, 2019). It can therefore guide nursing practice and improve patient outcomes (Younas & Quennell,

2019). In this review, it will help organize and frame the results to facilitate understanding and implementation in practice.

Peplau's Theory of Interpersonal Relations (Peplau, 1997) was designed to look at the nurse-patient relationship. The patient, in the context of this theory, could include the family member (Peplau, 1987). Within family-centred care, the patient, and family are treated as a whole (Clay & Marsh, 2016). While their needs may differ, it is necessary to address the family's needs as well as the patient's because the family has a large impact on the treatment and comfort of the patient (Clay & Marsh, 2016). Peplau's theory recognizes the nurses and the patients/families as whole beings who both contribute to the relationship (Peplau, 1997). Other researchers have used Peplau's theory to guide their family-centred and communication-based research (Forchuck & Dorsay, 1995; Hagerty et al., 2017; Rooney et al., 2021; Wasaya et al., 2021). This theory was found to be useful in guiding family-centred care in pediatrics and home care in particular, as the patient often does not have the capacity to interact and participate in care to the same extent as a healthy adult, so interventions are much more caregiver focused (McNaughton, 2005; Rooney et al., 2021). This theory has not only been previously useful in family-centred research but has also been explored in the ED context, thus making it suitable to guide this review (Senn, 2013).

Peplau's theory describes the three phases of the therapeutic relationship: the orientation phase, the working phase, and the termination phase (Peplau, 1997). The nurse, in this theory, can play the role of the stranger, resource, teacher, leader, surrogate, or counsellor while developing a therapeutic relationship with the patient/family (Wasaya et al., 2021). The *orientation phase* lays the foundation for the rest of the relationship (Peplau, 1997). The family presents with needs, and the nurse must show a desire to meet these with open-mindedness (Rooney et al., 2021). Figuring out how to address the family's needs may require some

additional probing from the nurse (Peplau, 1997). To develop a therapeutic relationship with the family, it is necessary for the nurse to examine their inherent biases and work towards not letting those biases impact care (Roney et al., 2021). For example, patients with mental health issues report feeling stigmatized by HCPs as soon as the providers see their diagnosis which can cause distress and distrust when seeking care (Senn, 2013; Vandyk et al., 2019). Within the ED, this phase occurs primarily at triage (Senn, 2013). The triage nurse, the stranger, is the first HCP that the family is exposed to and sets the tone for the rest of the ED visit. It is essential that the nurse is open and receptive to the patient and family (Rooney et al., 2021). This theory will be used to categorize the interventions found in this review. If the communication intervention impacts the orientation phase, it is likely to improve the communication of triage nurses.

Within the *working phase*, the nurse identifies the needs of the family and works towards meeting those needs (Peplau, 1997). At the beginning of the working phase, the onus is on the nurse to be a leader, assess the family's needs, and make strides towards meeting them. As the family gains more knowledge and understanding of the environment and situation, they are able to participate more in the relationship, and the focus shifts to providing the family with the tools they require to independently meet their needs (Peplau, 1997). For example, in the context of the ED, the family may express anxiety while waiting to see a physician, which may be demonstrated by verbalizing questions, pacing, fidgeting, yelling, crying, or expressing frustration. Anxiety may be caused by the family not understanding how the ED works, not knowing what they are waiting for, why they are waiting, and how long they may have to wait. It may alternatively be caused by anxiety over the medical condition of their family member. The nurse in this phase can recognize the underlying anxiety causing the family's behaviour, identify the cause, and address that cause. This may involve the nurse acting as a resource, teacher,

surrogate, or counsellor. As this is the largest phase of the nurse-family relationship, it is likely that most communication interventions will fall within this category.

The *termination phase* is the final step of the relationship and usually encompasses discharge planning and education (Peplau, 1997). This phase is for providing closure to the working relationship as the nurse-family relationship is time-limited (Peplau, 1997). The nurse's role is to set the family up for success in the transition to home by ensuring that the family has the proper tools and information suitable for their lifestyle (Peplau, 1997). As discharge interventions will not be included in this review, this phase will not be incorporated. Peplau's theory will help illuminate whether targeting a specific phase of the nurse-family relationship influences communication with families during the waiting period more positively and more clearly inform how nurses may incorporate these interventions in their practice.

Chapter 4: Methodology

Research Design

A scoping review was conducted to identify the nature and extent of research evidence specific to interventions used to improve nurse-family communication during the waiting period of an ED visit using methodology developed by JBI. Scoping reviews are used to assess the extent of evidence available on a topic, identify gaps in the literature and act as a precursor for future research (Khalil et al., 2016; Peters et al., 2021; Pham et al., 2014). It allows a broader overview of the topic than systematic reviews. Based on the relatively limited amount of research found during the preliminary search and on the vast differences between the interventions explored, a scoping review was more appropriate to address the aim of this study and can be used to inform future systematic reviews. A preliminary search of MEDLINE, the Cochrane Database of Systematic Reviews, JBI Evidence Synthesis, PROSPERO, and Open Science Framework (OSF) was conducted, and no current or registered systematic reviews or scoping reviews of these interventions were identified. A scoping review protocol was developed and registered with the *Open Science Framework,* registration number 10.17605/OSF.IO/ETSYB. There was no funding obtained for this scoping review.

Ethics

Ethics approval was not needed as there was no data collection involving human participants. This was confirmed by the University of Ottawa's Research Ethics Board (Research Ethics Board, personal communication, 2022).

Data Collection and Analysis

The methodology developed by the Joanna Briggs Institution (JBI) for scoping reviews was used (Peters et al., 2020). These seven steps were followed in this review: (1) identify the

research question, (2) define the inclusion criteria, (3) use a search strategy to identify relevant studies using a three-step approach, (4) select studies using a team approach, (5) data extraction, (6) data analysis, and (7) presentation of results (Peters et al., 2020; Peters et al., 2021). Data was reported using the Preferred Reporting for Systematic Reviews and Meta-analyses Extension for Scoping Reviews (PRISMA-ScR) (Tricco et al., 2018).

Research Question and Related Concepts

The research question of this review is *what interventions exist in the literature that aims to improve nurse-family communication during the waiting period of an emergency department visit?* Intervention is defined as "an activity or set of activities aimed at modifying a process, course of action or sequence of events in order to change one or several of their characteristics such as performance of expected outcome" (World Health Organization, n.d.) and includes any technique that could be implemented in the ED, including frameworks, guidelines, strategies, models, tools, programs, and training. "Aims to improve" refers to the aim of the intervention itself and not the overall aim of the included studies. Family refers to two people that are related in any way (biologically, legally, or emotionally), whoever the patient considers as family (Clay & Parsh, 2016). For this review, family can be solely the family or the patient and their family as many interventions target the group as a whole. Communication is defined as the exchange of information, thoughts or feelings using verbal or non-verbal cues (Kourkouta & Papathanasiou, 2014). The waiting period includes the time spent waiting to see a physician, for medical tests, test results, and for discharge information. The emergency department is the hospital unit that provides "treatment of severe illnesses and life-threatening injuries" (Government of Ontario, 2022).

Inclusion Criteria

The inclusion criteria were determined according to the research question and related to the participants, concept, and context of the scoping review. The inclusion criteria for the **participants** included registered or practical nurses working in the emergency department and family members accompanying their loved ones of any age in the emergency department. Articles that concern the **concept** of interventions aiming to improve communication between nurses and families were included. These could have included families' perception of communication, provided nurses play a role in that communication. These interventions could have included apps, audio/visual/web-based instruction, frameworks, guidelines, strategies, models, tools, programs or training. The inclusion criteria for the **context** included that the intervention took place within an adult or pediatric ED during the waiting period of the visit.

Results were limited to primary studies with full texts available in English or French. All study types, qualitative, quantitative, or mixed methods, were included, provided they reported on an intervention that nurses could use. Published studies as well as grey literature, such as best practice guidelines, policy statements, and scientific reports, could be included. Due to the large volume of dissertations and conference proceedings, these were only included if the results were published. There were no limitations on the year of publication. This was because no previous reviews had been completed on this topic, and research has shown that communication has long been identified as needing improvement. Additionally, the focus of nursing care has shifted from being primarily relationship-based to being task-based, with a focus on being timely, efficient and cost-effective (Foth et al., 2018). Thus, communication interventions may have been missed by limiting the year of publication. There was also no limitations on country of the studies.

Exclusion criteria included reviews, editorials, or opinion papers as they did not offer an intervention, discharge communication, or community-based communication interventions.

Search Strategy

Identifying relevant studies was done using a three-phase approach (Khalil et al., 2016). The first stage was a preliminary search of Medline (Ovid) to ensure that an adequate search strategy had been made (Khalil et al., 2016; Peters et al., 2020). The search strategy was developed in collaboration with the University of Ottawa's Health Science librarian and reviewed by a librarian using PRESS guidelines. Key concepts and related index terms included patient experiences, communication, waiting, and emergency department. The second stage used the search strategy developed in the first stage across all selected databases (Khalil et al., 2016; Peters et al., 2020). The search strategy was translated into other databases in collaboration with the librarian, using the University of Ottawa's search translation tool. The databases selected include Medline (Ovid), CINAHL (EBSCO), Embase (Ovid), and PsychInfo (Ovid). The database search was conducted on August 3rd, 2022. The search strategy for each database can be found in Appendix A. Grey literature was searched using a tool, "Grey Matters", for health-related research (CADTH, 2018) (Appendix B). This included searching the databases of various nursing associations including, but not limited to, Registered Nurses Association of Ontario, Emergency Nurses Association, and the Canadian Nurses Association. During the third stage, an ancestry and descendancy approach was used to identify additional key studies (Khalil et al., 2016; Peters et al., 2020). Thus, the reference lists of included articles were searched for additional relevant citations and research that had cited the key articles were identified and screened as well.

Selection of Studies

All identified citations were collated and uploaded to Covidence ©, a web-based software used to facilitate reviews, and duplicates removed. Studies were selected by two independent reviewers according to pre-selected inclusion criteria. Disputes were resolved by discussion between the two reviewers. This was a change from the study protocol developed which stated that disputes would be resolved by a third reviewer. This was altered because conflicts were minor and solely required some clarification between reviewers. The title and abstract were first screened for relevancy. The full text of those articles that passed the abstract screening was then read. In total, 2,389 studies were uploaded to Covidence ©, and 618 duplicates were removed by the system. A total of 1,771 studies were included in the title and abstract screen, and 86 of those studies moved on to the full text screen. Finally, 20 studies were identified for inclusion in the review. The PRISMA flow diagram illustrating this process is found in *Figure 1* along with detailed reasons for exclusion (Page et al., 2021; Tricco et al., 2018). The grey literature search found seven relevant quality improvement guidelines that have been included in this review.

Data Extraction

The data about the communication interventions was extracted by two independent reviewers using a data extraction form in a Microsoft Word (Version 2206) document that was developed and tested by both reviewers prior to data extraction (Khalil et al., 2016; Peters et al., 2020) (Appendix C). The other data was collected in a shared excel spreadsheet that was developed and tested by both reviewers (Appendix D). Data extracted from the included studies comprised specific details about the participants, context, methods, and results. Data not concerning the intervention itself was collected by one reviewer and verified for accuracy by the other, as per acceptable JBI standards (Peters et al., 2020). This was another change from the

protocol that stated that two independent reviewers would do all data collection. The change was made due to feasibility issues, as there was no funding obtained for this project. Data from the grey literature search was extracted by one reviewer in a Microsoft Word (Version 2206) document (Appendix E). The data were organized into categories based on Peplau's Theory of Interpersonal Relations: orientation phase, working phase, or termination phase (Peplau, 1997). As this review concerns interventions and one of its goals is to act as a precursor for future research, a critical appraisal of the research was completed by one reviewer and verified for accuracy by the other using the appropriate JBI critical appraisal tool for the study type (JBI, n.d.) (Appendix F). This critical appraisal was not used to exclude studies but to provide the reader with more information about the evidence presented.

Data Analysis and Presentation

Results of this review will be presented in the following chapter. Descriptive statistics and basic content analysis were used to analyze the results (Pollock et al., 2022). Results are presented using narrative synthesis and tables to describe the characteristics of the included studies. Data was reported using the PRISMA-ScR checklist (Appendix G) as well as a PRISMA flow diagram (Tricco et al., 2018). Data reported include the study's participants, the study design, methods used, key findings, the category of which the intervention belongs within Peplau's Theory of Interpersonal Relations, and the critical appraisal.

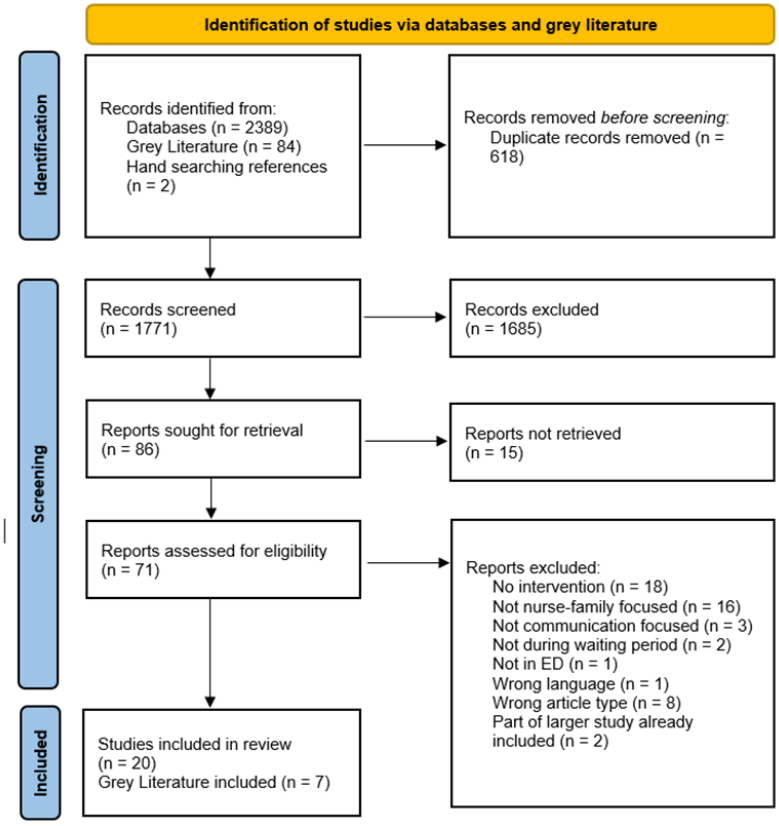
Chapter 5: Results

In this chapter, the results and findings of the scoping review will be presented. These results will answer the question, "what interventions exist that aim to improve nurse-family communication during the waiting period of an ED visit?". It will also serve to meet the goal of this review, which is to determine and describe interventions that improve nurse-family communication during the waiting period of an ED visit.

As discussed in the methodology chapter, the database search yielded 2,389 studies for review. Of those, 1,771 studies were included in the title and abstract screening phase. Finally, 20 studies were identified for inclusion in the review through the database search, two of which were found by hand searching the references of the included studies. The reasons for exclusion included no intervention, not nurse-family focused, not communication focused, not in an ED, not during the waiting period, wrong language, wrong article type, and because the articles were part of a larger study that had already been included. A detailed list of reasons for exclusion can be found in the PRISMA flow diagram (*Figure 1*). For the grey literature search, the CADTH tool was used, and 84 grey literature websites/databases were searched for additional literature. Of those, seven documents were included in the review (CADTH, 2018).

Figure 1

PRISMA Flow Diagram



Database Results

The included studies (*n* = 20) consisted of qualitative studies (*n* = 8) (Blackburn et al., 2019; Cameron et al., 2010; Elmqvist et al., 2012; Emmamally et al., 2020; Fry et al., 2013; Hermann et al., 2019; Perret et al., 2017; Phiri et al., 2020), quantitative studies (*n* = 9) (Ak et al., 2011; Cahill, 2008; Emerson et al., 2021; Lowe et al., 2018; Meade et al., 2010; Paavilainen et al., 2009; Porter et al., 2011; Taylor et al., 2006; Tothy et al., 2016) and mixed methods studies (*n* = 3) (Innes et al., 2021; Lau et al. 2012; Westphal et al., 2020). These were conducted in EDs that served pediatric patients (*n* = 4), pediatric and adult patients (*n* = 4), and adult patients (*n* = 12). These studies were completed from 2006-2021, with nine completed in the last five years (Blackburn et al., 2019; Emerson et al., 2021; Emmamally et al., 2020; Hermann et al., 2019;

Innes et al., 2021; Lowe et al., 2018; Perret et al., 2017; Phiri et al., 2020; Westphal et al., 2020).

A summary of the general characteristics of the included studies is found in *Table 3.*

Table 3

Included Studies' General Characteristics

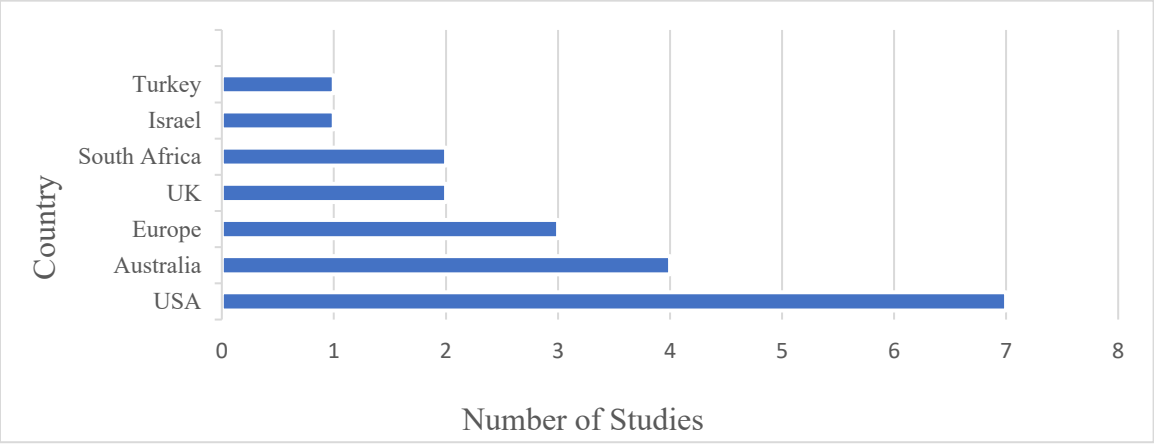
First author, year	Country	Study type	Context	Source of Funding	Aim
Ak, 2011	Turkey	Quantitative	Adult	Not disclosed	To determine the effects of a communication skills training program on emergency nurse and patient satisfaction.
Blackburn, 2019	England	Qualitative	Adult	General Nursing Council Trust	To understand the informational requirement of patients and their families attending the ED and how to best meet their needs.
Cahill, 2008	USA	Quantitative	Adult	Not disclosed	(1) To evaluate the effectiveness of the ACT-SMART educational training program. (2) To examine the incidence of aggression and violence within the ED.
Cameron, 2010	USA	Qualitative	Adult	Davee Foundation	To engage and empower ED staff by identifying their perceptions of current communication barriers and find strategies to improve communication within the ED.
Elmqvist, 2012	Sweden	Qualitative	Adult	Not disclosed	To describe and understand the patients first encounter in the ED as experienced by the patient, family and first providers.
Emerson, 2021	USA	Quantitative	Pediatric	Not disclosed	To improve patient experience scores.
Emmamally, 2020	KwaZulu-Natal, South Africa	Qualitative	Adult	National Research Foundation/Research and Innovation Support and Advancement grant	To describe health care providers' perceptions of relational practice with families in the ED.
Fry, 2013	Australia	Qualitative	Pediatric and adult	NSW Health Nursing and Midwifery Office Innovation Scholarship	To explore the role of a clinical initiative nurse (CIN).
Hermann, 2019	USA	Qualitative	Adult	Not disclosed	To describe patients' experience of their communication with nurses and providers in the ED and fast track area.
Innes, 2021	Australia	Mixed methods	Pediatric and adult	Existing ED budget	To use a range of methods to describe ED waiting room nurses (WRN).
Lau, 2012	Australia	Mixed methods	Adult	Not disclosed	To explore the cultural aspects of violence.
Lowe, 2018	Scotland	Quantitative	Adult	The Health Foundation	To examine the validity and effectiveness of implementing the Always Events approach to quality improvement in a Scottish ED.
Meade, 2010	USA	Quantitative	Adult	The Studer Group	To test the effectiveness of three different rounding techniques.
Paavilainen, 2009	Finland	Quantitative	Adult	Etela-Boitekanelo Research Fund	To describe patients' experience of the counselling they received in the ED particularly during the waiting period and the importance of family member participation.

First author, year	Country	Study type	Context	Source of Funding	Aim
Perret, 2017	Switzerland	Qualitative	Pediatric	Not disclosed	To understand the experience and needs of families coming to the ED for non-urgent reasons.
Phiri, 2020	Botswana, South Africa	Qualitative	Adult	Boitekanelo College	To understand patient ED triage experience.
Porter, 2011	USA	Quantitative	Pediatric	Not disclosed	To improve parent communication with clinicians and satisfaction with care.
Taylor, 2006	Australia	Quantitative	Pediatric and adult	The Australian Council for Safety and Quality in Health Care grant	To evaluate the effectiveness of a multifaceted intervention targeting staff-patient communication in improving ED patient satisfaction.
Tothy, 2016	USA	Quantitative	Pediatric	Not disclosed	To quantify the impact of specific improvement activities on patient satisfaction.
Westphal, 2020	Israel	Mixed methods	Pediatric and adult	The Israel National Institute for Health Policy Research grant, the Israel Ministry of Science and Technology grant and the Israel Foundation grant	To communicate information about the ED process to patients without adding to the HCPs' workload or delaying medical procedures.

These studies took place in the United States of America (n = 7) (Cahill, 2008; Cameron et al., 2010; Emerson et al., 2021; Hermann et al., 2019; Meade et al., 2010; Porter et al., 2011; Tothy et al., 2016), Australia (n = 4) (Fry et al., 2013; Innes et al., 2021; Lau et al., 2012; Taylor et al., 2006), Europe (n = 3) (Elmqvist et al., 2012; Paavilainen et al., 2009; Perret et al., 2017), the United Kingdom (UK) (n = 2) (Blackburn et al., 2019; Lowe et al., 2018), South Africa (n = 2) (Emmamally et al., 2020; Phiri et al., 2020), Israel (n = 1) (Westphal et al., 2020), and Turkey (n = 1) (Ak et al., 2011). See *Figure 2*.

Figure 2

Geographical Location of Included Studies



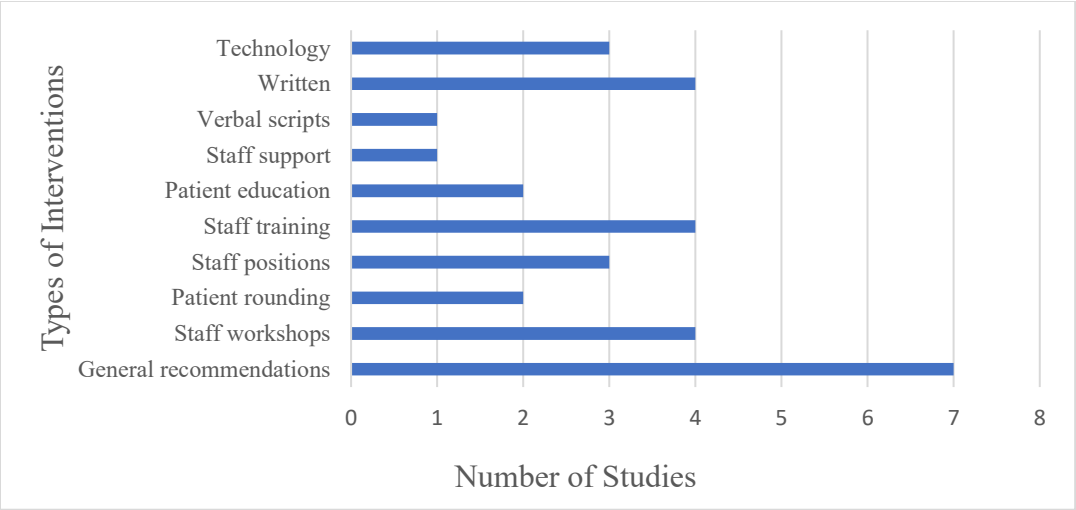
The EDs in which the studies took place include tertiary care centers (*n* = 7) (Cahill, 2008; Cameron et al., 2010; Emerson et al., 2021; Fry et al., 2013; Lowe et al., 2018; Porter et al., 2011; Westphal et al., 2020), trauma centers (*n* = 3) (Cahill, 2008; Emerson et al., 2021; Tothy et al., 2016), teaching hospitals (*n* = 4) (Cameron et al., 2010; Hermann et al., 2019; Perret et al., 2017; Taylor et al., 2006), referral centers (*n* = 2) (Fry et al., 2013; Innes et al., 2021), regional/rural hospitals (*n* = 2) (Fry et al., 2013; Innes et al., 2021), privately funded hospitals (*n* = 1) (Emmamally et al., 2020) and publicly funded hospitals (*n* = 2) (Emmamally et al., 2020; Phiri et al., 2020). A few studies (*n* = 6) did not include a specific description of the ED in which the study took place (Ak et al., 2011; Blackburn et al., 2019; Elmqvist et al., 2012; Lau et al., 2012; Meade et al., 2010; Paavilainen et al., 2009).

Though all included studies had interventions whose content concerned improving communication, there were a variety of overall study objectives. Some objectives included examining the effectiveness of training programs (*n* = 2) (Ak et al., 2011; Cahill, 2008) or patient rounding techniques (*n* = 1) (Meade et al., 2010), while others aimed to understand the patient experience of different aspects of the ED visit (*n* = 4) (Elmqvist et al., 2012; Hermann et al., 2019; Paavalianen et al., 2009; Phiri et al., 2020) or patient needs during their ED visit (*n* = 2) (Blackburn et al., 2019; Perret et al., 2017). Some studies were quality improvement initiatives that aimed to improve patient experience (*n* = 3) (Emerson et al., 2021; Lowe et al., 2018; Tothy et al., 2016). Other studies explored HCPs' perception of relational practice (*n* = 1) (Emmamally et al., 2020), the role of a waiting room nurse/clinical initiative nurse (*n* = 2) (Fry et al., 2013; Innes et al., 2021), or of the cultural aspects of violence (*n* = 1) (Lau et al., 2012). Of the 20 included studies, four had an overall study aim of improving communication (Cameron et al., 2010; Porter et al., 2011; Taylor et al., 2006; Westphal et al., 2020).

There were a variety of interventions found in this review, which ranged from general recommendations (*n* = 7) (Blackburn et al., 2019; Elmqvist et al., 2012; Emmamally et al., 2020; Hermann et al., 2016; Lau et al., 2012; Perret et al., 2017; Phiri et al., 2020), to multifaceted interventions (*n* = 3) (Emerson et al., 2021; Taylor et al., 2006; Tothy et al., 2016). The multifaceted interventions have been separated into their individual components to facilitate the synthesis. Other interventions found include staff workshops (*n* = 4) (Cameron et al., 2010; Emerson et al., 2021; Taylor et al., 2006; Tothy et al., 2016), patient rounding (*n* = 2) (Emerson et al., 2021; Meade et al., 2010), staff positions (*n* = 3) (Fry et al., 2013; Innes et al., 2021; Taylor et al., 2006), staff training (*n* = 4) (Ak et al., 2011; Cahill, 2008; Emerson et al., 2021; Tothy et al., 2016), patient education (*n* = 2) (Paavilainen et al., 2009; Taylor et al., 2016), staff meetings and staff mentors (*n* = 1) (Emerson et al., 2021), and verbal scripts (*n* = 1) (Emerson et al., 2021). Some interventions used written communication or communication facilitated by technology in the form of posters, buttons, forms for parents, communication boards, pamphlets, TVs, videos and websites (*n* = 6) (Emerson et al., 2021; Lowe et al.., 2018; Porter et al., 2011; Tothy et al., 2016; Taylor et al., 2016; Westphal et al., 2020). See *Figure 3* for a summary of the types of interventions.

Figure 3

Types of Interventions

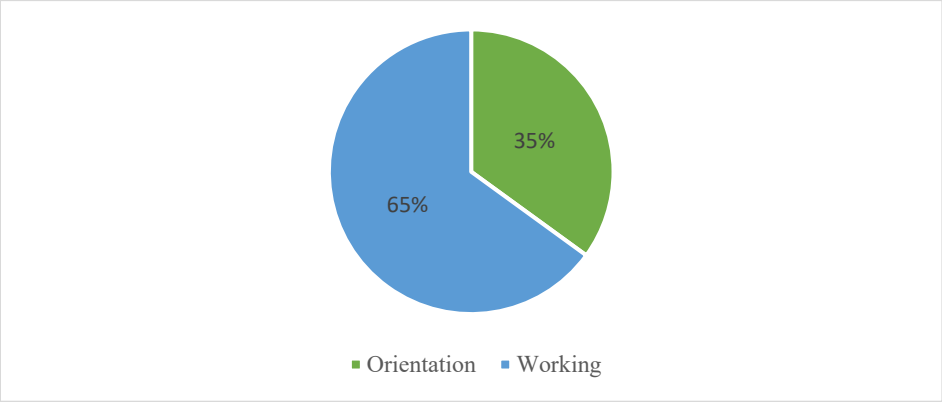


These interventions were targeted at staff members (n = 13) (Ak et al., 2011; Cahill, 2008; Elmqvist et al., 2012; Emerson et al., 2021; Emmamally et al., 2020; Fry et al., 2013; Hermann et al., 2019; Innes et al., 2021; Lau et al., 2012; Meade et al., 2010; Paavilainen et al., 2009; Perret et al., 2017; Phiri et al., 2020) and family members (n = 3) (Lowe et al., 2018; Porter et al., 2011; Westphal et al., 2020) with four studies targeting both staff and family members (Blackburn et al., 2019, Cameron et al., 2010; Taylor et al., 2006; Tothy et al., 2016). Seven interventions took place in the orientation phase of Peplau's Theory of Interpersonal Relations (Blackburn et al., 2019; Elmqvist et al., 2012; Lau et al., 2012; Lowe et al., 2018; Perret et al., 2017; Phiri et al., 2020; Westphal et al., 2020), and thirteen took place in the working phase (Ak et al., 2011; Cahill, 2008; Cameron et al., 2010; Emerson et al., 2021; Emmamally et al., 2020; Fry et al., 2013; Hermann et al., 2019; Innes et al., 2021; Meade et al., 2010; Paavilainen et al., 2009; Porter et al., 2011; Taylor et al., 2006; Tothy et al., 2016). While most interventions have components that target both the orientation phase and the working phase

of Peplau's Theory of Interpersonal Relations, the interventions have been categorized by which phase the intervention primarily impacts. See *Figure 4*.

Figure 4

Distribution of Studies According to Peplau's Theory of Interpersonal Relations (1997)



The studies included a variety of staff and family member participants. For the staff participants, five studies included exclusively ED nurses (Ak et al., 2011; Blackburn et al., 2019; Fry et al., 2013; Innes et al., 2021; Lau et al., 2012), three were comprised of nurses and physicians (Elmqvist et al., 2012; Emmamally et al., 2020; Westphal et al., 2020) and three included all ED employees (Cahill, 2008; Cameron et al., 2010, Meade et al., 2010). Types of ED employees included: ED assistants, unit secretaries, social workers, aides, greeters, ED technicians, child life experts, resident physicians, attending physicians, assistant nurses, professional nurses, registered nurses and enrolled nurses. Staff participants' age ranged from 18 to over 60 years and their ED experience ranged from less than one to 16 years. For the ED nurses, their education level ranged from a diploma to a master's degree. Patient participants' age ranged from less than 18 years of age to greater than 80 years. Patients and family members were included. Family members included mothers, fathers, grandparents and spouses (Emerson et al., 2021; Hermann et al., 2019; Lowe et al., 2018; Paavilainen et al., 2009; Perret et al., 2017;

Phiri et al., 2020; Porter et al., 2011; Taylor et al., 2006; Tothy et al., 2016). A description of participant characteristics is presented in *Table 4*.

Table 4

Participant Characteristics

First author, year	Type of participant	Number of participants	Age	Sex (F/M)	Other relevant information
Ak, 2011	Nurse	16	Mean age 30.4	16 F	
Blackburn, 2019	Patient Family Nurse	14 1 6			 Senior nursing staff
Cahill, 2008	ED employee ED Nurse	44 21 (9 control group)	Mean age 38	46 (82%) F 9 (16%) M	Mean time employed by hospital 6 years
Cameron, 2010	Attending physician Resident physician Nurse ED assistant Unit secretary	13 23 66 14 11	18-29 years: 32 30-39 years: 40 40-49 years: 15 50-59 years: 11 > 60 years: 4	68 F 59 M	Years of experience: < 1 year: 12 1-5 years: 50 6-10 years: 22 11-15 years: 7 > 16 years: 11
Elmqvist, 2012	Patient Family Assistant nurse Registered nurse Physicians	4 2 1 4 3		2 F, 2 M 1 F, 1 M 1 F 4 F 3 M	Patients entered ED by: 1 walk in 1 ambulance 1 referral 1 telephone counsel
Emerson, 2021	Patients/Families	1,881			
Emmamally, 2020	Professional nurse Enrolled nurse Physician	4 2 3			Employed at: 7 State-funded hospital 2 private hospitals
Fry, 2013	Clinical initiative nurse	16		13 F 3 M	Level of ED experience: 5-10 years
Hermann, 2019	Patient	30	18-29 years: 8 30-44 years: 7 45-65 years: 8 > 66 years: 7	16 F 14 M	
Innes, 2021	Phase 1: waiting room nurse Phase 2: waiting room nurse Phase 3: registered nurses	5 8 197			Level of ED experience: Phase 1: 3-15 years Phase 2: > 10 years
Lau, 2012	Triage nurse Registered nurse	34 103			
Lowe, 2018	Patient	368			
Meade, 2010	Emergency department	28			Participants within the ED: 75% nurses 24% ED assistants 1% other ED staff (social workers, aides, and greeters)
Paavilainen, 2009	Patient	107	< 30 years: 23 31-50 years: 30 51-70 years: 32	48 F 58 M	45 patients attended the ED with a family member

First author, year	Type of participant	Number of participants	Age	Sex (F/M)	Other relevant information
			> 70 years: 20		
Perret, 2017	Family	28	Median age of the pediatric patient: 7.5 years	23 F 6 M	Type of family member: 21 mothers 5 fathers 1 grandmother 1 both parents
Phiri, 2020	Patient	10	Aged 22-53 years	4 F 6 M	
Porter, 2011	Patients/Families	1,233			
Taylor, 2006	Patient	866	0-17 years: 11 18-34 years: 237 35-49 years: 146 50-64 years: 186 65-79 years: 178 > 80 years: 55	443 F 388 M	
Tothy, 2016	Patients/Families	352			
Westphal, 2020	Patient Family Health care provider	1,088 4 10	Mean age 50 years	54 % F	

Critical appraisals were completed for each study to offer insight to the reader about the evidence presented and help act as a precursor for future systematic reviews (Appendix F). No articles were excluded based on their critical appraisal score. For the mixed methods studies, the qualitative part of the study was evaluated using the appropriate qualitative critical appraisal tool and the quantitative part was evaluated using the appropriate quantitative critical appraisal tool per JBI guidelines (Stern et al., 2020). The JBI tools used include the "JBI Checklist for Qualitative Research", the "JBI Checklist for Quasi-Experimental Studies," and the "JBI Checklist for Prevalence Studies" (n.d.). *Table 5* lists the critical appraisal scores for the included studies.

Table 5

Critical Appraisal Scores

Author	Ak et al., 2011	Blackburn et al., 2019	Cahill, 2008	Cameron et al., 2010	Elmqvist et al., 2012	Emerson et al., 2021	Emmamally et al., 2020	Fry et al., 2013	Hermann et al., 2019	Innes et al., 2021	Lau et al., 2012	Lowe et al., 2018	Meade et al., 2010	Paavilainen et al., 2009	Perret et al., 2017	Phiri et al., 2020	Porter et al., 2011	Taylor et al., 2006	Tothy et al., 2016	Westphal et al., 2020
Critical appraisal score	6/9	8/10	4/9	7/10	9/10	7/9	7/10	8/10	7/10	Qual 8/10 Quant 8/9	Qual 8/10 Quant 4/9	5/9	6/9	5/9	7/10	9/10	8/9	6/9	7/9	Qual 6/10 Quant 5/9

Pediatric Results

Orientation phase.

Within the orientation phase of the pediatric ED visit, two studies focused their interventions primarily on the orientation phase (Perret et al., 2017; Westphal et al., 2020), with another four studies contributing additional interventions, though these studies mainly concerned the working phase (Emerson et al., 2021; Fry et al., 2013; Innes et al., 2021; Taylor et al., 2006). Perret et al. (2017) identified general recommendations, and Westphal et al. (2020) took a technological approach via a website. All interventions in this phase emphasize ways to decrease parents' anxiety by increasing their knowledge. This was done by orienting them to the ED on arrival (n = 2) (Perret et al., 2017; Taylor et al., 2006), informing them about where things are located, like the bathrooms, as well as what they can do while they wait, like activities for the children or going to the coffee shop (n = 5) (Emerson et al., 2021; Fry et al., 2013; Innes et al., 2021; Perret et al., 2017; Taylor et al., 2006).

Studies also suggest explaining the ED process to families (n = 5) (Fry et al., 2013; Innes et al., 2021; Perret et al., 2017; Taylor et al., 2006; Westphal et al., 2020). Different studies took

different approaches to do so. Westphal et al. (2020) created a responsive website accessed by families' mobile devices and designed to deliver patient-specific ED journeys based on the information updated by the HCPs in the electronic medical record. This website, called “myED” outlines the patient-specific steps in the ED journey, their associated wait times, and where they are in the process. Taylor et al. (2006) developed a 10 minute “Welcome to the ED” video that cycled on a waiting room television that explained the triage process, the order in which patients are seen, the registration process, and the illness evaluation process. Other studies (n = 4) also used verbal communication to inform families of the ED process while waiting to see a physician (Fry et al., 2013; Innes et al., 2021; Perret et al., 2017; Taylor et al., 2006). While Perret et al. (2017) did not specify who would be explaining the ED process, Fry et al. (2013), Innes et al. (2021), and Taylor et al. (2006) had specific staff members explaining the ED process to families. These roles will be discussed later in this chapter.

In addition to explaining the ED process, another common intervention included explaining the wait times (n = 7) (Emerson et al., 2021; Fry et al., 2013; Innes et al., 2021; Perret et al., 2017; Taylor et al., 2006; Tothy et al., 2016, Westphal et al., 2020). Some studies explained wait times verbally (n = 5) (Emerson et al., 2021; Fry et al., 2013; Innes et al., 2021; Perret et al., 2017; Taylor et al., 2006), while others used written communication (n = 2) in the form of posters (Tothy et al., 2016), or updated communication boards (Emerson et al., 2021), as well as technology (n = 2) in the form of videos (Taylor et al., 2006) or websites (Westphal et al., 2020). When providing these explanations, it is important to be clear and consistent (Emerson et al., 2021; Perret et al., 2017). Emerson et al. (2021) developed scripted phrases that could be used for this purpose so that every family received the same information.

Working phase.

This review found different interventions tailored to the working phase of the relationship (*n* = 6) (Emerson et al., 2021; Fry et al., 2013; Innes et al., 2021; Porter et al., 2011; Taylor et al., 2006; Tothy et al., 2006) with one other pediatric study contributing (Perret et al., 2017). Although Perret et al. (2017) focused on the orientation phase, they had a couple of recommendations relevant to the working phase. These interventions took the form of multifaceted interventions (*n* = 3) that have been broken down into their individual components for this synthesis (Emerson et al., 2021; Taylor et al., 2006; Tothy et al., 2016), staff positions (*n* = 2) (Fry et al., 2013; Innes et al., 2021), and parent initiated written communication (*n* = 1) (Porter et al., 2011). The content of these interventions is discussed below, and further information is described in *Table 6.*

This review found studies (*n* = 2) that suggested/implemented regular staff rounding in the waiting room and patient rooms. During this rounding, a staff member talks to each family, reassesses the patient, updates families about delays, and wait times, and provides reassurance about the patient's condition by explaining the purpose of the assessment (i.e. signs of deterioration) and the findings of that assessment (i.e. no dyspnea or shortness of breath) (Emerson et al., 2021; Perret et al., 2017). Their role included addressing family concerns, answering questions, keeping the family informed, and monitoring patient status (Emerson et al., 2021; Perret et al., 2017). Usually, this rounding was completed by a nurse, but other members of the ED team, like ED leadership, could provide updates about delays and wait times to families (Emerson et al., 2021). The responsibilities while rounding in the waiting room/patient rooms are similar to those of the waiting room nurse (WRN)/clinical initiative nurse (CIN) as well as the patient liaison nurse, which have been implemented in other studies (Fry et al., 2013;

Innes et al., 2021; Taylor et al., 2006). The patient liaison nurse is responsible for all aspects of communication in the ED, including explaining delays, the reasons for investigations, and communicating with other team members (Taylor et al., 2006). The WRN/CINs' roles are to communicate the wait time to families, develop therapeutic relationships with families, de-escalate and resolve conflicts, assess and monitor the patients in the waiting room and escalate care when necessary while using a holistic approach (Fry et al., 2013; Innes et al., 2021).

Another approach to addressing family concerns and offering opportunities for families to ask questions was using posters and buttons worn by staff members that encouraged families to ask questions (Taylor et al., 2006). Alternatively, Porter et al. (2011) trialled using a written form that families filled out while waiting. The form asked about what their concerns were, expectations about the ED visit and specific questions the families had. These forms were to be reviewed and addressed at each encounter with a HCP. In order to get staff to focus on addressing family concerns, staff meetings (Emerson et al., 2021), staff mentors (Emerson et al., 2021), and staff training (Emerson et al., 2021; Tothy et al., 2016) have been used. Tothy et al. (2016) used on-the-spot training and training during staff meetings to help build the confidence of staff members about addressing family concerns.

Another intervention found in this review was multidisciplinary team workshops (Emerson et al., 2021; Taylor et al., 2006; Tothy et al., 2016). Each study used these workshops differently. Emerson et al. (2021) used the multidisciplinary team to review patient experience scores, identify areas of improvement and discuss strategies that could be implemented to improve scores. Tothy et al. (2016) were similar and used the multidisciplinary team to identify barriers and discuss potential solutions. However, Taylor et al. (2006) had a two-hour mandatory workshop run by a contracted professional company that presented information about patient

perceptions and vulnerabilities, determinants of patient satisfaction, interpersonal communications, deficiencies in holistic care and barriers to care. The workshop ended with problem-solving exercises and group discussions about ways to improve communication.

Interventions also included general recommendations to use during each nurse-family encounter. It has been recommended that nurses actively listen to what the families are saying (*n* = 3) (Fry et al., 2013; Innes et al., 2021; Perret et al., 2017), identify family concerns (*n* = 2) (Porter et al., 2011; Tothy et al., 2016), use clear language (*n* = 2) (Emerson et al., 2020; Perret et al., 2017), let the families ask questions (*n* = 4) (Emerson et al., 2021; Perret et al., 2017; Porter et al., 2011; Tothy et al., 2016), provide reassurance (*n* = 2) (Innes et al., 2021; Perret et al., 2017), and educate families on common illnesses and treatments (*n* = 3) (Innes et al., 2021; Perret et al., 2017; Taylor et al., 2006). Studies have examined using verbal and non-verbal communication skills (Innes et al., 2021), such as demonstrating empathy and a caring demeanour (Fry et al., 2013; Innes et al., 2021), using eye contact (Fry et al., 2013), humour (Fry et al., 2013), and touch (Fry et al., 2013) to improve communication. Calming strategies such as responding quietly and softly or using small talk were also used to address anxiety (Fry et al., 2013). Written communication was also provided upon request (Innes et al., 2021).

Table 6

Intervention Characteristics

First author, year	Category of intervention	Materials (physical or informational)	Procedures/Activities	Provider of intervention	Target population	Mode of delivery	Setting	Timing	Tailoring (personalized, individualized)
Ak, 2011	Skills training	(1) Workshop leader (2) Team participation	**Part 1:** theory on empathy, communication types, communication skills, non-verbal communication and relationship between patient and team. **Part 2**: discussions, role play and workshops using RN specific communication problems.	Workshop leader, unknown role	Staff-based	(1) Presentation (2) Discussion (3) Role play	ED in Turkey	90 minute sessions for 6 weeks	Role play and workshop designed using real life situations that ED nurses may encounter
Blackburn, 2019	(1) General strategies (2) Written	(1) Information (2) Leaflets and posters	**Information:** (1) communicate wait times (2) communicate acuity (3) communicate ED expectations (4) communicate clearly and consistently (5) explain all treatments **Written:** (1) Display written communication (leaflet/posters) to explain ED process, wait times and different areas of the ED.	ED physicians and RNs	Staff-based	(1) Staff interaction (2) Leaflets and posters	All areas of an ED in England	#1-3 all interactions by triage nurses #4-5 all interactions by ED staff	None
Cameron, 2010	Staff workshop	(1) Discussion leaders (2) Team participation	**Strategies developed from workshop:** (1) *Greeting and initial interaction*: (a) Introduce self and role with each interaction (b) Use positive non-verbal communication (c) Posters explaining wait times, and triage process (d) Develop scripted phases for consistent information (2) *Setting realistic expectations:* (a) Acknowledge wait times and apologize (b) Explain triage process, teaching hospital process, and anticipated delays (c) Outreach with community providers regarding expectation setting for the ED (d) Dry-erase boards for care plan	All ED staff, unknown role of discussion leader	Staff-based	Lead by researchers (1) Presentation (2) Discussion (3) Focus group	Large, urban, tertiary academic ED	6, 3.5 hour workshops. Participants attended one 3.5 hour workshop.	None

First author, year	Category of intervention	Materials (physical or informational)	Procedures/Activities	Provider of intervention	Target population	Mode of delivery	Setting	Timing	Tailoring (personalized, individualized)
			(c) Posters in patient rooms with wait times for different tests (d) TVs in waiting room explaining ED process, and treatment of common illnesses (3) *Team communication and respect:* (a) Acknowledge colleagues' work (b) Treat colleagues with respect (c) Ensure all team members are aware of plan (d) Checklist for tasks (c) Team rounding (d) Department-wide emails for departmental changes (4) *Information provision and delivery:* (a) Communicate in distraction free environment (b) Repeat important information throughout visit (c) Ask for families to state the information back (d) Encourage questions (e) Provide frequent updates (f) give families paper on which to write questions						
Cahill, 2008	Staff training	(1) Nurse educator (2) Team participation	(1) Discussion of professionalism (2) Identifying generational and cultural issues that impact communication styles. (3) Identifying strategies for improving communication among patients, families and staff (4) Examining behavioural characteristics associated with the cycle of aggression and violence (5) De-escalation techniques (6) Evasive techniques and patient containment techniques.	Nurse educator	Staff-based	Presentation by nurse educator	Tertiary ED, level 1 trauma centre and an associated satellite facility	One 8 hour session	None
Elmqvist, 2012	General strategies	Information	(1) Explain triage process (2) Explain patient acuity (3) Explain wait times (4) Explain ED process (5) Work out loud (6) Active listening (7) Answer questions	ED nurses and physicians	Staff-based	Staff interactions	ED in southern Sweden	NA	None

First author, year	Category of intervention	Materials (physical or informational)	Procedures/Activities	Provider of intervention	Target population	Mode of delivery	Setting	Timing	Tailoring (personalized, individualized)
Emerson, 2021	(1) Skills training (2) Rounding (3) Workshops (4) Mentors	(1) ED leadership (2) Leader for workshop (3) Communication boards (4) Staff training (5) Information	(1) Staff huddles (2) Multidisciplinary team workshop (3) Leadership rounding on roomed patients (4) Update patient communication boards (5) Waiting room rounding (6) Communication training (7) Staff mentors (8) Strategies to increase positive survey returns (9) Scripts for transitions	(1) Unclear who is leading skills training (2) Nurses and ED leadership rounds (3) Unclear who leads the workshop (4) ED nurses and MDs volunteer as mentors	Staff-based	(1) Staff interaction (2) ED leadership (3) Training (4) Workshops	Urban, tertiary pediatric ED, level 1 trauma centre All areas of the ED	6 months	None
Emmamally, 2020	General strategies	(1) Information	(1) clear, simple explanations with respectful tone, (2) caring gestures, (3) self reflection and asking for help, (4) respect, (5) attentive listening	ED nurses and MDs	Staff-based	Staff interactions	3 EDs in South Africa (2 state funded, 1 private)	NA	None
Fry, 2013	Staff position	ED RN in waiting room	Clinical Initiative Nurse's role is to (1) communicate wait (2) prioritize care (3) initiate treatment (4) develop relationships by using compassion, eye contact, empathy, humour, small talk and touch	ED nurses	Staff-based	Staff position in waiting room	3 pediatric and adult EDs in New South Wales (1) tertiary referral (2) regional referral (3) regional	NA	None
Hermann, 2019	General strategies	Information	(1) explaining the ED process (2) greet the family (3) ask preferred names (4) thank family for sharing (5) allow patients to talk without interruptions (6) respectful tone (7) reassurance (8) non-verbal body language (9) humanism (10) attentiveness (11) keep families informed, (12) use clear language	All ED staff	Staff-based	Staff interactions	Large, urban, academic ED	NA	None

First author, year	Category of intervention	Materials (physical or informational)	Procedures/Activities	Provider of intervention	Target population	Mode of delivery	Setting	Timing	Tailoring (personalized, individualized)
Innes, 2021	Staff position	Staff position in waiting room	Waiting Room Nurse's characteristics: (1) experience (2) communication by using non-verbal communication, active listening, empathy, presence, reassurance, empowerment, de-escalation, conflict resolution, education, and written communication (3) assessment and monitoring skills (4) clinical decision making (5) holistic approach	ED nurses	Staff-based	Staff position in waiting room	ED waiting room across Australia	NA	None
Lau, 2012	General strategies	Information	(1) acknowledge patients' arrival and wait (2) greet by name (3) friendly body language (4) thanking the family (5) recognize a turning point (6) handle requests (7) explain wait times (8) empathy	ED nurses	Staff-based	Staff interaction	Major metropolitan adult ED in the triage area	NA	None
Lowe, 2018	(1) Written (2) Technology	Poster Video (cost of £2000 to make)	(1) Posters in the waiting room to explain the triage process, the team members, the tests/procedures the patient may encounter. (2) Introduction video that introduces team members and describes each stage of the ED journey.	Unknown	Family-based	Posters and videos	Posters were put up in strategic locations within the ED and waiting room. Video played on patients own device online.	6 month campaign. 2.5 minute video	None
Meade, 2010	Rounding	Staff assignments	(1) Rounds every 30 minutes (2) Rounds every hour (3) Rounds every hour with an Individualized Patient Care (IPC) tactic	All ED staff	Staff-based	A training video was used to teach rounding protocols with a written competency test and observation by management	28 EDs Rounding occurred in reception areas and treatment areas	Rounding completed for 8 weeks.	Rounding with an IPC is specifically tailored to individual patients.

First author, year	Category of intervention	Materials (physical or informational)	Procedures/Activities	Provider of intervention	Target population	Mode of delivery	Setting	Timing	Tailoring (personalized, individualized)
Paavilainen, 2009	Counselling	(1) Information (2) Staff participation	(1) Families want counselling concerning patient illness, examinations, care procedure, medication, care at home, waiting area, wait times, eating/drinking status, and who to ask further questions to. (2) Privacy (3) Family members involved if patient consents	ED nurses	Staff-based	ED nurses counselling family members	ED waiting rooms and treatment areas	NA	Individualized counselling topics, where counselling takes place and who is involved in counselling.
Perret, 2017	General strategies	(1) Information (2) Staff assignments	(1) orient to ED, (2) explain ED process (3) explain wait times (4) explain what family can do during the wait (5) waiting room rounding (6) active listening (7) working out loud 8) clear explanations (9) patient education (10) letting families ask questions	All ED staff	Staff-based	Staff interaction	Pediatric ED, all areas	NA	Information provided is based on family questions/needs.
Phiri, 2020	General strategies	Information	(1) privacy, (2) explain ED process, (3) explain wait, (4) caring attitude, (5) reassurance, (6) answer questions	ED nurses	Staff-based	Staff interaction	Public ED in Botswana, 540 bed hospital	NA	None
Porter, 2011	Written	Written communication form for families	1 page form with 4 questions to assess what patients are worried about, expectations and questions.	ED nurses and physicians	Family-based	1 form delivered to families by staff members	Urban, tertiary pediatric ED		Let's staff members tailor communication to meet needs mentioned on form

First author, year	Category of intervention	Materials (physical or informational)	Procedures/Activities	Provider of intervention	Target population	Mode of delivery	Setting	Timing	Tailoring (personalized, individualized)
Taylor, 2006	(1) Workshop (2) Technology (3) Staff position	(1) Professional trainer (2) Patient education film (3) Patient liaison nurse	(1) mandatory communication workshop (15 staff/workshop) (2) patient education film that played in the waiting room describing triage and ED processes. (3) patient liaison nurse that's role was to communicate with patients and families and ensure understanding of the ED processes.	(1) Professional company provided communication workshop (2) Unclear who made the film (3) ED nurses	1 & 3 staff-based 2 family-based	(1) Professional training company was contracted to deliver a 2 hour workshop for the ED staff (2) welcome to the ED 10 minute video that cycled on a waiting room TV	University affiliated ED Patient education video played in the waiting room.	Campaign lasted 12 months 2 hour communication workshop	
Tothy, 2016	(1) Workshop (2) Written (3) Training	(1) Workshop leader (2) Team participation (3) Posters (4) Buttons (5) Training	(1) Multidisciplinary team workshop (2) Posters displaying wait times for families (3) Signs for staff to remind them to discuss family concerns (4) Signs for families to remind them to ask questions (5) Buttons for staff to encourage families to ask questions (6) Staff education	Unknown	1, 3, & 6 staff-based 2, 4, & 5 family- based	(1) Workshop (2) Posters (3) Buttons (4) Staff education	Posters in strategic locations in the ED and staff work rooms. 155 bed acute care teaching hospital at a level 1 trauma centre	90 days	None
Westphal, 2020	Technology	Family's own mobile device	MyED is a responsive website that is accessed on patients/families own mobile device via a secure platform they gain access to on ED admission. Gives information about the ED journey.	Researchers	Family-based	Technology – mobile phone	Pediatric and ambulant adult section of a medium sized tertiary care hospital Initiated at triage		Personalized to patients' specific journey

Findings.

Three studies discussed in this section used thematic analysis to discover their findings (Fry et al., 2013; Innes et al., 2021; Perret et al., 2017). It is within the themes presented that the communication interventions were found. Fry et al. (2013) and Innes et al. (2021) found themes describing the WRN/CIN. Fry et al. (2013) presented six themes: (1) positive body language and emotions; (2) CIN calming strategies; (3) negative body language; (4) CIN professional and personal conflict; (5) the doctor and the CIN; and (6) nurse mentoring and teamwork. While Innes et al. (2021) presented the themes: characteristics of the WRN, organizational resources for success, model of the WRN and external factors affecting performance. Perret et al. (2017) presented themes relating to family needs: the reason for the ED visit, sources of anxiety, triage, waiting room, consult room, and consultation.

Outcomes.

Interventions included in pediatric studies were evaluated using a variety of outcome measurements. Many were evaluating patient experience scores (n = 4) (Emerson et al., 2021; Porter et al., 2011; Taylor et al., 2006; Tothy et al., 2016), with one study evaluating an overall communication score as well (Porter et al., 2011). Patient experience surveys were not standardized, and each patient experience survey was comprised of different items. Items that studies had in common include evaluating "staff sensitivity to fears and concerns" (n = 2) (Emerson et al., 2021; Tothy et al., 2016), "communication about delays" (n = 3) (Emerson et al., 2021; Taylor et al., 2006; Tothy et al., 2016), "likelihood to recommend" (n = 2) (Taylor et al., 2006; Tothy et al., 2016), nurses and doctors being informative about treatments (n = 2) (Taylor et al., 2006; Tothy et al., 2016), nurses listening (n = 2) (Taylor et al., 2006; Tothy et al., 2016), and doctors listening (n = 3) (Porter et al., 2011; Taylor et al., 2006; Tothy et al., 2016). One

study measured whether patients' understanding of the ED journey improved (Westphal et al., 2020).

Emerson et al. (2021) and Porter et al. (2011) reported a significant improvement in overall patient experience; 86.1 to 89.8 (Emerson et al., 2021) and $p = .019$ (Porter et al., 2011). Emerson et al. (2021) also noted significant item-specific improvements: “availability of things for the child to do”, 71.7 to 78.3; “staff sensitivity to fears and concerns”, 84 to 94.4; “waiting time for radiology test”, 81.3 to 90.2; “communication about delays”, 75.7 to 87.5; and “summary metric for nurses [and] doctors”, 89.7 to 93.6 and 88.6 to 92.1 respectively. While Porter et al. (2011) noted significant item improvements in the categories “did the doctor listen to what you said about your child?”, $p = .026$, and “where you told signs to watch for at home?”, $p = .009$. Porter et al. (2011) also noted that the mean communication score was 88/100 and 52 % of parents reported an ideal communication experience.

While Taylor et al. (2006) and Tothy et al. (2016) did not evaluate overall patient experience, they did note significant improvements in the following categories: “staff cared about them as a person”, $p = .02$ (Taylor et al., 2006); “staff sensitivity to concerns”, $p = .002$ (Tothy et al., 2016); “informed about delays”, $p = .03$ (Taylor et al., 2006), and $p = .025$ (Tothy et al., 2016); “nurse was informative about treatments”, $p = .002$ (Tothy et al., 2016); “nurse took time to listen”, $p = .005$ (Tothy et al., 2016); “overall ED facility assessment”, $p = .03$ (Taylor et al., 2006); and “overall ED care”, $p = .03$ (Taylor et al., 2006). Westphal et al. (2020) found that patients understanding of the ED journey improved significantly ($p = .01$). A full description of these outcomes is presented in *Table 7.*

Table 7

Intervention Outcomes

First author, year	Aim/goal of intervention	Data source/Methods	Outcomes	Results/Findings
Ak, 2011	To determine the effects of a communication skills training program on emergency nurse and patient satisfaction	(1) Patient experience surveys completed by 439 patients (2) Communication skills survey completed pre and post intervention by staff. (3) Empathy survey completed pre and post intervention by staff. Data analyzed by t-tests and Wilcoxon signed rank tests.	*Patient experience*: (1) Confidence in the nurse (2) Respect, kindness and thoughtfulness of the nurse (3) Time devoted to listening (4) Counsel that was provided by nurses (5) Individualized attention from the nurses *Communication skills:* (1) Mental (2) Emotional (3) Behavioural *Empathy skills* *Number of undesirable events and complaints*	*Patient experience:* (1) Confidence in the nurse ($p = 0.01$) (2) Respect, kindness, and thoughtfulness of the nurse ($p = 0.01$) (3) Time devoted to listening ($p = 0.03$) (4) Counsel provided by nurses ($p = 0.01$) (5) Individualized attention from nurses ($p = 0.2$) Mean *communication skill* scores for nurses increased after training ($p = 0.001$) (1) Mental ($p = 0.006$) (2) Emotional ($p = 0.003$) (3) Behavioural ($p = 0.025$) Mean *empathy score* for nurses increased after training ($p = 0.001$) Number of undesirable events and complaints decreased 66 %
Blackburn, 2019	To understand the informational requirement of patients and their families attending the ED and how to best meet their needs.	Action research, interviews, and staff focus groups	Themes from patients and staff about meeting information needs of families attending the ED	From patients: (1) communication, (2) explanations of treatment and care, (3) expectations of the ED, (4) written communication From staff: (1) staff-patient interactions, (2) explanations of treatments, (3) written communication

First author, year	Aim/goal of intervention	Data source/Methods	Outcomes	Results/Findings
Cahill, 2008	(1) To evaluate the effectiveness of the ACT-SMART educational training program. (2) To examine the incidence of aggression and violence within the ED.	The Incidence of and Attitudes Toward Aggression in the Workplace survey Data Analyzed with *t*-tests and Pearson's correlation.	(1) Confidence managing aggression and violence (2) Attitude towards managing aggression and violence (3) Incidence of violence and aggression	(1) Confidence managing aggression and violence improved significantly for the whole experimental group ($p = .000$) (2) ED nurses' confidence managing aggressive situations improved significantly ($p = .007$) (3) No statistical difference between control and experimental group post test scores from independent *t* test ($p = .104$). (4) No statistical difference on attitude toward managing aggressive situations for the whole group and ED nurses ($p = .298$; $p = .991$) (5) No statistical difference in the mean scores on attitudes toward managing aggressive stations after participating in the ACT-SMART program ($p = .298$) (5) Weekly incidence of verbal threatening (23%), verbal insult (26%) and yelling (32%). 34% report being physically threatened, 21% slapped, 11% struck by object at least once per year.
Cameron, 2010	To engage and empower ED staff by identifying their perceptions of current communication barriers and find strategies to improve communication within the ED.	Participatory research via semi-structured focus groups.	Themes about improving communication	(1) greeting and initial interaction (2) setting realistic expectations (3) team communication and respect (4) information provision and delivery
Elmqvist, 2012	To describe and understand the patients first encounter in the ED as experience by the patient, family and first providers.	Open-ended interviews and reflective lifeworld analysis	Themes about the patients first encounter in the ED	(1) vague rules and conflicting expectations (2) encounter with a biological body (3) courtesy encounters (4) isolated in a timeless encounter (5) striving for meaning in the encounter
Emerson, 2021	To improve patient experience scores	Pre and post intervention Data analyzed for special cause variation and defined a shift as 8 or more points to one side of the centerline.	Patient experience scores: (1) availability of things for the child to do (2) staff sensitivity to fears and concerns (3) waiting time for radiology tests (4) communication about delays (5) summary for nurses (6) summary for doctors	Overall patient experience score improved from 86.1 to 89.8 which was sustained for the following year. Special cause variation was demonstrated in the categories: availability of things for the child to do (71.7 to 78.3), staff sensitivity to fears and concerns (84 to 91.4), waiting time for radiology test (81.3 to 90.2), communication about delays (75.7 to 87.3), summary metric for nurses (89.7 to 93.6), and summary metric for doctors (88.6 to 92.1).

First author, year	Aim/goal of intervention	Data source/Methods	Outcomes	Results/Findings
Emmamally, 2020	To describe HCP's perceptions of relational practice with families in the ED.	Semi-structured interviews and content analysis	Themes relating to relational practice	Within the themes families and HCPs connecting, recognizing the uniqueness of families, caring interactions, and taking charge when necessary, the strategies relating to communication are: (1) clear, simple explanations with respectful tone, (2) caring gestures, (3) self reflection and asking for help, (4) respect, (5) attentive listening They suggest the following to improve relational practice: (1) training workshops, (2) align nursing curricula to relational practice
Fry, 2013	To explore the role of a clinical initiative nurse (CIN)	Observations Thematic analysis	Themes describing the role of the CIN	(1) positive body language and emotions (2) CIN calming strategies (3) negative body language (4) CIN professional and personal conflict (5) the doctor and the CIN (6) nurse mentoring and teamwork
Hermann, 2019	To describe patients' experience of their communication with nurses and providers in the ED and fast track area.	Semi-structured interviews Thematic analysis	Themes describing experience of communication	(1) foundations that include behaviours that convey courtesy and respect (2) interactions that include ways in which providers conveyed respect.
Innes, 2021	To use a range of methods to describe ED waiting room nurses (WRN)	Mixed methods Semi-structured interviews Observations Survey	Data and themes describe the waiting room nurse	(1) characteristics of WRN (2) organizational resources for success (3) model of the WRN (4) external factors affecting performance
Lau, 2012	To explore the cultural aspects of violence	Ethnography Observations Semi-structured interviews Questionnaires to identify who to interview	Themes describing managing aggression Incidence of violence	(1) Problems and solutions (2) Them and us (3) Requests and demands (4) 103 violent incidences, 86.4% involved patients rather than relatives with nearly 2/3 being male

First author, year	Aim/goal of intervention	Data source/Methods	Outcomes	Results/Findings
Lowe, 2018	To examine the validity and effectiveness of implementing the Always Events approach to quality improvement in a Scottish ED.	Surveys pre, questionnaires post	Level of positive agreement to: (1) Were you provided with information about how we will provide care during your visit to the ED? (2) Do you understand how the ED delivers care? (3) Did staff keep you informed of your care within the ED? (4) How satisfied are you with the level of care you received?	Levels of positive agreement with the responses to question #1 increased from 80% to 88% after the poster intervention, and to 92% after the video intervention. Levels of positive agreement to question #2 increased from 83% to 86%. Levels of agreement were more variable for question #3 and #4. The authors state that the poster intervention had a greater impact.
Meade, 2010	To test the effectiveness of three different rounding technique.	Outcome measures were by data collection forms and patient satisfaction surveys. The differences between the 3 rounding groups were compared using general linear model multivariate tests and Least Significant Difference.	Leaving without being seen (LWBS) Leaving against medical advice (AMA) Call light use Patient falls Nursing station encounters Patient satisfaction: (1) Overall satisfaction (2) Being kept informed about care (3) Being kept informed about delays (4) How well pain was managed	Reduced LWBS by 23.4% ($p = .001$), leaving AMA by 22.6% ($p = .002$), falls by 58.8% ($p = .01$), call light use by 34.7% ($p = .01$), and nursing station encounters by 39.5% ($p = .001$). The protocol with the IPC most significantly improved outcomes when compared to the other 2 groups: reduced LWBS ($p = .02$), leaving AMA ($p = .04$), falls ($p = .04$), call light use ($p = .03$), and nursing station encounters ($p = .02$). Patient satisfaction improved with overall satisfaction with ED care ($p = .00$), how well pain was controlled ($p = .003$) and patients being kept informed about their care ($p = .00$). Nonsignificant change noted for being informed about delays (no p value reported).
Paavilainen, 2009	To describe patients' experience of the counselling they received in the ED particularly during the waiting period and the importance of family member participation.	Questionnaire Analyzed by frequency distributions, Kruskal-Wallis test and Mann-Whitney U-test	Patient satisfaction with counselling: (1) Information concerning illness (2) Information concerning exams (3) Information concerning care procedures (4) Information concerning medication (5) Information concerning care at home (6) Information concerning the waiting area (7) Information concerning wait times (8) Information concerning drinking or eating (9) Information concerning the rationale for exams and procedures (10) Information concerning exam results (11) Information concerning informing their family outside the hospital (12) Information concerning whom to ask further questions (13) Peacefulness of waiting area	Patients were satisfied with counselling in 11/13 of the counselling topics: Satisfaction with information concerning illness 74%, exams 82%, care procedures 81%, medication 81%, care at home 69%, waiting area 84%, length of waiting 56%, drinking and eating 62%, rationale for exams and procedures 69%, information concerning exam results 75%, informing their family outside the hospital 34%, whom to ask further questions 42%, and peacefulness of the waiting area 79%. Presence of a family member was important (75%)

First author, year	Aim/goal of intervention	Data source/Methods	Outcomes	Results/Findings
Perret, 2017	To understand the experience and needs of families coming to the ED for non-urgent reasons	Semi-structured interviews Thematic analysis	Themes relating to family needs	(1) reason for ED visit (2) sources of anxiety (3) triage (4) waiting room (5) consult room (6) consultation
Phiri, 2020	To understand patients ED triage experience	Phenomenology Open-ended interviews and collaborative hermeneutic data analysis by 11 ED nurses	Themes describing the triage experience	(1) triage environment (2) nursing staff (3) wait times
Porter, 2011	To improve parent communication with clinicians and satisfaction with care.	Survey Multivariate model From the satisfaction survey and 8-item communication scare was developed where 100 was a perfect score	Communication scores: (1) Did the doctor and nurse say different things? (2) Did the doctor listen to what you said about your child? (3) Was everything done for your child that you think should have been? (4) Was your child's problem explained to you in a way you understood? (5) Did the doctor listen to what your child said? (6) Would you have like more involvement in your child's care? (7) Were you told signs to watch for at home? (8) Were there times you needed help but did not get it? Overall patient satisfaction	Median percentage of form completion daily was 6.9 % The mean communication score was 88/100. Most respondents gave the best possible response with the lowest score for question #6, where 74% of respondents gave the highest response. No specific scores reported. Statistically significant results for question #7 ($p = 0.009$), and #2 ($p = 0.026$) 52% of parents reported an ideal communication experience (100). The campaign improved overall satisfaction by 14.2 points ($p = .019$).

First author, year	Aim/goal of intervention	Data source/Methods	Outcomes	Results/Findings
Taylor, 2006	To evaluate the effectiveness of a multifaceted intervention targeting staff-patient communication in improving ED patient satisfaction.	Patient satisfaction questionnaire Analyzed using Chi-squared test, Fisher's exact tests, t-tests, Mann-Whitney U tests and the Normal (z) test.	Patient satisfaction: (1) Informed about delays (2) Staff cared about you as a person (3) Standard of overall facility (4) Overall ED care rating (5) Adequacy of information provided to family/friend (6) Likelihood of recommending (7) Overall assessment (8) Courtesy shown to family/friends (9) Doctors informative about treatment (10) Doctors courtesy (11) Doctors took time to listen (12) Nurses informative about treatment (13) Nurses courtesy (14) Nurses took time to listen	Significant improvements in categories: informed of delays ($p = .03$), staff cared about them as a person ($p = .02$), the overall ED facility assessment ($p = .03$) and overall ED care ($p = .03$). 22.5% decrease in the number of complaints received in the post intervention period Non-significant changes in other categories: Question #5 ($p = .11$), #6 ($p = .08$), #7 ($p = .08$), #8 ($p = .29$), #9 ($p = .16$), #10 ($p = .21$), #11 ($p = .33$), #12 ($p = .35$), #13 ($p = .26$), #14 ($p = .25$)
Tothy, 2016	To quantify the impact of specific improvement activities on patient satisfaction	Patient experience survey Analyzed using Person's chi-square test	Patient satisfaction: (1) Likelihood to recommend (2) Staff sensitivity to concerns (3) Patient informed about delays (4) Nurse took time to listen (5) Doctor took time to listen (6) Nurse was informative of treatment (7) Doctor was informative of treatment	Significant improvement in staff sensitivity to concerns ($p = .002$), patient informed about delays ($p = .025$), nurse took time to listen ($p = .005$), nurse was informative of treatment ($p = .002$). Non-significant changes in other categories: Question #1 ($p = .146$), #5 ($p = .085$), #7 ($p = .44$)
Westphal, 2020	To communicate information about the ED process to patients without adding to the HCPs workload or delaying medical procedures	Mixed methods Interviews Observations Surveys	Patient understanding Use of system	Patients understanding of the ED journey improved significantly ($p = .01$). Use of system in third month after deployment was 30.48%

Adult Results

Orientation phase.

The interventions tailored to adults that concern the orientation phase of the ED visit were similar to those from the pediatric context. There were five studies that targeted this phase primarily (Blackburn et al., 2019; Elmqvist et al., 2012; Lau et al., 2012; Lowe et al., 2018; Phiri et al., 2020) with another five studies that targeted the working phase primarily, contributing additional recommendations (Cameron et al., 2019; Emmamally et al., 2020; Hermann et al., 2019; Meade et al., 2010; Paavilainen et al., 2009). The interventions in this phase took the form of recommendations (n = 6) (Blackburn et al., 2019; Elmqvist et al., 2012; Emmamally et al., 2020; Hermann et al., 2019; Lau et al., 2012; Phiri et al., 2020), and written and technology-assisted communication (Lowe et al., 2018). Additional information about the interventions is presented in *Table 6*.

The interventions focusing on this stage relate to increasing the knowledge of families, for instance, communicating the wait times in some way (n = 8) (Blackburn et al., 2019; Cameron et al., 2010; Elmqvist et al., 2012; Lau et al., 2012; Lowe et al., 2018; Meade et al., 2010; Paavalianen et al., 2009; Phiri et al., 2020). Some studies did this verbally by having a staff member explain the wait times (n = 6) (Blackburn et al., 2019; Elmqvist et al., 2012; Lau et al., 2012; Meade et al., 2010; Paavalianen et al., 2009; Phiri et al., 2020), others chose to use written communication in the form of posters or leaflets (n = 3) (Blackburn et al., 2019; Cameron et al., 2010; Lowe et al., 2012) or a combination of verbal explanation and written communication (Blackburn et al., 2019).

Studies also recommended/implemented explaining the ED process (n = 6) (Blackburn et al., 2019; Cameron et al., 2010; Elmqvist et al., 2012; Hermann et al., 2019; Lowe et al., 2018;

Phiri et al., 2020) and the triage process (*n* = 2) (Cameron et al., 2010; Elmqvist et al., 2012). The ED process was explained verbally by staff members (*n* = 4) (Blackburn et al., 2019; Cameron et al., 2010; Elmqvist et al., 2012; Hermann et al., 2019), through written communication methods in the form of posters put in strategic locations around the ED waiting room (*n* = 3) (Blackburn et al., 2019; Cameron et al., 2010; Lowe et al., 2018) or through technology (Cameron et al., 2019; Lowe et al., 2018). Cameron et al. (2019) explained the ED process and treatment of common illnesses through the waiting room television. Lowe et al. (2018) created a 2.5 minute introduction video introducing the ED team members and describing each step of the ED process, accessed with patients' mobile devices.

The adult interventions went a step further than the pediatric ones did by having staff members also explain patient acuity at triage (*n* = 2) (Blackburn et al., 2019; Elmqvist et al., 2012) as well as setting realistic expectations for the visit (i.e. tests they may expect, how often they may be updated, etc.) (Blackburn et al., 2019). Another study encouraged staff to work aloud during the triage process, meaning the staff member explains what they are doing and why during their assessment (Elmqvist et al., 2012). Another recommended explaining to families what they can do while they wait (Paavilainen et al., 2009).

The adult interventions differ from the pediatric ones because the interventions during the orientation phase also focused on first impressions with the ED HCPs. Several studies emphasized staff introducing themselves and explaining their role (*n* = 2) (Cameron et al., 2010; Meade et al., 2010) as well as asking for the patient's and family's preferred names and pronouns and greeting the family by those names (*n* = 2) (Hermann et al., 2019; Lau et al., 2012). Another implemented/recommended demonstrating a caring attitude (*n* = 3) (Emmamally et al., 2020;

Hermann et al., 2019; Phiri et al., 2020) and providing families with privacy while communicating with them (*n* = 2) (Paavalianen et al., 2009; Phiri et al., 2020).

Working phase.

Seven studies were found to have interventions that pertained primarily to the working phase of the relationship of Peplau's theory (Ak et al., 2011; Cahill, 2008; Cameron et al., 2010; Emmamally et al., 2020; Hermann et al., 2019; Meade et al., 2010; Paavilainen et al., 2009) with four additional studies that focused primarily on the orientation phase contributing some recommendations (Blackburn et al., 2019; Elmqvist et al., 2012; Lau et al., 2012; Phiri et al., 2020). These interventions took the form of staff training (*n* = 2) (Ak et al., 2011; Cahill, 2008), general recommendations (*n* = 2) (Emmamally et al., 2020; Hermann et al., 2019), a staff workshop (*n* = 1) (Cameron et al., 2010), patient counselling in the waiting room (*n* = 1) (Paavalianen et al., 2009), and patient rounding (*n* =1) (Meade et al., 2010).

There is some overlap in the content of the interventions targeted to the working phase. General recommendations that were used in each nurse-family encounter include using clear and simple language for explanations (*n* = 4) (Blackburn et al., 2019; Cameron et al., 2010; Emmamally et al., 2020; Hermann et al., 2019), encouraging families to ask questions (*n* = 4) (Cameron et al., 2010; Elmqvist et al., 2012; Paavalianen et al., 2009; Phiri et al., 2020), treating families with respect (*n* = 2) (Elmqvist et al., 2012; Emmamally et al., 2020), actively listening while families speak (*n* = 3) (Emmamally et al., 2020; Elmqvist et al., 2012; Hermann et al., 2019), allowing families to speak without interruption (*n* = 1) (Hermann et al., 2019), providing reassurance to families (*n* = 2) (Hermann et al., 2019; Phiri et al., 2020), showing empathy (*n* = 1) (Lau et al., 2012), and thanking the family for sharing (*n* = 2) (Hermann et al., 2019; Lau et al., 2012). Encouraging families to ask questions was done verbally or by providing a paper on

which the family can write questions while they wait (Cameron et al., 2010). Additionally, it is recommended that staff explain why they are completing certain assessments or treatments and also explain why they decline family's requests (n = 5) (Blackburn et al., 2019; Emmamally et al., 2020; Elmqvist et al., 2012; Lau et al., 2012; Paavalianen et al., 2009). For instance, if the nurse explains that the patient cannot eat or drink, they should explain why so families understand. While communicating with families' studies recommend communicating in a distraction-free environment (Cameron et al., 2010) and using positive non-verbal communication (Cameron et al., 2010; Hermann et al., 2019; Lau et al., 2012). They also suggest repeating important information throughout the visit (Cameron et al., 2010), acknowledging and apologizing for wait times (n = 2) (Cameron et al., 2010; Lau et al., 2012), providing patient education (Cameron et al., 2010; Paavalianen et al., 2009) and asking families to repeat the information back to ensure understanding (Cameron et al., 2010). Emmamally et al. (2020) also recommend that nurses self-reflect on their communication style to ensure it meets the family's needs and ask for help from nurses with more experience when required.

Other interventions include explaining delays and updating families regularly (n = 3) (Cameron et al., 2010; Hermann et al., 2019; Meade et al., 2010). All studies did this verbally, however, Meade et al. (2010) implemented three different rounding protocols that specified the frequency and information provided during patient updates. These rounding protocols were taught to nurses through a training video and verified for understanding by a written competency test and observation by a manager.

Another intervention found was staff workshops. Cameron et al. (2010) implemented a 3.5 hour multidisciplinary workshop to create strategies to improve communication in the ED. In addition to the general recommendations discussed above, Cameron et al. (2010) suggested

updating patient communication boards for roomed patients with information about their care plan, wait times and team members. They also developed scripted phrases that can be used in various situations in the ED so that all team members communicate clearly and consistently.

The final intervention found that could be applied during the working phase of the relationship was staff training. These training courses taught theory on empathy (Ak et al., 2011), different communication types and how communication is impacted by generational or cultural factors (Ak et al., 2011; Cahill, 2008), verbal and non-verbal communication skills to improve communication among patients, families and staff members (Ak et al., 2011; Cahill, 2008), professionalism and the relationship between the patient and the team (Ak et al., 2011; Cahill, 2008), behaviour associated with violence and aggression (Cahill, 2008), and de-escalation and evasive maneuvers (Cahill, 2008). Ak et al.'s (2011) course was taught using presentations, group discussions and role play. Each lesson took ninety minutes and lasted six weeks (Ak et al., 2011). Cahill's (2008) course was taught in one eight-hour day.

Findings

The qualitative studies were analyzed through the identification of themes. It was within these themes that the communication interventions were identified (n = 7) (Blackburn et al., 2019; Cameron et al., 2010; Elmqvist et al., 2012; Emmamally et al., 2020; Hermann et al., 2019; Lau et al., 2012; Phiri et al., 2020). Of these themes, two looked at improving communication or describing the communication experience in the ED (Cameron et al., 2010; Hermann et al., 2019). Others looked at describing the triage experience (n = 2) (Elmqvist et al., 2012; Phiri et al., 2020), the information needs of families (n = 1) (Blackburn et al., 2019), managing aggression and violence (Lau et al., 2012) and relational nursing practice (n = 1) (Emmamally et al., 2020). A full description of these themes is presented in *Table 7.*

Outcomes.

The outcomes of the adult interventions were measured in different ways. A few studies measured patient satisfaction (n = 4) (Ak et al., 2011; Lowe et al., 2018; Meade et al., 2010; Paavilainen et al., 2009) however, they were measured using different patient satisfaction questionnaires. Within the patient satisfaction questionnaires, the similarities include "being kept informed about care" (n = 2) (Lowe et al., 2018; Meade et al., 2010), overall satisfaction (n = 2) (Lowe et al., 2018; Meade et al., 2010), and being provided with information about how the staff will provide care (n = 2) (Lowe et al., 2018; Paavilainen et al., 2009). Lowe et al. (2018) and Paavilainen et al. (2009) reported their results using descriptive statistics, however, p values were not reported. Ak et al. (2011) used three outcome measures: patient experience surveys, the communication skills inventory and the empathy scale to assess the impact of their staff training program. They found that within the patient experience survey, significant improvements were found in the following categories: "confidence in the nurse" (p = .01), "respect, kindness, and thoughtfulness of the nurse" (p = .01), "time devoted to listening by the nurse" (p = .03), and "counsel provided by nurses" (p = .01). They also found that the mean staff communication skills score increased significantly (p = .001) and so did the staff's mean empathy score (p = .001) (Ak et al., 2011). Meade et al. (2010) used specific outcome metrics in addition to patient satisfaction to measure the effectiveness of patient rounding and found that patient rounding significantly reduced LWBS rates (p = .001), leaving against medical advice (AMA) rates (p = .002), fall rates (p = .01), call light use (p = .01), and nursing station encounters (p = .001). They also significantly improved overall patient satisfaction with ED care (p = .00), as well as improved specific survey items, "how well pain was controlled" (p = .003), and "informed about care" (p = .003) (Meade et al., 2010). One study used a "Incidence of and Attitudes Toward

Aggression in the Workplace" scale (Deans, 2004) and found that confidence managing aggression and violence, within the whole group and ED nurse specific, improved significantly (p = .000 and p = .007 respectively) (Cahill, 2008). A full description of outcomes is done in *Table 7*.

Grey Literature Results

The grey literature search yielded seven documents concerning nurse/HCP-patient/family communication (College of Nurses of Ontario [CNO], 2006; Health Quality Ontario, n.d.; NHS Quality Improvement Scotland, 2005; NICE Guidelines, 2021; Registered Nurses' Association of Ontario [RNAO], n.d.; RNAO, 2002; RNAO, 2015). The documents came from Canadian sources (n = 5) (CNO, 2006; Health Quality Ontario, n.d.; RNAO, n.d.; RNAO, 2002; RNAO, 2015), and from the United Kingdom (n = 2) (NHS Quality Improvement Scotland, 2005; NICE Guidelines, 2021). All documents found were best practice guidelines or quality improvement guidelines created by sources in health care. The CNO is the regulatory nursing body in Ontario, Canada (2006). The Government of Ontario created Health Quality Ontario to ensure Ontarians receive quality health care by publishing quality standards for clinicians. The RNAO is a nursing organization that promotes excellence in nursing practice and publishes many best practice guidelines. The NICE (National Institute for Health and Care Excellence) identifies high-quality health care and develops guidelines and standards of practice that reflect the national (United Kingdom) priorities. The NHS (National Health Services of Scotland) provides quality health care strategies.

The documents found during the grey literature search focused on more generalizable findings that could be implemented in any HCP-family relationship rather than specific communication strategies for the ED. No ED-specific strategies were found in the grey literature

search. The documents found focused on pediatrics (*n* = 1) (NICE Guidelines, 2021), adult and pediatrics (*n* = 1) (RNAO, 2015), and adults (*n* = 5) (CNO, 2006; Health Quality Ontario, n.d.; NHS Quality Improvement Scotland, 2005; RNAO, n.d.; RNAO, 2002). Of the adult-specific documents, two focused on the older adult population (RNAO, n.d.; NHS Quality Improvement Scotland, 2005). The CNO (2006) and RNAO (n.d.; 2002; 2015) provide recommendations specific to the nurse-family relationship. None of the documents focused strictly on the orientation phase of the relationship, however, most documents included suggestions for both the orientation and the working phases (*n* = 6) (CNO, 2006; NHS Quality Improvement Scotland, 2005; NICE Guidelines, 2021; RNAO, n.d.; RNAO, 2002; RNAO, 2015) with the final document focusing strictly on the working phase of the relationship (Health Quality Ontario, n.d.). All documents contained general strategies that could be used to improve nurse-family communication (CNO, 2006; Health Quality Ontario, n.d.; NHS Quality Improvement Scotland, 2005; NICE Guidelines, 2021; RNAO, n.d.; RNAO, 2002; RNAO, 2015). See *Table 8* for more information.

Pediatric Results

General strategies identified for the orientation phase of the pediatric nurse-family relationships were the same for both documents that identified pediatric-specific strategies (NICE Guidelines, 2021; RNAO, 2015). These strategies include nurses introducing themselves to the patient and family, asking the patient and family for their preferred names, asking the family for their communication preferences (written or verbal), encouraging participation from all members of the family and exhibiting a friendly/caring demeanor (NICE Guidelines, 2021; RNAO, 2015).

Within the working phase of the relationship, many strategies were suggested that mirrored database study results. They include: the HCP explains care (*n* = 3) (NICE Guidelines, 2021; Perret et al., 2017; RNAO, 2015) using clear language (*n* = 5) (Emerson et al., 2021; Innes et al., 2021; NICE Guidelines, 2021; Perret et al., 2017; RNAO, 2015), actively listens to families (*n* = 5) (Innes et al., 2021; Fry et al., 2013; NICE Guidelines, 2021; Perret et al., 2017; RNAO, 2015), encourages the family to ask questions (*n* = 6) (Emerson et al., 2021; NICE Guidelines, 2021; Perret et al., 2017; Porter et al., 2011; RNAO, 2015; Tothy et al., 2016), provides reassurance (*n* = 3) (Innes et al., 2021; NICE Guidelines, 2021; RNAO, 2015), and timely updates (*n* = 4) (Emerson et al., 2021; NICE Guidelines, 2021; Perret et al., 2017; RNAO, 2015) while demonstrating compassion (*n* = 3) (Fry et al., 2013; NICE Guidelines, 2021, RNAO, 2015), and empathy (*n* = 3) (Fry et al., 2013; NICE Guidelines, 2021, RNAO, 2015). They also recommend using eye contact and touch if appropriate to the situation (*n* = 2) (Fry et al., 2013; RNAO, 2015). Some additional strategies were identified that were not found in the pediatric database results. The grey literature identified that HCPs should demonstrate respect, cultural sensitivity and a non-judgmental attitude when working with families (*n* = 2) (NICE Guidelines, 2021; RNAO, 2015). These documents recommend being present in the encounter (RNAO, 2015), not rushing the person (RNAO, 2015), and reflecting on the communication style that is being used to see if it is effective for that situation (RNAO, 2015).

Adult Results

The grey literature search found four documents that offered general strategies that HCPs could use when communicating with families during the orientation phase of the relationship (CNO, 2006; NHS Quality Improvement Scotland, 2005; RNAO, n.d.; RNAO, 2002), some of which are similar to the database results concerning the adult population. It is recommended that

HCPs introduce themselves (*n* = 4) (Cameron et al., 2010; CNO, 2006, Meade et al., 2010; NHS Quality Improvement Scotland, 2005) and set expectations for the visit (*n* = 3) (Blackburn et al., 2019; Cameron et al., 2010; RNAO, 2002). Within the orientation phase, HCPs need to build trust (RNAO, 2002), ask for family preferences (RNAO, n.d.), demonstrate patience, and exhibit a friendly demeanour (NHS Quality Improvement Scotland, 2005). It is also important to screen for and recognize hearing disabilities (NHS Quality Improvement Scotland, 2005) and ensure that patients and family members use appropriate supportive measures if hearing disabilities are identified (NHS Quality Improvement Scotland, 2005). According to NHS Quality Improvement Scotland (2005), when communicating with a person with a hearing disability, it is important to get the person's attention, look directly at the person when speaking, minimize background noise and use a slightly slowed-down version of a normal rhythm of speech.

Five documents made recommendations for the working phase of the relationship (CNO, 2006; Health Quality Ontario, n.d.; NHS Quality Improvement Scotland, 2005; RNAO, n.d.; RNAO, 2002), many of which had commonalities with the database results. To promote effective communication with patients and families, HCPs should show respect (*n* = 5) (CNO, 2006; Emmamally et al., 2020; Hermann et al., 2019; RNAO, n.d.; RNAO, 2002), actively listen (*n* = 5) (Elmqvist et al., 2012; Emmamally et al., 2020; Hermann et al., 2019; RNAO, n.d., RNAO, 2002), use plain language (*n* = 5) (Blackburn et al., 2019; Cameron et al., 2010; Emmamally et al., 2020; Hermann et al., 2019; NHS Quality Improvement Scotland, 2005), and be consistent with the information provided (*n* = 2) (Cameron et al., 2010; RNAO, 2002). If providing written communication, as many sources recommend (*n* = 5) (Blackburn et al., 2019; Cameron et al., 2010; Health Quality Ontario, n.d.; Lowe et al., 2018; NHS Quality Improvement Scotland, 2005), HCPs need to be concise and focused with the information provided (Health Quality

Ontario, n.d.), use no jargon or acronyms (Health Quality Ontario, n.d.), and write at no higher than a grade eight literacy level (Health Quality Ontario, n.d.).

Sources from the grey literature also recommend using positive verbal and non-verbal communication techniques (*n* = 5) (Cameron et al., 2010; CNO, 2005; Hermann et al., 2019; Lau et al., 2012; RNAO, 2002). This can be done by validating the family's feelings (RNAO, 2002), using silence to let the family fully express themselves (RNAO, 2002), asking open-ended questions (RNAO, 2002), restating, summarizing or clarifying what the person said to ensure comprehension (NHS Quality Improvement Scotland, 2005; RNAO, 2002), and focusing the conversation (RNAO, 2002). HCPs need to take adequate time with the family (NHS Quality Improvement Scotland, 2005), understand that all behaviour has meaning and to take the time to understand the patient/family's perspective (CNO, 2006; RNAO, 2002), and reflect on the communication style being used to see if it is meeting the needs of the family (Emmamally et al., 2020; RNAO, 2002). According to these grey literature documents, utilizing the strategies highlighted above will help HCPs communicate effectively with families (CNO, 2006; Health Quality Ontario, n.d.; NHS Quality Improvement Scotland, 2005; RNAO, n.d.; RNAO, 2002). See *Table 8* for more details.

Table 8

Grey Literature Documents' Characteristics

Source	Country	Document type	Population	Findings
Registered Nurses' Association of Ontario (RNAO), n.d.	Canada	The 3 A's communication strategy developed as part of the prevention of elder abuse best practice guidelines	Older adults	(1) Active listening and reassurance (2) Ask the older person what they want (3) Action according to their wishes and follow-up
RNAO, 2002	Canada	Best practice guidelines for establishing therapeutic relationships	Adults	*Orientation:* (1) Build trust (2) Set realistic expectations (3) Demonstrate respect and honesty (4) Be consistent (5) Active listening *Working* (1) Validate feelings (2) Understand the patient's perspective *Termination:* (1) Celebrate meeting goals All phases require effective *communication techniques*: (1) Silence (2) Open-ended questions (3) Restating (4) Reflecting (5) Seeking clarification and validation (6) Focusing (7) Summarizing (8) Awareness of verbal and non-verbal communication and cultural differences relating to communication *Recommendation:* (1) Hospitals should offer clinical supervision, coaching, group exercises, demonstration, role modeling and case consultation to improve relationship building. (2) Reflective activities to foster self-awareness, empathy, and awareness of boundaries like journal writing. (3) Hospital should ensure appropriate workloads

Source	Country	Document type	Population	Findings
RNAO, 2015	Canada	Best practice guidelines for person- and family-centred care.	Adult and pediatrics	Establish therapeutic relationships using verbal and non-verbal communication strategies to build a partnership. *Verbal communication strategies:* (1) Introduce self, role, and timelines of involvement in care (2) Ask for preferred names (3) Explain care step by step using clear, simple language (4) Be respectful of others values/beliefs/culture (5) Reassurance (6) Do no rush the person (7) Encourage the person to tell their story and explore their priorities (8) Use positive and non-judgemental response (9) Clarify information (10) Accept, repeat and validate your understanding (11) Adjust communication style (tone of voice, cadence, loudness, pauses and silence) to accommodate persons needs (age, development, literacy level) (12) Use written communication if requested (13) Explain how to raise concerns, and ask questions (14) Provide timely communication (15) Reflect on your communication style to see if it is meeting the persons needs *Non-verbal communication strategies:* (1) Active listening without interruption (2) Sympathetic and caring presence (3) Full attention and direct eye contact (if appropriate) (4) Display emotion that indicates warmth, kindness, friendliness, sadness and compassion (5) Demonstrate respect and courtesy through behaviour such as shaking hands, nodding head, silence and smiling (6) Touch is appropriate (7) Use actions that display efficiency and competence
Health Quality Ontario, n.d.	Canada	Plain Language Checklist for health care professionals.	Adults	(1) Focus your communication: open with the most important information and remember your purpose (2) Be concise: 4-6 key messages at most (3) Speak/write at grade 8 level (4) Use bullet points for written communication (5) Use images (6) Avoid jargon and acronyms

Source	Country	Document type	Population	Findings
National Health Service (NHS) Quality Improvement, 2005	United Kingdom	Guidelines for maximising communication with older people with hearing disabilities.	Older adults	(1) Screen and recognize hearing disabilities (2) By patient and friendly (3) Take adequate time with the person (4) Ensure sufficient lighting (5) Look directly at the person and do not turn away while talking (6) Minimize background noise (7) Get the persons attention (8) Introduce self (9) Use plain language (10) Provide supplemental information in writing (use large, clear font (14)) (11) Use normal rhythm of speech but slow down slightly (12) Ask for summary (13) Ensure supportive measures are used/available (hearing aids, glasses)
National Institute for Health and Care Excellence (NICE) Guidelines, 2021	United Kingdom	Communication recommendations for pediatrics.	Pediatric	(1) Introduce self and role (2) Ask for preferred names and pronouns (3) Friendly and welcoming demeanor (4) Encourage family/child to participate in discussions (5) Demonstrate kindness, compassion, respect, and cultural sensitivity (6) Non-judgemental attitude (7) Active listening (8) Reassurance (9) Explain all treatment options, where they will be seen, wait times, and delays (10) Use clear, simple language, no jargon (11) Provide information at regular, predictable times if possible (12) Encourage questions (13) Ask about communication preferences (verbal or written)
College of Nurses of Ontario, 2006	Canada	Practice standard guidelines for therapeutic relationships.	Adults	(1) Introduce self (2) Use verbal and non-verbal communication (3) Respect beliefs and values (4) Recognize that all behaviour has meaning and try to understand the cause of the behaviour (5) Identify care goals

Chapter 6: Discussion and Conclusion

This chapter will discuss the results presented in this scoping review and their relation to the overall literature. This discussion will present a summary of the overall interventions, barriers to implementation of these interventions, and highlight gaps in the literature. Peplau's Theory of Interpersonal Relations (1997) helps organize the results of this review to make them easier to understand and thus easier to implement in practice (Younas & Quennell, 2019). Each section will be structured within the orientation or working phase of the therapeutic relationship (Peplau, 1997). The chapter will finish by presenting the recommendations for future directions in this clinical area, the strengths and limitations of this scoping review, and a conclusion of this thesis.

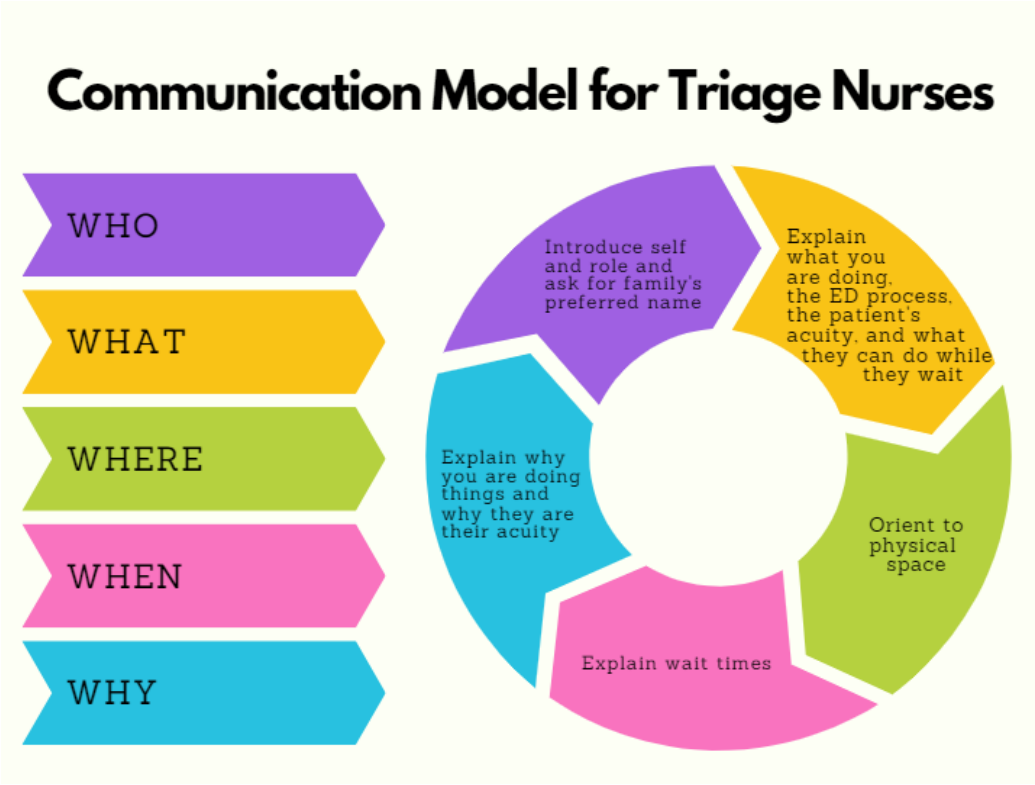
Orientation Phase

The orientation phase of the therapeutic relationship (Peplau, 1997) is mainly targeted at the triage step of the ED process. Triage nurses are usually the patient's and family's first staff interaction within the ED and can set the tone for the rest of the visit (Elmqvist et al., 2012; Lau et al., 2012). Once the patient is triaged, it is unknown how long it will take for another staff member to communicate with the family before getting a room, so the triage nurse is an important source of information (Elmqvist et al., 2012). Based on the results of this scoping review, the recommendations from the literature for communication during triage can be represented using the five W's model (*Figure 5*): who, what, where, when, and why (Sloan, 2010). This model is well known and diffusely taught in the context of journalism and writing (Sloan, 2010). It was originally introduced by Aristotle and referred to as the seven circumstances but was adopted by writers and presenters over the years and is now known as the

five W's (Sloan, 2010). This popular model was adapted to represent the communication needs of families at triage.

Figure 5

Communication Model for Triage Nurses



The *who* section refers to who the patient, family member and HCP present at triage are. It is recommended that upon arrival at triage, the nurse introduces themself, asks the patient and the family's preferred names and greets them by those names (Cameron et al., 2010; CNO, 2006; Hermann et al., 2019; Lau et al., 2012; Meade et al., 2010; NHS Quality Improvement Scotland, 2005; NICE Guidelines, 2021; RNAO, 2015). The *what* section refers to what the nurse is doing during their assessment (Elmqvist et al., 2012; Emerson et al., 2021; Perret et al., 2017), what the ED process is (Blackburn et al., 2019; Cameron et al., 2010; Elmqvist et al., 2012; Fry et al., 2013; Hermann et al., 2019; Innes et al., 2021; Lowe et al., 2018; Perret et al., 2017; Phiri et al.,

2020; Taylor et al., 2006; Westphal et al., 2020), what the patient's acuity is (Blackburn et al., 2019; Elmqvist et al., 2012), and what the patient and family can do while they wait (Emerson et al., 2019; Fry et al., 2013; Innes et al., 2021; Paavilainen et al., 2009; Perret et al., 2017; Taylor et al., 2006). The *where* section refers to orienting the family to the physical space of the ED. This means explaining where important spaces are, for example, the bathroom, the coffee shop, the patient rooms, and the X-ray department (Perret et al., 2017; Taylor et al., 2006). The *when* section refers to explaining wait times, both to see a physician as well as to see another staff member for the next step of the process (Blackburn et al., 2019; Cameron et al., 2010; Elmqvist et al., 2012; Emerson et al., 2021; Fry et al., 2013; Innes et al., 2021; Lau et al., 2012; Lowe et al., 2018; Meade et al., 2010; Paavilainen et al., 2009; Perret et al., 2017; Phiri et al., 2020; Taylor et al., 2006; Tothy et al., 20116; Westphal et al., 2020). Finally, the *why* section refers to explaining why the nurse is doing the assessment (Elmqvist et al., 2012; Emerson et al., 2021; Perret et al., 2017) and why the patient is triaged to their acuity level (Blackburn et al., 2019; Elmqvist et al., 2012). During each of the steps, the nurse must ensure privacy during the discussion (Paavalianen et al., 2009; Phiri et al., 2020), be clear and consistent (Emerson et al., 2021) and demonstrate a caring attitude (Emmamally et al., 20201; Hermann et al., 2019; Phiri et al., 2020).

Return to the Vignette

The use of this model can be exemplified by revisiting the vignette from the beginning of this thesis.

It's 2 am, my daughter (8 years old) has been crying in pain all night. The Tylenol I gave her didn't help. She just started vomiting. I rush to the nearest emergency department and get in line for triage. There are three other families ahead of me. I am trying to be patient, but my

daughter won't stop crying. It is finally my turn. The nurse greets me, "Hello, my name is Ann, and I will be your triage nurse today. What are your names?". After I answer, the nurse acknowledges my daughter and says, "It looks like your daughter is in pain. Let's get her weight and her health card so I can give her something for that. Can you tell me what has been going on?". I'm relieved she is taking me seriously. I explain what has been going on and the nurse starts her exam. The nurse explained that she was taking my daughter's vital signs to see if anything was abnormal, she listened to her heart, lungs and stomach, felt her stomach and asked a lot of questions about my daughter's pain.

When the nurse finished, she said, "it is clear your daughter is in pain, but she does not have any other symptoms that are a red flag. She has good circulation and a moist mouth, so she does not seem to be dehydrated at this time. She has not had any stomach pain to the right lower quadrant, has no fever at this time and her blood pressure is normal. This means that while she is triaged as urgent based on her pain level, she does not need to be seen right away. We will try to manage her pain and symptoms while you wait to see the physician. The wait time currently is approximately 2-4 hours, but it may end up being longer if sicker patients come in because the sickest patients are always seen first. While you are waiting, I would like you to keep her hydrated since she is at risk of developing dehydration. She can have small sips of clear fluid, frequently. Please let me or one of the other triage nurses know if her pain does not improve or her condition worsens in anyway." She then gave us directions to the waiting room, the bathrooms, and the coffee shop but explained that I needed to let the receptionist know if I left the waiting room, so they knew where we were at all times.

I sit down in the waiting room with the other families. I text my partner to bring some supplies since it will be a couple of hours before we are seen. I am relieved that the nurse did not find any red flags on her assessment. I settle down for the wait.

When compared to the initial vignette, utilizing the communication model for triage nurses answered most of the mother's questions, the mother felt reassured, and prepared for what was to come.

Barriers to Implementation

Many studies in the scoping review recommended that the above information be given verbally to families (Blackburn et al., 2019; Cameron et al., 2010; Emerson et al., 2010; Fry et al., 2013; Innes et al., 2021; Lau et al., 2012; Meade et al., 2012; Paavilainen et al., 2009; Perret et al., 2017; Phiri et al., 2020; Taylor et al., 2006). While verbal communication requires no extra physical resources, it requires organizational support and staff training. There are several barriers to their implementation (RNAO, 2002). Increasing patient volumes in the ED can lead to long waits to be triaged (Rozo et al., 2017). This is a vulnerable time for patients to be waiting as their acuity is unknown and they could deteriorate without quick intervention (Andrusiek et al., 2018; Hansen et al., 2021). For these reasons, it is important for the triage nurses to be quick and efficient in order to minimize a patient's time to triage (Andrusiek et al., 2018). One study showed that it took a median of 12 minutes for a patient to be triaged from entering the ED (Hansen et al., 2021). This is already a significant amount of time when trying to follow the Canadian Triage and Acuity Scale (CTAS) recommended timeframes for the physician's initial assessment (PIA) (Hansen et al., 2021). CTAS Level 1 requires immediate assessment, while CTAS Level 2 requires a PIA of 15 minutes and CTAS Level 3 a PIA of 30 minutes (Hansen et al., 2021). Thus, triage nurses do not have a lot of extra time for communication. They must

assign a CTAS score as quickly as possible but in order to do that they must obtain the required information. They must balance speed with the communication needs for triage and the patient and family's needs.

Additionally, it can be difficult for nurses to communicate effectively when patients are very ill or in pain and family members are very anxious (Al-Kalaldeh et al., 2020; Ekwall et al., 2009; Embong et al., 2020; Westphal et al., 2020). For instance, if an 8-year-old comes into the ED with symptoms of gastroenteritis and is vomiting every 5 minutes. The child will be unable to listen to or cooperate with the triage nurse, and the parents will be too anxious/distracted to listen. If the nurse gives an antiemetic and reinitiates the conversation once the child is no longer vomiting, the family will likely be able to devote more attention. Relying only on the triage nurses to provide adequate communication adds to their already heavy workload as they try to juggle sick patients at increased patient volumes (Rozo et al., 2017). This is compounded by staff shortages, and often a lack of experienced staff or support (Rozo et al., 2017). This can contribute to increasing nurse stress and nurse burnout (Rozo et al., 2017).

With these barriers in mind, some studies from the scoping review explored explaining the *what, where,* and *when* sections using written communication or technology-assisted communication (Blackburn et al., 2019; Cameron et al., 2010; Lowe et al., 2018; Taylor et al., 2006; Tothy et al., 2016; Westphal et al., 2020). These can minimize the impact on nurses' workload (Westphal et al., 2020) but present with their own barriers to implementation. When referring to web-based technology-assisted communication like websites (Westphal et al., 2020) or informational videos accessed by websites (Lowe et al., 2018), Westphal et al. (2020) found that age, illness, and mobile device issues contributed to a lack of use. Older adults often have more trouble with technology than other populations (Westphal et al., 2020). Patients who feel

too ill are less likely to engage with technology (Westphal et al., 2020). Mobile device issues are another barrier to implementation, whether it is internet connectivity issues or user/website errors (Westphal et al., 2020). If there is no one in the ED to address these issues, the patient and family will not have access to the information. There is also a cost associated with the use of technology (Lowe et al., 2018). This can make it more difficult to implement as the hospital needs to fund the intervention, and smaller hospitals may not have the budget for it (Vaughan & Edwards, 2020).

Lowe et al. (2018) found that written communication had a greater impact on patient experience scores than their information video, but their information video was accessed via the patient's or family's own mobile device. Taylor et al. (2006) also trialed an informational video played on a waiting room television, but it was not compared to written or verbal communication. Some literature suggests that educational videos can be more effective than written pamphlets (Ramagiri et al., 2020). However, the literature has also shown that people have different learning styles, and while some may find written communication effective, others respond well to audio-visual based teaching strategies (Truong, 2016). Written communication costs less than technology-based communication, making it easier to implement in many EDs. However, the environmental impact of this intervention needs to be considered (Arango, 2017). Creating pamphlets to hand out to every patient creates a larger environmental impact than posters or web-based information (Arango, 2017). Posters displayed in strategic areas create less waste, however, there is the possibility that patients/families do not see the poster (Redding & Cole, 2019), and posters themselves may be less effective at conveying a message than other methods like videos or pamphlets (Redding & Cole, 2019). For these reasons, some studies used

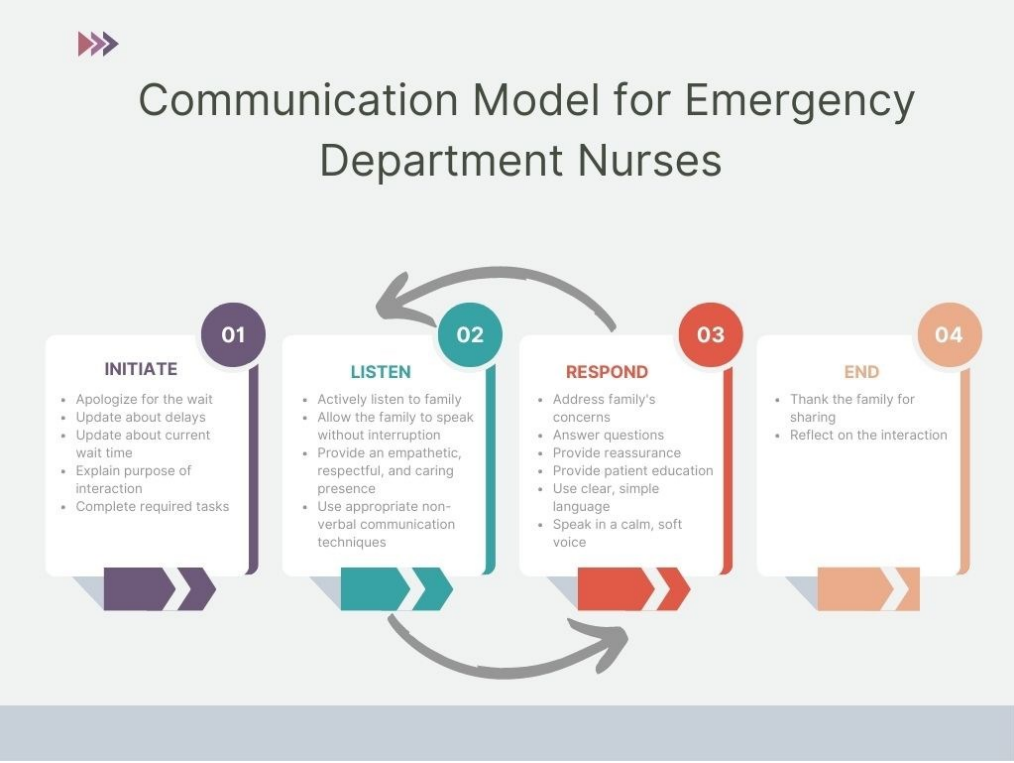
posters in combination with verbal or technology-assisted communication to convey their message (Cameron et al., 2010; Lowe et al., 2018; Tothy et al., 2016).

Working Phase

The working phase in the context of this study refers to communication with the families while in the waiting room or patient rooms prior to being evaluated by a physician. Many of the interventions targeting this phase were general verbal communication strategies (Blackburn et al., 2019; Cameron et al., 2010; Elmqvist et al., 2012; Emerson et al., 2021; Emmamally et al., 2020; Fry et al., 2013; Hermann et al., 2019; Innes et al., 2021; Lau et al., 2012; Paavilainen et al., 2009; Perret et al., 2017; Phiri et al., 2020; Porter et al., 2011; Taylor et al., 2006; Tothy et al., 2016). These strategies are synthesized in a communication model presented in *Figure 6.* This model should be implemented at each nurse-patient/family encounter in the ED.

Figure 6

Communication Model for ED Nurses



The first box "Initiate" refers to information that is recommended for nurses to provide to families during interactions in the waiting room or patient rooms prior to a physician assessment. These interactions can be initiated by nurses when approaching families to reassess the patient's condition or during patient rounding (Emerson et al., 2021; Fry et al., 2013; Innes et al., 2021; Perret et al., 2017). This includes apologizing for the wait time, updating about delays, and providing an updated wait estimate (Cameron et al., 2021; Emerson et al., 2021; Fry et al., 2013; Hermann et al., 2019; Innes et al., 2021; Meade et al., 2010; NICE Guidelines, 2021; Perret et al., 2017; RNAO, 2015; Taylor et al., 2006). The nurse should also explain the reason for the interaction and complete any required tasks at this time (Blackburn et al., 2019; Emmamally et al., 2020; Meade et al., 2010; NICE Guidelines, 2021; Paavilainen et al., 2009; RNAO, 2015).

The second box "Listen" concerns listening to the patient's and family's response to that information. The nurse should actively listen to what the patient and family are saying (Elmqvist et al., 2012; Emmamally et al., 2020; Fry et al., 2013; Hermann et al., 2019; Innes et al., 2021; NICE Guidelines, 2021; Perret et al., 2017; RNAO, n.d.; RNAO, 2002; RNAO, 2015) while allowing the family to speak without interruption (Hermann et al., 2019, RNAO, 2015), provide an empathetic, respectful, and caring presence (Elmqvist et al., 2012; Emmamally, 2020; Fry et al., 2013; Innes et al., 2021; Lau et al., 2012; NICE Guidelines, 2021), and utilize appropriate non-verbal communication, like eye contact or empathetic touch when appropriate (Fry et al., 2013; RNAO, 2015).

The third box "Respond" represents the nurse's response to the patient and family. The nurse now addresses any concerns that the patient and family has brought forward (Emerson et al., 2021; Fry et al., 2013; Innes et al., 2021; Perret et al., 2017; Porter et al., 2011; Taylor et al., 2006; Tothy et al., 2016), answers questions (Cameron et al., 2010; Elmqvist et al., 2012;

Emerson et al., 2021; Paavilainen et al., 2009; Perret et al., 2017; Phiri et al., 2020; Taylor et al., 2006; Tothy et al., 2016), and provides reassurance or patient education as appropriate (Cameron et al., 2010; Hermann et al., 2019; Innes et al., 2021; Perret et al., 2017; Phiri et al., 2020; Taylor et al., 2006) using clear, simple language in a calm, soft voice (Blackburn et al., 2019; Cameron et al., 2010; Emerson et al., 2021; Emmamally et al., 2020; Fry et al., 2013; Health Quality Ontario, n.d.; Hermann et al., 2019; Innes et al., 2021; NCIE Guidelines, 2021; Perret et al., 2017; RNAO, 2015). This step is an iterative process where the nurse can adjust their responses and communication technique used based on the ongoing responses from the family. The fourth box "End" depicts the end of the interaction. The nurse should thank the family for sharing (Hermann et al., 2019; Lau et al., 2012) and reflect on the interaction (Emmamally et al., 2020). While not all studies explained how these strategies were taught to nurses, the ones that did described teaching staff communication skills through training or workshops (Ak et al., 2011; Cahill et al., 2008; Emerson et al., 2021; Taylor et al., 2006; Tothy et al., 2016). Nurses should implement this model with every ED interaction with patients and families to ensure they understand the important information, feel heard, and respected, and have their questions answered. Reflecting on each interaction and what could be done differently will help nurses improve subsequent interactions.

Return to the Vignette

This model can be further described using the initial vignette again.

I have been sitting in the waiting room for about an hour and a half now. My daughter has settled with the Advil and has fallen asleep. I see the nurse approaching us. She says, "I wanted to check on your daughter to see if the pain and vomiting improved and if you had any questions or concerns. It looks like she is more comfortable now, her skin's a good colour and

she seems relaxed. I also wanted to let you know that the wait will likely be a little longer than I previously said. Several big traumas just came in. You are probably looking at another 4 hour wait." I let her know that she hasn't vomited again since arriving and fell asleep as soon as the Advil kicked in. I asked if I should wake her up to get her to drink or if I should try giving her some food. The nurse answered my questions, listened to my daughter's heart and lungs again, gave me some advice on how to keep my daughter hydrated once she wakes up, and thanked me for my questions. It was reassuring to get an update and get my questions answered since it sounds like we will be here for a while. It didn't feel like I was annoying her with all of my questions. I texted an update to my partner and settled down to wait again.

Barriers to Implementation

One of the barriers to implementing these strategies identified in the literature is a lack of resources. Often ED waiting rooms do not have a nurse assigned to care for them, and no alternative employees are assigned to the waiting room (Innes et al., 2015). In this case, no one can communicate with the families until they get transferred to an assessment room. Sometimes the care of the waiting room would be assigned to the triage nurse (Innes et al., 2015). If the triage nurse was busy assessing other patients, then the patients in the waiting room would again have no one to approach for assistance. Three of the studies included in the scoping review addressed this barrier by assigning a nurse to the waiting room (Fry et al., 2013; Innes et al., 2021; Taylor et al., 2006). However, if this position is not prioritized when the ED is short-staffed, this nurse may be reassigned to assist in other areas (Fry et al., 2013; Innes et al., 2021; Taylor et al., 2006). The studies evaluating this role had specific funding so that the nurse could not be reassigned, but that would not be the reality if implemented at other hospitals (Fry et al., 2013; Innes et al., 2021; Taylor et al., 2006). Also, these nurses had only daytime hours so there

would still be a gap in the care process at night (Fry et al., 2013; Innes et al., 2021; Taylor et al., 2006).

Other studies used patient rounding to address this (Emerson et al., 2021; Meade et al., 2010; Perret et al., 2017). However, as discussed previously, smaller hospitals have fewer resources and are likely unable to accommodate the assignment of a nurse to the waiting room (Vaughan & Edwards, 2020). Additionally, with the increasing volumes and staff shortages, existing staff members are unlikely to be able to absorb the extra responsibilities of caring for the waiting room (Rozo et al., 2017). Another strategy noted in the literature to address this barrier was to have ED leadership or alternative employees, like social workers or ED technicians, round in the waiting room (Emerson et al., 2021; Meade et al., 2010). While this may address basic communication needs, alternative staff members will be unable to reassess the patient's condition for deterioration, provide reassurance for the patient's medical condition, answer questions or provide education about the patient's medical condition (Emerson et al., 2021). Adequate staffing for patient volume is necessary to incorporate effective communication (Rozo et al., 2017).

Gaps in the Literature

Orientation Phase

There are several gaps in knowledge that need to be studied prior to the diffuse implementation of the recommendations from the communication model for triage nurses (*Figure 5)*. One major gap identified was the lack of information found in the studies about the staff training required to implement the verbal communication suggestions. Only two of the studies that recommended verbal communication techniques described the training required for nurses (Meade et al., 2010; Taylor et al., 2006). Taylor et al. (2006) used a professional training

company for their staff workshop but described no training process for their hired patient liaison nurse, who oversaw communicating with patients and families in the waiting room. Innes et al. (2021) identified that there was no standardized approach for training waiting room nurses. In the remaining studies, there was little to no information about who trained the staff on how to implement the interventions (Blackburn et al., 2019; Cameron et al., 2010; Emerson et al., 2021; Fry et al., 2013; Innes et al., 2021; Lau et al., 2012; Paavilainen et al., 2009; Perret et al., 2017; Phiri et al., 2020). Future research in this area should identify how these interventions are implemented and what training is required to increase the transferability of the intervention.

To date, current triage training for all ED medical practitioners in Canada consists of one 8-hour day to review the Canadian Triage and Acuity Scale (CTAS) and complete some practice scenarios triaging patients (Canadian Association of Emergency Physicians [CAEP], 2015). Communication is not a focus of this training. Any additional training would be hospital specific. This review highlights the need for research into specific communication skills training for triage nurses. In the literature, simulation and active learning have been identified as effective ways to teach new skills to nurses while keeping the required training time low (Sigalet et al., 2020). Online training formats have been explored and found to be effective as well (Atack et al., 2005; Rankin et al., 2013). These formats could be explored in the context of developing communication skills training for triage nurses.

Another significant gap in the literature is the evaluation of the effectiveness of the interventions. Most of the studies concerning the orientation phase were qualitative studies. Of the quantitative studies, none used a specific communication evaluation scale. Most evaluated the intervention by using the hospitals' patient experience surveys, and while five of the studies used this outcome measure, the patient experience surveys differed in content, making

comparing the effectiveness of the interventions difficult (Emerson et al., 2021; Lowe et al., 2018; Meade et al., 2010; Taylor et al., 2006; Tothy et al., 2016). There was also no data on the effectiveness of verbal communication techniques when compared to written or technology-assisted communication techniques. Future directions for research should include developing or implementing a communication-specific outcome measure and repeating the interventions using a standardized communication scale to compare results for effectiveness.

Working Phase

There were numerous gaps in the literature concerning the working phase of ED communication. Of the staff-based interventions, there was a lack of nurse-specific interventions. Only six studies had interventions specific to nurses (Ak et al., 2011; Fry et al., 2013; Innes et al., 2021; Lau et al., 2012; Paavilainen et al., 2009; Phiri et al., 2020), most targeted all ED staff (Blackburn et al., 2019; Cameron et al., 2010; Cahill, 2008; Elmqvist et al., 2012; Emerson et al., 2021; Emmamally et al., 2020; Hermann et al., 2019; Meade et al., 2010; Perret et al., 2017; Porter et al., 2011; Taylor et al., 2006; Tothy et al., 2016). This review also noted that only one study had family-specific interventions (Perret et al., 2017). The other studies that used families as participants included the patient and family (Blackburn et al., 2019; Elmqvist et al., 2012; Hermann et al., 2019; Lowe et al., 2018; Paavilainen et al., 2009; Phiri et al., 2020; Porter et al., 2011; Taylor et al., 2006; Tothy et al., 2016; Westphal et al., 2020). However, when analyzing the data, there were far fewer family member participants compared to patient participants when grouped together while other studies did not differentiate whether it was the patient or family participating. This could result in the unique perspective of family members being missed or inaccurately represented. Future research should focus on incapsulating the perspective of

family members by studying them exclusively or by recruiting more family member participants and clearly differentiating between patient and family participants.

Similar to the interventions concerning the orientation phase, another significant gap was the lack of similar outcome measures and communication as an outcome measure. Out of the quantitative studies, eight studies used patient experience as an outcome measure (Ak et al., 2011; Emerson et al., 2021; Lowe et al., 2018; Meade et al., 2010; Taylor et al., 2006; Tothy et al., 2016). There were no standardized patient experience questionnaires, therefore, the content of each survey differed, making comparisons difficult. There were some overlapping categories, such as "nurse took the time to listen" (Ak et al., 2011; Taylor et al., 2006; Tothy et al., 2016). In this example, Taylor et al. (2006) and Tothy et al. (2016) used the same wording, however, Ak et al. (2011) phrased the question "time devoted to listening by the nurse". Furthermore, these patient experience questionnaires had communication-specific questions like "being kept informed about care" (Lowe et al., 2018; Meade et al., 2010; Tothy et al., 2016) and "staff sensitivity to concerns" (Emerson et al., 2021; Tothy et al., 2016), only two studies evaluated the subset of communication specific questions in order to assess the improvement of communication in particular (Emerson et al., 2021; Porter et al., 2011). Future research should focus on standardizing patient experience questionnaires to facilitate comparison between hospitals. Additionally, the patient experience questionnaires used in these studies are designed for the whole hospital and are not ED-specific. Utilizing an ED-specific patient experience questionnaire for nursing care with a subset of communication-specific questions would be beneficial. Haruna et al. (2022) explored this concept which led to the development and validation of an ED nursing care-specific patient satisfaction survey designed for the Japanese

health care system. Future research should explore the usefulness of this survey in other health care systems worldwide.

Only one study included in this review used a communication-specific questionnaire. Ak et al. (2011) used the "Communication Skills Inventory" (CSI) and "Empathy Scale" to evaluate the impact of communication skills training on ED nurses. This questionnaire evaluated the nurses' views on their own communication skills, offering a valuable perspective different from that of the family. There are a few validated communication skills questionnaires in the literature that were found outside of the scoping review, including the "Clinical Communication Skills Scale" (CCSS) (Kühne et al., 2022a) and the "Health care Professionals Communication Skills Scale" (HP-CSS) (Leal-Cost et al., 2019). The Clinical Communication Skills Scale allows an observer to evaluate HCPs communication skills, though it is recommended that the observer have a clinical background. It has been studied in the context of educating HCPs (Kühne et al., 2022b). The HP-CSS is similar to the CSI. It is a self-reporting scale to evaluate the communication skills of HCP. It has been validated in a number of different countries, including Turkey (Mendi et al., 2020) and Iran (Nia et al., 2022) and explored in the ED (Lozano et al., 2020), critical care units (Lozano et al., 2020), and universities (Juliá-Sanchis et al., 2020). Future research should utilize a validated communication skills scale like the CSI or HP-CSS to evaluate the impact of interventions on nurses' communication skills. Additionally, future research should explore incorporating the CCSS into the nursing curriculum to evaluate students' communication skills before they start their nursing careers.

The final gap noted was a lack of ED-specific guidelines for communication, and the lack of overarching national and international communication guidelines within the grey literature. There were no international communication guidelines identified. This could be due, in part, to

the cultural differences in communication, making one overarching guideline difficult (Haruna et al., 2022). Only one national guideline was found for the United Kingdom (NICE Guideline, 2021). Canada had approximately 14 million ED visits from 2021-2022 (CIHI, 2022). Despite such a significant number, no national Canadian guidelines were found for HCP communication. The grey literature recommendations for communication that were found largely reflected what was found in the databases, however, there was nothing specific to ED providers. Considering that communication has been shown to have a positive impact on the quality of care (Byczkowski et al., 2013; Locke et al., 2011; Sonis et al., 2018), and the large number of people that visit EDs every year, it is interesting that the development of these guidelines has not yet been prioritized.

Future Directions

Nursing Research

This review highlights several gaps in the literature that can be addressed in future research. Future quantitative research should focus on the effectiveness of communication-specific interventions. This can be done in several ways. If using patient experience surveys to evaluate outcomes, as they are often already deployed in hospitals, a subset of communication-specific questions should be analyzed to assess the impact on communication as well as patient experience. Future researchers should consider using a standardized patient experience survey, such as the “consumer assessment of health care providers and systems survey” (CAHPS) (Byczkowski et al., 2013; Emerson et al., 2021; Hermann et al., 2019) to evaluate outcomes so that the results can be compared to other hospitals worldwide. The CAHPS survey is a validated and standardized survey used across the United States (Center for Medicare & Medicaid Services, 2021). Future research could focus on validating this survey for use in other health care

systems and then utilizing it to evaluate outcomes. Furthermore, researchers could explore using a specific patient experience survey designed for nursing care in the ED. One has been made by Haruna et al. (2022) but requires validation in other health care systems. Future research could also develop and validate a nurse-patient/family communication scale to make the results more relevant. None were found in the literature. When evaluating communication skills training, future researchers should describe its provider and content. They should also use a validated communication skills scale such as the Communication Skills Inventory (CSI) or the Health Care Professionals Communication Skills Scale (HPCSS) to evaluate the nurse's perspective of their communication skills. In the area of triage, future quantitative research should be done to explore communication interventions at triage, including the effectiveness of simulation or online learning to teach communication skills. Future qualitative research should include incapsulating specifically the communication needs of family members in the ED. Additionally, researchers could also explore the experience of nurses using the communication models developed in this thesis and the impact of those models on their nursing care as well as the experience of nurses after completing communication skills training.

Nursing Education

Communication skills training, such as the psychoeducation program developed by Ak et al. (2011) should be built into the nursing curriculum to help future nurses develop the interpersonal skills necessary to build therapeutic relationships and communicate effectively, even in difficult situations (Emmamally et al., 2020). Nursing students' communication skills should be evaluated by a validated scale such as the Clinical Communication Skills Scale to ensure they have adequate skills prior to working as a nurse. To date, effective communication with families is an entry to practice competency highlighted by the Canadian Association of

Schools of Nursing (2022), the College of Nurses of Ontario (2018) and the National Council of State Boards of Nursing (NCSBN) (2023). These documents express that nurses should be competent communicators when entering the nursing practice, but each nursing school can choose how to teach those skills. Communication skills training should also be built into nursing orientation and continuing education opportunities provided at hospitals with job specific examples since communication is a part of all nursing care which can impact patient outcomes (Byczkowski et al., 2013; Locke et al., 2011; Sonis et al., 2018). Furthermore, this communication skills training could be built into Peplau's theoretical framework for therapeutic relationships (1997) as effective communication is a key principle to therapeutic relationships. RNAO (2002) has built this Peplau's theory into its best practice guidelines for therapeutic relationships with a section on communicating effectively.

Currently, there are few supplemental courses available to ED nurses. The Emergency Nursing Pediatric Course has a component that teaches techniques for family-centred care, but its focus is teaching clinical skills (National Emergency Nurses Association, n.d.). The Ontario Centres for Learning, Research and Innovation in Long-Term Care (CLRI) (n.d.) offer a free course about communicating effectively in a variety of contexts and is accredited through the Canadian Nurses Association. The United States offers some communication courses that provide continuing education credits (Nursing CE Central, n.d.). American nurses require a certain number of continuing education credits to maintain their nursing license (California Board of Registered Nursing, n.d.).

Communication skills training for new ED nurses should include teaching the communication model for ED nurses that was developed in this thesis. New triage nurses should have communication skills training, including the communication model for triage nurses

presented in this thesis, in addition to their triage training. Triage is the patient and family's first encounter with the ED and can set expectations for the rest of the visit (Elmqvist et al., 2012). Good communication can decrease anxiety and reduce the risk of violence (Elmqvist et al., 2012; Lau et al., 2012).

Nursing Administration

Nursing administrators should focus on ensuring that nurses have the resources they need to be effective communicators. This means ensuring safe patient-to-nurse ratios and that nurses have appropriate time off as these factors contribute to nurse burnout (Phillips et al., 2022; RNAO, 2015). Studies have shown that "burned out" nurses are unable to communicate effectively (Rozo et al., 2017). Nursing administrators can also create a committee to develop "scripted phrases" that nurses can use when transitioning between areas of the ED or responding to wait time inquiries in order to ensure clear and consistent communication and to develop policies surrounding caring for patients in the waiting room (Cameron et al., 2019; Emerson et al., 2021). Nursing administrators can then implement these policies around who is to care for and communicate with the waiting room (Innes et al., 2015).

Nursing Practice

Nurses in everyday practice should reflect on their interactions with patients and families to verify whether they are adequately meeting their needs. Verbal and non-verbal communication skills are relatively easy to implement, and the patient and family's response can be a gauge for how well they are being utilized. Nurses should keep in mind that patients and families visiting the ED may have no knowledge about how the ED works or their medical condition. Hence, any additional information nurses can provide patients and families with is beneficial to decrease their anxiety (Elmqvist et al., 2012; Lau et al., 2012). Nurses can immediately work on

improving their communication skills by referencing sources like RNAO best practice guidelines for family-centred care and therapeutic relationships (2015; 2002) and using Peplau's Theory of Interpersonal Relations as a framework for their care (1997).

Strengths

This scoping review has numerous strengths. It has strong theoretical contributions in the form of the Theory of Interpersonal Relations (Peplau, 1997). Nursing theories have been shown to inform approaches to nursing care, improve understanding of results and thus contribute to improving patient outcomes (Younas & Quennell, 2019). It has also been shown to help guide the search strategies of reviews, clarify outcomes, inform data analysis and identify gaps in the literature (Godfrey et al., 2010). Despite this, reviews often do not include theoretical frameworks, and it is not included JBI methodology (Godfrey et al., 2010; Peters et al., 2020; Peters et al., 2021). Peplau's theory was designed for the therapeutic nurse-patient/family relationship (Peplau, 1997). It describes three clear phases of the therapeutic relationship, orientation, working and termination, and outlines clear goals for those phases (Peplau, 1997). This theory helped structure the analysis and clarify and organize the outcomes of this review. This scoping review also utilized rigorous methodology by following the JBI methodology and following each step in the PRISMA extension for scoping reviews (Appendix G) (Peters et al., 2020; Peters et al., 2021). The final strength of this scoping review is the creation of two models to clearly illustrate the recommended strategies for improving nurse-family communication within the ED, which are organized into Peplau's theoretical framework. These models can inform future research and nursing practice. They offer nurses tangible, understandable and easy solutions to implement in practice. Further research is required to understand the perspectives of

nurses and families when using these models, improve the models based on findings and evaluate their effectiveness.

Limitations

This review was limited by several factors. Firstly, by only including English and French resources. Communication interventions described in other languages may have been missed due to the language barrier. Secondly, this review used one person to extract the data, while a second reviewer verified the data for accuracy. The gold standard for scoping reviews would include two reviewers independently extracting all data (Peters et al., 2021). That technique was not feasible for this study due to lack of funding and thus is a limitation.

Conclusion

In this thesis, a scoping review was completed to answer the question: "what interventions exist that aims to improve nurse-family communication during the waiting period of an ED visit?" This scoping review included a variety of communication interventions found in the literature. The interventions were organized into phases of the therapeutic relationship per Peplau's Theory of Interpersonal Relations as a framework for ease of understanding. The types of interventions found included written, technology, and verbal communication interventions as well as staff training, staff support, staff positions, staff workshops, and patient rounding. Interventions were described by the country in which it was completed, the target of the intervention, the type of participants, the type of intervention, the content of the intervention and the outcomes. Results were presented using narrative synthesis, figures and tables. The barriers to the implementation of these interventions and gaps in the literature were illuminated and direction of future research were identified.

Communication is an essential part of quality nursing care and contributes to patient and nurse satisfaction, and positive patient outcomes (Ammentorp et al., 2005; Byczkowski et al., 2013; Curley, 1997; Gunther, 2001; Locke et al., 2011; Sonis et al., 2018). Communication can reduce patient and family anxiety as well as the risk of violence and aggression towards HCPs (Ekwall et al., 2009; Lau et al., 2012). Communication with families needs to become a hospital priority in the ED. Families have continually expressed the need for more information while waiting (Byczkowski et al., 2013). This thesis has provided a greater understanding of the communication interventions that could be implemented to address the informational and emotional needs of families in the ED to contribute to improving nurse-family communication and inform future research.

References

Ak, M., Cinar, O., Sutcigil, L., Congologlu, E. D., Haciomeroglu, B., Canbaz, H., Yaprak, H., Jay, L., & Ozmenler, K. N. (2011). Communication skills training for emergency nurses. *International journal of medical sciences, 8*(5), 397–401. https://doi.org/10.7150/ijms.8.397

Al-Kalaldeh, Amro, N., Qtait, M., & Alwawi, A. (2020). Barriers to effective nurse-patient communication in the emergency department. *Emergency Nurse*, *28*(3), 29–35. https://doi.org/10.7748/en.2020.e1969

Ammentorp, Mainz, J., & Sabroe, S. (2005). Parents' Priorities and Satisfaction With Acute Pediatric Care. *Archives of Pediatrics & Adolescent Medicine, 159*(2), 127–131. https://doi.org/10.1001/archpedi.159.2.127

Andrew, E., Pell, C., Angwin, A., Auwun, A., Daniels, J., Mueller, I., Phuanukoonnon, S., & Pool, R. (2014). Factors affecting attendance at and timing of formal antenatal care: Results from a qualitative study in Madang, Papua New Guinea. *PloS One, 9*(5), e93025–e93025. https://doi.org/10.1371/journal.pone.0093025.

Andrusiek, D., Bullard, M., & Atkinson, P. (2018). Triage – Formal emergency department triage tools are inefficient, unfair, and they waste time and resources. *Canadian Journal of Emergency Medicine, 20*(5), 665–670. https://doi.org/10.1017/cem.2018.434

Arango, J. (2017). Environmental impacts of paper handouts vs. Online handouts-from a life cycle assessment prospective. *Revista de Tecnología, 15*. DOI: 10.18270/rt.v15i2.2175.

Aromataris, E., Stern, C., Lockwood, C., Barker, T. H., Klugar, M., Jadotte, Y., Evans, C., Ross-White, A., Lizarondo, L., Stephenson, M., McArthur, A., Jordan, Z., & Munn, Z. (2022). JBI series paper 2: tailored evidence synthesis approaches are required to answer diverse

questions: a pragmatic evidence synthesis toolkit from JBI. *Journal of Clinical Epidemiology*, *150*, 196–202. https://doi.org/10.1016/j.jclinepi.2022.04.006

Atack, L., Rankin, J., & Then, K. (2005). Effectiveness of a 6-week Online course in the Canadian Triage and Acuity Scale for Emergency Nurses. *Journal of Emergency Nursing, 31*(5), 436-441. https://doi.org/10.1016/j.jen.2005.07.005

Bingöl, & Ince, S. (2021). Factors influencing violence at emergency departments: Patients' relatives' perspectives. *International Emergency Nursing, 54*. https://doi.org/10.1016/j.ienj.2020.100942.

Blackburn, J., Ousey, K., Goodwin, E. (2019). Information and communication in the emergency department. *International emergency nursing, 42*, 30-35. https://dx.doi.org/10.1016/j.ienj.2018.07.002.

Bongale, S., & Young, I. (2013). Why people complain after attending emergency departments. *Emergency Nurse, 21*(6), 26-30. https://dx.doi.org/10.7748/en2013.10.21.6.26.e1200

Brar, Stempien, J., & Goodridge, D. (2018). P012: Why did you leave? Contacting left without being seen patients to understand their emergency department experience. *Canadian Journal of Emergency Medicine, 20*(S1), S61–S61. https://doi.org/10.1017/cem.2018.210

Bull, C., Latimer, S., Crilly, J., Gillespie, B. M. (2021). A systematic mixed studies review of patient experiences in the ed. *Emergency Medicine Journal, 38*, 643-649. https://dx.doi.org/10.1136/emermed-2020-210634

Burgess, Kynoch, K., & Hines, S. (2019). Implementing best practice into the emergency department triage process. *International Journal of Evidence-Based Healthcare, 17*(1), 27–35. https://doi.org/10.1097/XEB.0000000000000144

Burström, Starrin, B., Engström, M.-L., & Thulesius, H. (2013). Waiting management at the emergency department - a grounded theory study. *BMC Health Services Research, 13*(1), 95–95. https://doi.org/10.1186/1472-6963-13-95

Byczkowski, Fitzgerald, M., Kennebeck, S., Vaughn, L., Myers, K., Kachelmeyer, A., & Timm, N. (2013). A Comprehensive View of Parental Satisfaction With Pediatric Emergency Department Visits. *Annals of Emergency Medicine, 62*(4), 340–350. https://doi.org/10.1016/j.annemergmed.2013.04.025

Byczkowski, T. L., Gillespie, G. L., Kennebeck, S. S., Fitzgerald, M. R., Downing, K. A., Alessandrini, E. A. (2016). Family-centered pediatric emergency care: a framework for measuring what parents want and value. *Academic pediatrics, 16*, 327-35. https://dx.doi.org/10.1016/j.acap.2015.08.011

CADTH. (2018). Grey Matters: A Practical Tool for Search Health-Related Grey Literature (Internet). Ottawa. Retrieved May 10, 2022, from https://www.cadth.ca/grey-matters-practical-tool-searching-health-related-grey-literature

Cahill. (2008). The Effect of ACT-SMART on Nurses' Perceived Level of Confidence Toward Managing the Aggressive and Violent Patient. *Advanced Emergency Nursing Journal, 30*(3), 252–268. https://doi.org/10.1097/01.TME.0000334377.82646.04

Calder-Sprackman, Kwok, E. S. H., Bradley, R., Landreville, J., Perry, J. J., & Calder, L. A. (2021). Availability of Emergency Department Wait Times Information: A Patient-Centered Needs Assessment. *Emergency Medicine International*, 2021, 8883933–8883936. https://doi.org/10.1155/2021/8883933

California Board of Registered Nursing. (n.d.). *Continuing Education for License Renewal.* https://www.rn.ca.gov/licensees/ce-renewal.shtml

Cameron, K. A., Engel, K. G., McCarthy, D. M., Buckley, B. A., Mercer Kollar, L. M., Donlan, S. M., Pang, P. S., Makoul, G., Tanabe, P., Gisondi, M. A., & Adams, J. G. (2010). Examining emergency department communication through a staff-based participatory research method: identifying barriers and solutions to meaningful change. *Annals of emergency medicine, 56*(6), 614–622. https://doi.org/10.1016/j.annemergmed.2010.03.017

Campbell, SM. A Filter to Retrieve Studies related to Emergency Departments from the OVID MEDLINE Database. John W. Scott Health Sciences Library, University of Alberta. Rev. April 20, 2021. https://docs.google.com/document/d/1VH1Un8TzC3EXEKfytIF_W7I8-5LwRhU7JcIBDiPpaio/edit#

Canadian Association of Emergency Physicians. (2015, January). *The Canadian Triage and Acuity Scale Education Program.* https://caep.ca/wp-content/uploads/2017/06/ctas_admin_manual_feb_15_2015.pdf

Canadian Association of Schools of Nursing. (2022*). National Nursing Education Framework*. https://www.casn.ca/wp-content/uploads/2023/04/National-Nursing-Education-Framework_2022_EN_FINAL.pdf

Canadian Institute for Health Information. (2022, December 8). *NACRS Emergency Department Visits and Lengths of Stay.* https://www.cihi.ca/en/nacrs-emergency-department-visits-and-lengths-of-stay#:~:text=Reported%20ED%20visits%20rose%20to,11.7%20million%20in%202020%E2%80%932021.

Center for Medicare & Medicaid Services (2021, December 1). HCAHPS: Patients' Perspectives of Care Survey. https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/HospitalQualityInits/HospitalHCAHPS

Centres for Learning, Research & Innovation in Long-Term Care. (n.d.) *CNL. Course 1. Communication Effectively.* https://learn.clri-ltc.ca/courses/cnl-module-1-communicating-effectively/

Cerel, Currier, G. W., & Conwell, Y. (2006). Consumer and family experiences in the emergency department following a suicide attempt. *Journal of Psychiatric Practice, 12*(6), 341–347. https://doi.org/10.1097/00131746-200611000-00002

Charrier, P., Occelli, P., Buchet-Poyau, K., Douplat, M., Delaroche-Gaudin, M., Fayard-Gonon, F., Jacquin, L., Potinet, V., Sigal, A., Tazarourte, K., Touzet, S. (2021). Strategies used by emergency care professionals to handle interpersonal difficulties with patients: a qualitative study. *BMJ Open, 11*. https://dx.doi.org/10.1136/bmjopen-2020-042362

Clay, A., & Parch, B. (2016). Patient- and Family-Centered Care: It's Not Just for Pediatrics Anymore. *AMA Journal of Ethics, 18*(1), 40-44. https://dx.doi.org/10.1001/journalofethics.2016.18.1.medu3-1601.

Cohen, E., Wilkin, H., Tannebaum, M., Plew, M., & Haley, L. (2013). When Patients are Impatient: The Communication Strategies Utilized by Emergency Department Employees to Manage Patients Frustrated by Wait Times. *Health Communication, 28*, 275-285. DOI: 10.1080/10410236.2012.680948

College of Nurses of Ontario. (2018). *Entry to Practice Competencies for Registered Nurses.* https://www.cno.org/globalassets/docs/reg/41037-entry-to-practice-competencies-2020.pdf

College of Nurses of Ontario. (2006). *Therapeutic Nurse-Client Relationship Practice Standard.* Retrieved from College of Nurses of Ontario: https://www.cno.org/globalassets/4-learnaboutstandardsandguidelines/prac/learn/modules/tncr/pdf/tncr-chapter3.pdf

Cooke, Watt, D., Wertzler, W., & Quan, H. (2006). Patient Expectations of Emergency Department Care: Phase II – A Cross-Sectional Survey. *Canadian Journal of Emergency Medicine*, *8*(3), 148–157. https://doi.org/10.1017/S1481803500013658

Corlade-Andrei, M., Măirean, C., Nedelea, P., Grigoraşi, G., & Cimpoeşu, D. (2022). Burnout Syndrome among Staff at an Emergency Department during the COVID-19 Pandemic. *Healthcare*, *10*(2), 258. https://doi.org/10.3390/healthcare10020258

Coughlan, & Corry, M. (2007). The experiences of patients and relatives/significant others of overcrowding in accident and emergency in Ireland: A qualitative descriptive study. *Accident and Emergency Nursing, 15*(4), 201–209. https://doi.org/10.1016/j.aaen.2007.07.009

Covidence systematic review software, Veritas Health Innovation, Melbourne, Australia. Available at www.covidence.org.

Curley, M. (1997). Mutuality-an expression of nursing presence. *Journal of Pediatric Nursing, 12*(4), 208–213. https://doi.org/10.1016/S0882-5963(97)80003-6

Deans, C. (2004). The effectiveness of a training program for emergency department nurses in managing violent situations. *Australian Journal of Advanced Nursing*, *21*(4), 17–22.

Dolan, Nowell, L., & McCaffrey, G. (2022). Pragmatism as a philosophical foundation to integrate education, practice, research and policy across the nursing profession. *Journal of Advanced Nursing, 78*(10), e118–e129. https://doi.org/10.1111/jan.15373

Ehrler, F., Lovis, C., Rochat, J., Schneider, F., Gervaix, A., Galetto-Lacour, A., & Siebert, J. (2018). InfoKids : Changement de paradigme du parcours patients dans un service d'urgences. *Revue Médicale Suisse, 14(*617), 1538-1542. Retrieved from https://archive-ouverte.unige.ch/unige:128381

Ekwall, A. (2013). Acuity and anxiety from the patient's perspective in the emergency department. *Journal of Emergency Nursing, 39*, 534-538. https://dx.doi.org/10.1016/j.jen.2010.10.003

Ekwall, Gerdtz, M., & Manias, E. (2009). Anxiety as a factor influencing satisfaction with emergency department care: perspectives of accompanying persons. *Journal of Clinical Nursing, 18*(24), 3489–3497. https://doi.org/10.1111/j.1365-2702.2009.02873.x

Elmqvist, C., Fridlund, B., & Ekebergh, M. (2012). On a hidden game board: the patient's first encounter with emergency care at the emergency department. *Journal of clinical nursing, 21*(17-18), 2609–2616. https://doi.org/10.1111/j.1365-2702.2011.03929.x

Embong, Ting, C. Y., Ramli, M. S., & Harunarashid, H. (2020). Heightened anxiety state among parents of sick children attending emergency department using state-trait anxiety inventory. *Hong Kong Journal of Emergency Medicine, 27*(2), 65–70. https://doi.org/10.1177/1024907918807384

Emerson, B. L., Setzer, E., Bechtel, K., & Grossman, M. (2021). Improving Patient Experience Scores in a Pediatric Emergency Department. *Pediatric quality & safety, 6*(4), e417. https://doi.org/10.1097/pq9.0000000000000417

Emmamally, W., Erlingsson, C. & Brysiewicz, P. (2020). Describing healthcare providers' perceptions of relational practice with families in the emergency department: A qualitative study. *Curationis, 43*(1), a2155. https://doi. org/10.4102/curationis.v43i1.2155

Felt, Depaoli, S., & Tiemensma, J. (2021). Stress and information processing: acute psychosocial stress affects levels of mental abstraction. *Anxiety, Stress, and Coping, 34*(1), 83–95. https://doi.org/10.1080/10615806.2020.1839646

Forchuk, & Dorsay, J. P. (1995). Hildegard Peplau meets family systems nursing: innovation in theory-based practice. *Journal of Advanced Nursing, 21*(1), 110–115. https://doi.org/10.1046/j.1365-2648.1995.21010110.x

Forsgärde, E. S., From Attebring, M., & Elmqvist, C. (2016). Powerlessness: Dissatisfied patients' and relatives' experience of their emergency department visit. *International emergency nursing, 25*, 32–36. https://doi.org/10.1016/j.ienj.2015.07.004

Foth, T., Lange, J., & Smith, K. (2018). Nursing history as philosophy—towards a critical history of nursing. *Nursing Philosophy, 19*(3). https://doi.org/10.1111/nup.12210

Fry, M., MacGregor, C., Ruperto, K., Jarrett, K., Wheeler, J., Fong, J., & Fetchet, W. (2013). Nursing praxis, compassionate caring and interpersonal relations: an observational study. *Australasian emergency nursing journal : AENJ, 16*(2), 37–44. https://doi.org/10.1016/j.aenj.2013.02.003

Gignon, Ammirati, C., Mercier, R., & Detave, M. (2014). Compliance with Emergency Department Discharge Instructions. *Journal of Emergency Nursing, 40*(1), 51–55. https://doi.org/10.1016/j.jen.2012.10.004

Godfrey, C. M., Harrison, M. B., Graham, I. D., & Ross-White, A. (2010). Utilisation of theoretical models and frameworks in the process of evidence synthesis. *JBI library of systematic reviews*, *8*(18), 730–751. https://doi.org/10.11124/01938924-201008180-00001

Göransson, & von Rosen, A. (2010). Patient experience of the triage encounter in a Swedish emergency department. *International Emergency Nursing, 18*(1), 36–40. https://doi.org/10.1016/j.ienj.2009.10.001

Government of Ontario. (2022, July 7). *Emergency rooms.* https://www.ontario.ca/page/emergency-rooms

Graham, B., & Smith, J. E. (2016). Understanding team, interpersonal and situational factors is essential for routine communication with patients in the emergency department (ED): A scoping literature review and formation of the 'T.IP.S' conceptual framework. *Journal of Communication in Healthcare, 9*(3), 210–222. https://doi.org/10.1080/17538068.2016.1192370

Gunther, M.E. (2001). The meaning of high-quality nursing care derived from King's Interacting Systems (Imogene King). PhD dissertation, University of Tennessee. Retrieved from https://trace.tennessee.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=3896&context=utk_graddiss

Habermas, J. (1966). *Knowledge and Interest. Inquiry, 9*(1-4), 285-300. DOI: 10.1080/00201746608601463

Hagerty, Samuels, W., Norcini-Pala, A., & Gigliotti, E. (2017). Peplau's Theory of Interpersonal Relations: An Alternate Factor Structure for Patient Experience Data? *Nursing Science Quarterly, 30*(2), 160–167. https://doi.org/10.1177/0894318417693286

Hansen, B., Bonin, D., Van Aarsen, K., & Dreyer, J. (2021). Door-To-Triage Time in a Canadian Tertiary-Care Center. *The Journal of emergency medicine, 60*(1), 121–124. https://doi.org/10.1016/j.jemermed.2020.07.015

Haruna, J., Minamoto, N., Shiromaru, M., Taguchi, Y., Makino, N., Kanda, N., & Uchida, H. (2022). Emergency Nursing-Care Patient Satisfaction Scale (Enpss): Development and Validation of a Patient Satisfaction Scale with Emergency Room Nursing. *Healthcare (Basel, Switzerland), 10*(3), 518. https://doi.org/10.3390/healthcare10030518

Health Quality Ontario. (n.d.). *A Plain Language Checklist for Health Care Professionals.* Retrieved from Health Quality Ontario: http://www.hqontario.ca/Portals/0/Documents/pe/quick-tools-checklist-communicating-clearly-pc.pdf

Henson, R. H. (1997). Analysis of the concept of mutuality. *The Journal of Nursing Scholarship., 29*(1), 77–81. https://doi.org/10.1111/j.1547-5069.1997.tb01144.x

Hermann, R. M., Long, E., & Trotta, R. L. (2019). Improving Patients' Experiences Communicating With Nurses and Providers in the Emergency Department. *Journal of emergency nursing, 45*(5), 523–530. https://doi.org/10.1016/j.jen.2018.12.001

Innes, K., Jackson, D., Plummer, V., & Elliott, D. (2015). Care of patients in emergency department waiting rooms - an integrative review. *Journal of Advanced Nursing, 71*(12), 2702–2714. https://doi.org/10.1111/jan.12719

Innes, K., Jackson, D., Plummer, V., Elliott, D. (2021). Exploration and model development for emergency department waiting room nurse role: synthesis of a three-phase sequential mixed methods study. *International emergency nursing, 59*, 101075. https://dx.doi.org/10.1016/j.ienj.2021.101075

Irwin A. J. (2019). Improving patient satisfaction at a rural urgent care center. *Nursing, 49*(3), 18–20. https://doi.org/10.1097/01.NURSE.0000552700.35255.a1

Irzik. (2001). Back to Basics: A Philosophical Critique of Constructivism. *Studies in Philosophy and Education, 20*(2), 157–180. https://doi.org/10.1023/A:1010393620547

Joanna Briggs Institute. (n.d.). Critical Appraisal Tools. Retrieved April 8, 2022 from https://jbi.global/critical-appraisal-tools

Johnson, Castillo, E. M., Harley, J., & Guss, D. A. (2012). Impact of Patient and Family Communication in a Pediatric Emergency Department on Likelihood to Recommend. *Pediatric Emergency Care, 28*(3), 243–246. https://doi.org/10.1097/PEC.0b013e3182494c83

Johnson, K. D., Schumacher, D., Lee, R. C. (2021). Identifying strategies for the management of interruptions for novice triage nurses using an online modified delphi method. *Journal of Nursing Scholarship, 53*, 718-726. https://dx.doi.org/10.1111/jnu.12683

Juliá-Sanchis, R., Cabañero-Martínez, M. J., Leal-Costa, C., Fernández-Alcántara, M., & Escribano, S. (2020). Psychometric Properties of the Health Professionals Communication Skills Scale in University Students of Health Sciences. *International Journal of Environmental Research and Public Health*, *17*(20), 7565–. https://doi.org/10.3390/ijerph17207565

Kaushik, & Walsh, C. A. (2019). Pragmatism as a Research Paradigm and Its Implications for Social Work Research. *Social Sciences (Basel), 8*(9), 255–. https://doi.org/10.3390/socsci8090255

Keijzers, Crilly, J., Walters, B., Crawford, R., & Bell, C. (2010). Does a Dedicated Pediatric Team Within a Busy Mixed Emergency Department Make a Difference in Waiting Times, Satisfaction, and Care Transition? *Pediatric Emergency Care, 26*(4), 274–280. https://doi.org/10.1097/PEC.0b013e3181d6da2c

Kelly, M., Dowling, M., & Millar, M. (2018). The search for understanding: the role of paradigms, *Nurse Researcher, 25*, 4(9-13). doi: 10.7748/nr.2018.e1499

Khalil, H., Peters, M., Godfrey, C. M., McInerney, P., Soares, C. B., & Parker, D. (2016). An Evidence-Based Approach to Scoping Reviews. *Worldviews on evidence-based nursing, 13*(2), 118–123. https://doi.org/10.1111/wvn.12144

Khan, M. N., Khan, I., Ul-Haq, Z., Khan, M., Baddia, F., Ahmad, F., Khan, S. (2021). Managing violence against healthcare personnel in the emergency settings of pakistan: a mixed methods study. *BMJ Open, 11*. https://dx.doi.org/10.1136/bmjopen-2020-044213

Kline, Fisher, M. A., Pettit, K. L., Linville, C. T., & Beck, A. M. (2019). Controlled clinical trial of canine therapy versus usual care to reduce patient anxiety in the emergency department. *PloS One, 14*(1), e0209232–e0209232. https://doi.org/10.1371/journal.pone.0209232

Kourkouta, L., & Papathanasiou, I. (2014). Communication in Nursing Practice. *Mater Sociomed, 26*(1), 65-67. https://dx.doi.org/10.5455/msm.2014.26.65-67

Kuehnel, Morrison, A. K., & Ferguson, C. C. (2019). Rapid cycle testing drives improved communication and satisfaction using in-person survey. *BMJ Open Quality, 8*(3), e000504–e000504. https://doi.org/10.1136/bmjoq-2018-000504

Kühne, F., Heinze, P. E., Ay-Bryson, D., Maaß, U., & Weck, F. (2022). Development of a Scale for Assessing Basic Psychotherapeutic Skills. *Klinische Psychologie und Psychotherapie, 50*(3-4). https://doi.org/10.1026/1616-3443/a000623

Kühne, F., Heinze, P. E., Maaß, U., & Weck, F. (2022). Modeling in psychotherapy training: A randomized controlled proof-of-concept trial. *Journal of Consulting and Clinical Psychology*, *90*(12), 950–956. https://doi.org/10.1037/ccp0000780

Kwon, Y. E., Kim, M., Choi, S. (2021). Degree of interruptions experienced by emergency department nurses and interruption related factors. *International emergency nursing, 58*, 101036. https://dx.doi.org/10.1016/j.ienj.2021.101036

Lau, Magarey, J., & Wiechula, R. (2012). Violence in the emergency department: An ethnographic study (part II). *International Emergency Nursing, 20*(3), 126–132. https://doi.org/10.1016/j.ienj.2011.08.001

Leal-Costa, C., Tirado González, S., Ramos-Morcillo, A. J., Díaz Agea, J. L., Ruzafa-Martínez, M., & Van-der Hofstadt Román, C. J. (2019). Validación de la Escala sobre Habilidades de Comunicación [Validation of the Communication Skills Scale in nursing professionals]. *Anales del sistema sanitario de Navarra, 42*(3), 291–301. https://doi.org/10.23938/ASSN.0745

Lee, B., Hollenbeck-Pringle, D., Goldman, V., Biondi, E., & Alverson, B. (2019). Are Caregivers Who Respond to the Child HCAHPS Survey Reflective of All Hospitalized Pediatric Patients?. *Hospital pediatrics, 9*(3), 162–169. https://doi.org/10.1542/hpeds.2018-0139

Locke, R., Stefano, M., Koster, A., Taylor, B., Greenspan, J. (2011). Optimizing patient/caregiver satisfaction through quality of communication in the pediatric emergency department. *Pediatric Emergency Care, 27*, 1016-1021. https://dx.doi.org/10.1097/PEC.0b013e318235be06

Lowe, D., Kay, C., Taylor, D., Littlewood, N., Hepburn, S., Bowie, P. (2018). Testing of the 'Always Events' approach to improve the patient experience in the emergency department. *BMJ Open Quality, 7*(4). http://dx.doi.org/10.1136/bmjoq-2017-000195

Lozano, J. L., Llor, A. M. S., Agea, J. L. D., Gutiérrez, L. L., & Costa, C. L. (2020). Burnout, communication skills and self-efficacy in emergency and critical care health professionals. *Enfermería Global*, *19*(3), 81–92. https://doi.org/10.6018/eglobal.381641

Luethi, M., Meier, B., & Sandi, C. (2009). Stress effects on working memory, explicit memory, and implicit memory for neutral and emotional stimuli in healthy men. *Frontiers in behavioral neuroscience, 2*, 5. https://doi.org/10.3389/neuro.08.005.2008

Mackenzie, N., & Knipe, S. (2006). Research Dilemmas: Paradigms, Methods and Methodology. *Issues in Educational Research, 16*, 193-205.

Marcilly, R., van Heerde, M., Schiro, J., Dusseljee-Peute, L. (2022). Improving parents' experience in the pediatric emergency waiting room: researching the most optimal design for an information tool. *Studies in Health Technology & Informatics, 290*, 814-818. https://dx.doi.org/10.3233/SHTI220192

McNaughton. (2005). A Naturalistic Test of Peplau's Theory in Home Visiting. *Public Health Nursing (Boston, Mass.), 22*(5), 429–438. https://doi.org/10.1111/j.0737-1209.2005.220508.x

Meade, C. M., Kennedy, J., & Kaplan, J. (2010). The effects of emergency department staff rounding on patient safety and satisfaction. *The Journal of emergency medicine, 38*(5), 666–674. https://doi.org/10.1016/j.jemermed.2008.03.042

Mendi, O., Yildirim, N., & Mendi, B. (2020). Cross-cultural Adaptation, Reliability, and Validity of the Turkish Version of the Health Professionals Communication Skills Scale. *Asian Nursing Research, 14*(5), 312–319. https://doi.org/10.1016/j.anr.2020.09.003

Misak. (2019). Habermas's place in the history of pragmatism. *International Journal of Constitutional Law, 17*(4), 1064–1067. https://doi.org/10.1093/icon/moz092

Musey, Lee, J. A., Hall, C. A., & Kline, J. A. (2018). Anxiety about anxiety: a survey of emergency department provider beliefs and practices regarding anxiety-associated low risk chest pain. *BMC Emergency Medicine, 18*(1), 10–10. https://doi.org/10.1186/s12873-018-0161-x

Myers, D. G., & Dewall, C. N. (2015). Psychology (eleventh ed.). United States of America: Worth Publishers.

National Council of State Boards of Nursing (NCSBN). (2023). *NCLEX-RN Test Plan*. https://nclex.com/files/2023_RN_Test%20Plan_English_FINAL.pdf

National Emergency Nurses Association. (n.d.) *Emergency Nursing Pediatric Course ENPC.* https://nena.ca/courses/

Nieman, C. L., Benke, J. R., Ishman, S. L., Smith, D. F., & Boss, E. F. (2014). Whose experience is measured? A pilot study of patient satisfaction demographics in pediatric otolaryngology. *The Laryngoscope*, *124*(1), 290–294. https://doi.org/10.1002/lary.24307

NHS Quality Improvement Scotland. (2005). *Maximising Communication with Older People who have Hearing Disability.* Retrieved from Healthcare Improvement Scotland: file:///C:/Users/sarah/Downloads/OLDPEOPLEHEARDIS_BPS_NOV05.pdf

Nia, H. S., Salimi, S. S., Charati, F. G., Azimi-Lolaty, H., & Shafipour, V. (2022). Validation of the Persian Version of Health Professionals Communication Skills Scale. *Iranian journal of nursing and midwifery research*, *27*(1), 47–53. https://doi.org/10.4103/ijnmr.IJNMR_205_19

NICE Guidelines. (2021, August 25). *Babies, children and young people's experience of healthcare.* Retrieved from National Institute for Health and Care Excellence: https://www.nice.org.uk/guidance/ng204/chapter/Recommendations#communication-and-information

Nursing CE Central. (n.d.). *Effective Communication in Nursing.* https://nursingcecentral.com/lessons/effective-communication-in-nursing/

Paavilainen, E., Salminen-Tuomaala, M., Kurikka, S., & Paussu, P. (2009). Experiences of counselling in the emergency department during the waiting period: importance of family participation. *Journal of clinical nursing, 18*(15), 2217–2224. https://doi.org/10.1111/j.1365-2702.2008.02574.x

Page, M., McKenzie, J., Bossuyt, P., Boutron, I., Hoffmann, T., Mulrow, C., Shamseer, L., Tetzlaff, J., Akl, E., Brennan, S., Chou, R., Glanville, J., Grimshaw, J., Hróbjartsson, A., Lalu, M., Li, T., Loder, E., Mayo-Wilson, E., McDonald, S.,… Moher, D. (2021). The PRISMA 2020 Statement: An Updated Guideline for Reporting Systematic Reviews. *BMJ, 372,* n71. https://doi.org/10.1136/bmj.n71

Peeler, Fulbrook, P., Edward, K.-L., & Kinnear, F. B. (2019). Parents' experiences of care in a paediatric emergency department: A phenomenological inquiry. *Australasian Emergency Care, 22*(2), 113–118. https://doi.org/10.1016/j.auec.2018.12.004

Peplau. (1987). Interpersonal constructs for nursing practice. *Nurse Education Today, 7*(5), 201–208. https://doi.org/10.1016/0260-6917(87)90002-5

Peplau. (1997). Peplau's Theory of Interpersonal Relations. *Nursing Science Quarterly, 10*(4), 162–167. https://doi.org/10.1177/089431849701000407

Perret, S., Gehri, M., Pluies, J., Rossi, I., & Akre, C. (2017). Familles fréquentant un service d'accueil des urgences pédiatriques : expérience, satisfaction et besoins [Families' experiences and satisfaction with a pediatric emergency service]. *Archives de pediatrie : organe officiel de la Societe francaise de pediatrie, 24*(10), 960–968. https://doi.org/10.1016/j.arcped.2017.08.006

Peters, M., Godfrey, C., McInerney, P., Munn, Z., Tricco, A.C., Khalil, H. (2020). Chapter 11: Scoping Reviews. In: Aromataris E, Munn Z (Editors). JBI Manual for Evidence Synthesis. Retrieved May 10, 2022, from https://synthesismanual.jbi.global. https://doi.org/10.46658/JBIMES-20-12

Peters, Marnie, C., Tricco, A. C., Pollock, D., Munn, Z., Alexander, L., McInerney, P., Godfrey, C. M., & Khalil, H. (2021). Updated methodological guidance for the conduct of scoping reviews. *JBI Evidence Implementation, 19*(1), 3–10. https://doi.org/10.1097/XEB.0000000000000277

Pham, M. T., Rajić, A., Greig, J. D., Sargeant, J. M., Papadopoulos, A., & McEwen, S. A. (2014). A scoping review of scoping reviews: advancing the approach and enhancing the consistency. *Research synthesis methods, 5*(4), 371–385. https://doi.org/10.1002/jrsm.1123

Phillips, K. , Knowlton, M. & Riseden, J. (2022). Emergency Department Nursing Burnout and Resilience. *Advanced Emergency Nursing Journal, 44* (1), 54-62. doi: 10.1097/TME.0000000000000391.

Phiri, M., Heyns, T., & Coetzee, I. (2020). Patients' experiences of triage in an emergency department: A phenomenographic study. *Applied nursing research : ANR, 54*, 151271. https://doi.org/10.1016/j.apnr.2020.151271

Pollock, D., Peters, M. D. J., Khalil, H., McInerney, P., Alexander, L., Tricco, A. C., Evans, C., de Moraes, É. B., Godfrey, C. M., Pieper, D., Saran, A., Stern, C., & Munn, Z. (2022). Recommendations for the extraction, analysis, and presentation of results in scoping reviews. JBI evidence synthesis, 10.11124/JBIES-22-00123. Advance online publication. https://doi.org/10.11124/JBIES-22-00123https://doi.org/10.11124/JBIES-22-00123

Porter, S. C., Johnston, P., Parry, G., Damian, F., Hoppa, E. C., & Stack, A. M. (2011). Improving parent-provider communication in the pediatric emergency department: results from the clear and concise communication campaign. *Pediatric emergency care, 27*(2), 75–80. https://doi.org/10.1097/PEC.0b013e3182094283

Prud'homme, J. (2012). Un autre modèle de femmes soignantes: infirmières et professions paramédicales au Québec, 1940-2010. In M.-C. Thifault, L'incontournable caste des femmes (pp. 251-267). Ottawa: Les Presses de L'Université d'Ottawa.

Pun, J., Matthiessen, C., Murray, K., & Slade, D. (2015). Factors affecting communication in emergency departments: doctors and nurses' perceptions of communication in a trilingual ED in Hong Kong. *International Journal of Emergency Medicine*, *8*(1). https://doi.org/10.1186/s12245-015-0095-y

Pytel, Fielden, N. M., Meyer, K. H., & Albert, N. (2009). Nurse-Patient/Visitor Communication in the Emergency Department. *Journal of Emergency Nursing, 35*(5), 406–411. https://doi.org/10.1016/j.jen.2008.09.002

Ramagiri, R., Kannuri, N. K., Lewis, M. G., Murthy, G. V. S., & Gilbert, C. (2020). Evaluation of whether health education using video technology increases the uptake of screening for diabetic retinopathy among individuals with diabetes in a slum population in Hyderabad. *Indian journal of ophthalmology, 68*(Suppl 1), S37–S41. https://doi.org/10.4103/ijo.IJO_2028_19

Rankin, J., Then, K., & Atack, L. (2013). Can Emergency Nurses' Triage Skills Be Improved by Online Learning? Results of an Experiment. *Journal of Emergency Nursing, 39*(1), 20-26. https://doi.org/10.1016/j.jen.2011.07.004

Rathagirishnan, Birchall, I., Latimer-Cheung, A., Tse, S., & Cheung, K. (2022). About time! A scoping review of public-facing emergency department wait time displays in Canada. *Canadian Journal of Emergency Medicine, 24*(5), 503–508. https://doi.org/10.1007/s43678-022-00301-4

Redding, L. E., & Cole, S. D. (2019). Posters Have Limited Utility in Conveying a Message of Antimicrobial Stewardship to Pet Owners. *Frontiers in veterinary science, 6*, 421. https://doi.org/10.3389/fvets.2019.00421

Registered Nurses' Association of Ontario. (2015, May). *Clinical Best Practice Guidelines: Person- and Family-Centred Care.* Retrieved from Registered Nurses' Association of Ontario: https://rnao.ca/sites/rnao-ca/files/FINAL_Web_Version_0.pdf

Registered Nurses' Association of Ontario. (n.d.). *Communication Strategies*. Retrieved from RNAO: https://bpgmobile.rnao.ca/node/826

Registered Nurses' Association of Ontario. (2002, July). *Nursing Best Practice Guideline: Establishing Therapeutic Relationships*. Retrieved from Registered Nurses' Association of Ontario: https://rnao.ca/sites/rnao-ca/files/Establishing_Therapeutic_Relationships.pdf

Reid, Neto, G., Tse, S., Farion, K. J., Marvizi, A., Smith, L., Clarkin, C., Rohde, K., & Moreau, K. (2017). Education in the Waiting Room: Description of a Pediatric Emergency Department Educational Initiative. *Pediatric Emergency Care, 33*(10), e87–e91. https://doi.org/10.1097/PEC.0000000000001140

Riess, H., & Kraft-Todd, G. (2014). E.M.P.A.T.H.Y.: a tool to enhance nonverbal communication between clinicians and their patients. *Academic medicine : journal of the Association of American Medical Colleges, 89*(8), 1108–1112.

Risjord, Mark. (2010). Chapter 08: Logical Positivism and Mid-Century Philosophy of Science. Nursing Knowledge: Science, Practice, and Philosophy. London: Wiley-Blackwell. (online resource). https://mis.kp.ac.rw/admin/admin_panel/kp_lms/files/digital/Core%20Books/Nursing/Nursing%20Knowledge.pdf

Roney, L. , Knapik, K. , Eaves, T. , Neitlich, J. & Lapointe, K. (2021). An Interprofessional Approach to Family-Centered Child Protective Services Referral: A Case Report. *Journal of Trauma Nursing, 28* (6), 401-405. doi: 10.1097/JTN.0000000000000620.

Rowe, B. H., Channan, P., Bullard, M., Blitz, S., Saunders, L. D., Rosychuk, R. J., Lari, H., Craig, W. R., & Holroyd, B. R. (2006). Characteristics of patients who leave emergency departments without being seen. *Academic emergency medicine : official journal of the Society for Academic Emergency Medicine, 13*(8), 848–852. https://doi.org/10.1197/j.aem.2006.01.028

Rozo, J., Olson, D., Thu, H., & Stutzman, S. (2017). Situational Factors Associated With Burnout Among Emergency Department Nurses. *Workplace Health & Safety, 65*(6), 262–265. https://doi.org/10.1177/2165079917705669

Sağlık, D. S., & Çağlar, S. (2019). The Effect of Parental Presence on Pain and Anxiety Levels During Invasive Procedures in the Pediatric Emergency Department. *Journal of Emergency Nursing*, *45*(3), 278–285. https://doi.org/10.1016/j.jen.2018.07.003

Sandlin, Tranter, L., Atkinson, N., Grothaus, C., Tracy, K., & Burtschy, T. (2014). Partner in Care: Improving the Patient Experience Through AIDET.sup.[R]. *Journal of Perianesthesia Nursing, 29*(5), e10–e11–. https://doi.org/10.1016/j.jopan.2014.08.039

Schouten, esen, B. E. J. ., Merten, H., Burger, B., Hartjes, M., Nanayakkara, P. W. ., & Wagner, C. (2021). experiences and perspectives of older patients with a return visit to the emergency department within 30 days: patient journey mapping. *European Geriatric Medicine, 13*(2), 339–350. https://doi.org/10.1007/s41999-021-00581-6

Senn. (2013). Peplau's Theory of Interpersonal Relations: Application in Emergency and Rural Nursing. *Nursing Science Quarterly, 26*(1), 31–35. https://doi.org/10.1177/0894318412466744

Shankar, Bhatia, B. K., & Schuur, J. D. (2013). Toward Patient-Centered Care: A Systematic Review of Older Adults' Views of Quality Emergency Care. *Annals of Emergency Medicine*, *63*(5), 529–550.e1. https://doi.org/10.1016/j.annemergmed.2013.07.509

Sigalet, E. L. , Grant, D., Kissoon, N., Lufesi, N., Dubrowski, A., Haji, F., Khan, R., Weinstock, P., Wishart, I., & Molyneux, E. (2020). Simulation and Active Learning Decreases Training Time of an Emergency Triage Assessment and Treatment Course in Pilot Study in Malawi:

Implications for Increasing Efficiency and Workforce Capacity in Low Resource Settings. *Pediatric Emergency Care*. https://doi.org/10.1097/PEC.0000000000001996

Sloan, M. C. (2010). Aristotle's Nicomachean Ethics as the Original Locus for the Septem Circumstantiae. *Classical Philology*, *105*(3), 236–251. https://doi.org/10.1086/656196

Sonis, Aaronson, E. L., Lee, R. Y., Philpotts, L. L., & White, B. A. (2018). Emergency Department Patient Experience: A Systematic Review of the Literature. *Journal of Patient Experience.,* *5*(2), 101–106. https://doi.org/10.1177/2374373517731359

Soremekun, O. A., Takayesu, J. K., & Bohan, S. J. (2011). Framework for analyzing wait times and other factors that impact patient satisfaction in the emergency department. *The Journal of emergency medicine*, *41*(6), 686–692. https://doi.org/10.1016/j.jemermed.2011.01.018

Stern, C., Lizarondo, L., Carrier, J., Godfrey, C., Rieger, K., Salmond, S., Apóstolo, J., Kirkpatrick, P., & Loveday, H. (2020). Methodological Guidance for the Conduct of Mixed Methods Systematic Reviews. *JBI Evidence Synthesis, 18*(10), p.2108-2118. https://doi.org/10.11124/JBISRIR-D-19-00169

Sullivan, T. (2013). Emergency Department Nurses' Perceptions of the Benefits and Challenges of Hourly Rounding. ProQuest Dissertations Publishing.

Taylor, D., Kennedy, M. P., Virtue, E., McDonald, G. (2006). A multifaceted intervention improves patient satisfaction and perceptions of emergency department care. *International Journal for Quality in Health Care, 18*, 238-45

Terndrup, T. E., Ali, S., Hulse, S., Shaffer, M., & Lloyd, T. (2013). Multimedia education increases elder knowledge of emergency department care. *The Western Journal of Emergency Medicine, 14*, 132-6. https://dx.doi.org/10.5811/westjem.2012.11.12224

Thomas, A., Lubarsky, S., Varpio, L., Durning, S. J., & Young, M. E. (2020). Scoping reviews in health professions education: challenges, considerations and lessons learned about epistemology and methodology. *Advances in Health Sciences Education : Theory and Practice*, *25*(4), 989–1002. https://doi.org/10.1007/s10459-019-09932-2

Tothy, A. S., Limper, H. M., Driscoll, J., Bittick, N., Howell, M. D. (2016). The ask me to explain campaign: a 90-day intervention to promote patient and family involvement in care in a pediatric emergency department. *Joint Commission Journal on Quality & Patient Safety, 42*(6), 281-285. https://doi.org/10.1016/s1553-7250(16)42037-4

Tran, T. P., Schutte, W. P., Muelleman, R. L., & Wadman, M. C. (2002). Provision of clinically based information improves patients' perceived length of stay and satisfaction with EP. *The American journal of emergency medicine, 20*(6), 506–509. https://doi.org/10.1053/ajem.2002.32652

Tricco, A.C., Lillie, E., Zarin, W., O'Brien, K.K., Colquhoun, H., Levac, D., et al. (2018). PRISMA Extension for Scoping Reviews (PRISMAScR): Checklist and Explanation. *Ann Intern Med, 169*, 467-473. doi: 10.7326/M18-0850.

Truong, H. (2016). Integrating Learning Styles and Adaptive E-Learning System: Current Developments, Problems and Opportunities. *Computers in Human Behaviour, 55*(B), 1185-1193. https://doi.org/10.1016/j.chb.2015.02.014

Vandyk, A., Bentz, A., Bissonette, S., & Cater, C. (2019). Why go to the emergency department? Perspectives from persons with borderline personality disorder. *International Journal of Mental Health Nursing, 28*(3), 757-765. https://doi.org/10.1111/inm.12580

Vaughan, L., & Edwards, N. (2020). The problems of smaller, rural and remote hospitals: Separating facts from fiction. *Future healthcare journal, 7*(1), 38–45. https://doi.org/10.7861/fhj.2019-0066

Wasaya, Shah, Q., Shaheen, A., & Carroll, K. (2021). Peplau's Theory of Interpersonal Relations: A Case Study. *Nursing Science Quarterly, 34*(4), 368–371. https://doi.org/10.1177/08943184211031573

Weeks, C. (2022, June 24). *Canadian ERs face record wait times, closures amid labour shortages and resurgence of viruses.* The Globe and Mail. https://www.theglobeandmail.com/canada/article-canadian-ers-face-record-wait-times-closures-amid-labour-shortages-and/

Wennberg-Capellades, L., Feijoo-Cid, M., Llaurado-Serra, M., & Portell, M. (2021). Feeling Informed Versus Being Informed: Mixed-Methods Analysis of Family Perceptions and Behavior Following a Pediatric Emergency Department Visit. *Journal of Pediatric Nursing, 60*, e87–e95. https://doi.org/10.1016/j.pedn.2021.03.027

Westphal, Yom-Tov, G. B., Parush, A., Carmeli, N., Shaulov, A., Shapira, C., & Rafaeli, A. (2020). A Patient-Centered Information System (myED) for Emergency Care Journeys: Design, Development, and Initial Adoption. *JMIR Formative Research, 4*(2), e16410–e16410. https://doi.org/10.2196/16410

Williams. (2017). Improving patient-provider communication to reduce the left-without-being seen (LWBS) rates at a pediatric emergency department. ProQuest Dissertations Publishing.

World Health Organization. (n.d.). *Health Systems Strengthening Glossary.* https://cdn.who.int/media/docs/default-source/documents/health-systems-strengthening-glossary.pdf

Younas, & Quennell, S. (2019). Usefulness of nursing theory-guided practice: an integrative review. *Scandinavian Journal of Caring Sciences, 33*(3), 540–555. https://doi.org/10.1111/scs.12670

Young, A., Flower, L. (2002). Patients as partners, patients as problem-solvers. *Health Communication, 14*, 69-97.

Appendix A: Search Strategy

Search was completed on the 3rd of August, 2022.

Search Strategy for Medline (Ovid)

Ovid MEDLINE(R) ALL <1946 to August 02, 2022>

1 Professional-Family Relations/ or Family Nursing/ or Parents/ 89867

2 Patient-Centered Care/ 22285

3 ((patient or client or family) adj (cent?red or focus?ed or tailored)).tw,kf. 41698

4 Nurse-Patient Relations/ 35975

5 (((nurs* or staff* or healthcare provider* or health care provider*) and (fami* or caregiver* or parent* or guardian* or spouse* or patient*)) adj3 (relation* or communicat* or interact* or engag* or connect* or information* or understand* or need* or partner*)).tw,kf. 95100

6 or/1-5 254451

7 Patient Satisfaction/ 88128

8 ((patient* or client* or user* or consumer*) adj1 (experienc* or satisfaction)).tw,kf. 142020

9 Communication/ 95825

10 (communicat* or interact* or engag* or connect* or inform*).tw,kf. 4161785

11 "Attitude of Health Personnel"/ 129926

12 or/7-114442755

13 (wait* adj2 (room* or period* or time* or treatment* or care* or area*)).tw,kf. 23401

14 waiting rooms/ 51

15 delay*.tw,kf. 541329

16 or/13-15 562482

17 Emergency Treatment/ or Emergency Medicine/ or emergency medical services/ or emergency service, hospital/ or trauma centers/ or triage/ or exp Evidence-Based Emergency Medicine/ or exp Emergency Nursing/ or Emergencies/ or emergicent*.mp. or casualty department*.mp. or ((emergenc* or ED) adj1 (room* or accident or ward or wards or department* or nurs* or treatment* or visit*)).mp. or (triage or critical care or (trauma adj1 (cent* or care))).mp. [mp=title, book title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] 380433

18 6 and 12 and 16 and 17 543

*Line 17 is a premade search strategy developed by Campbell (2021) to search for the emergency department setting.

Search Strategy for PsychINFO (Ovid)

APA PsycInfo <1806 to July Week 4 2022>

1 Therapeutic Processes/ or Family Interventions/ or Parents/ 73136

2 Nurses/ or Nursing/ 47726

3 Patient-Centered Care/ 468

4 ((patient or client or family) adj (cent?red or focus?ed or tailored)).mp. 19795

5 (((nurs* or staff* or healthcare provider* or health care provider*) and (fami* or caregiver* or parent* or guardian* or spouse* or patient*)) adj3 (relation* or communicat* or interact* or engag* or connect* or information* or understand* or need* or partner*)).mp. 41092

6 or/1-5 160176

7 Client Satisfaction/ 6125

8 ((patient* or client* or user* or consumer*) adj1 (experienc* or satisfaction)).mp. 42891

9 Communication/ 32225

10 (communicat* or interact* or engag* or connect* or inform*).mp. 1572369

11 Health Personnel Attitudes/ 21879

12 or/7-111610013

13 (wait* adj2 (room* or period* or time* or treatment* or care* or area*)).mp. 5065

14 delay*.mp. 101985

15 or/13-14 106587

16 ((emergenc* adj1 (room* or ward or wards or unit or units or department* or nurs*)) or triage or casualty department*).mp. or ("Inpatient & Hospital Services ".cc. and *"Emergency Services"/) or "emergency department".id. or "emergencies program".id. 17112

17 6 and 12 and 15 and 16 73

*Line 16 is a premade search strategy developed by Campbell (2021) to search for the emergency department setting.

Search Strategy for Embase (Ovid)

Embase Classic+Embase <1947 to 2022 August 02>

1 Professional-Family Relations/ or Family Nursing/ or Parents/ 179928

2 Patient-Centered Care/ 218199

3 ((patient or client or family) adj (cent?red or focus?ed or tailored)).tw,kf. 57100

4 Nurse-Patient Relations/ 33002

5 (((nurs* or staff* or healthcare provider* or health care provider*) and (fami* or caregiver* or parent* or guardian* or spouse* or patient*)) adj3 (relation* or communicat* or

interact* or engag* or connect* or information* or understand* or need* or partner*)).tw,kf. 140531

6 or/1-5 584520

7 Patient Satisfaction/ 158222

8 ((patient* or client* or user* or consumer*) adj1 (experienc* or satisfaction)).tw,kf. 224350

9 Communication/ 142774

10 (communicat* or interact* or engag* or connect* or inform*).tw,kf. 5289533

11 health personnel attitude/ 88719

12 or/7-115657330

13 (wait* adj2 (room* or period* or time* or treatment* or care* or area*)).tw,kf. 37518

14 waiting rooms/ 2494

15 delay*.tw,kf. 770068

16 or/13-15 803906

17 emergency treatment/ or emergency medicine/ or exp emergency health service/ or evidence based emergency medicine/ or emergency nursing/ or exp emergency care/ or emergency ward/ or emergency/ or (emergicent* or ((emergenc* or ED) adj1 (room* or accident or ward or wards or unit or units or department* or nurs* or treatment*or visit*))).mp. or (triage or critical care or (trauma adj1 (cent* or care))).mp. 563437

18 6 and 12 and 16 and 17 1460

*Line 17 is a premade search strategy developed by Campbell (2021) to search for the emergency department setting.

Search Strategy for CINAHL (EBSCO)

Wednesday, August 03, 2022 8:19:34 PM

S18 S1 AND S7 AND S13 AND S17 Expanders - Apply related words; Apply equivalent subjects 311

S17 S14 OR S15 OR S16 Expanders - Apply related words; Apply equivalent subjects 111,116

S16 TI (delay*) OR AB (delay*) Expanders - Apply related words; Apply equivalent subjects 100,631

S15 TI ((wait* N2 (room* or period* or time* or treatment* or care* or area*))) OR AB ((wait* N2 (room* or period* or time* or treatment* or care* or area*))) Expanders - Apply related words; Apply equivalent subjects 10,935

S14 (MH "Waiting Rooms") Expanders - Apply related words; Apply equivalent subjects 10,935

S13 S8 OR S9 OR S10 OR S11 OR S12 Expanders - Apply related words; Apply equivalent subjects 917

S12 (MH "Attitude of Health Personnel") Expanders - Apply related words; Apply equivalent subjects 1,133,766

S11 TI ((communicat* or interact* or engag* or connect* or inform*)) OR AB ((communicat* or interact* or engag* or connect* or inform*)) Expanders - Apply related words; Apply equivalent subjects 50,355

S10 (MH "Communication") Expanders - Apply related words; Apply equivalent subjects 974,656

S9 TI (((patient* or client* or user* or consumer*) N1 (experienc* or satisfaction))) OR AB (((patient* or client* or user* or consumer*) N1 (experienc* or satisfaction)))
Expanders - Apply related words; Apply equivalent subjects 89,322

S8 (MH "Patient Satisfaction") Expanders - Apply related words; Apply equivalent subjects 76,707

S7 S2 OR S3 OR S4 OR S5 OR S6 Expanders - Apply related words; Apply equivalent subjects 60,493

S6 (MH "Patient Centered Care") OR (MH "Family Centered Care") Expanders - Apply related words; Apply equivalent subjects 188,914

S5 (MH "Nurse-Patient Relations") Expanders - Apply related words; Apply equivalent subjects 41,679

S4 (MH "Professional-Family Relations") OR (MH "Family Nursing") OR (MH "Parents")
Expanders - Apply related words; Apply equivalent subjects 28,666

S3 TI ((((nurs* or staff* or healthcare provider* or health care provider*) and (fami* or caregiver* or parent* or guardian* or spouse* or patient*)) N3 (relation* or communicat* or interact* or engag* or connect* or information* or understand* or need* or partner*))) OR AB ((((nurs* or staff* or healthcare provider* or health care provider*) and (fami* or caregiver* or parent* or guardian* or spouse* or patient*)) N3 (relation* or communicat* or interact* or engag* or connect* or information* or understand* or need* or partner*))) Expanders - Apply related words; Apply equivalent subjects 65,553

S2 TI (((patient or client or family) N (cent?red or focus?ed or tailored))) OR AB (((patient or client or family) N (cent?red or focus?ed or tailored))) Expanders - Apply related words; Apply equivalent subjects 72,363

S1 (MH "Emergency Service+") or (MH "Emergency Medicine") OR (MH "Emergency Nurse Practitioners") or (MH "Emergency Nursing+") or (MH "Emergency Patients") or "casualty department*" or ((emergenc* or "ED") N1 (room* or accident or ward or wards or unit or units or department* or nurs* or treatment* or visit*)) or (triage or (trauma N1 (cent* or care))) Expanders - Apply related words; Apply equivalent subjects 61

*Line S1 is a premade search strategy developed by Campbell (2021) to search for the emergency department setting.

Appendix B: Grey Literature Search

Canadian Health-Related Grey Literature	
Searched; nothing found	The Alberta College of Family Physicians https://acfp.ca/
Searched; nothing found	Alberta Health and Wellness https://www.alberta.ca/health.aspx
Searched; nothing found	Canadian Agency for Drugs and Technologies in Health https://www.cadth.ca/search?keywords
Searched; nothing found	Health Quality Council of Alberta https://hqca.ca/reports-library/
Searched; **results found**	Health Quality Ontario https://www.hqontario.ca/Evidence-to-Improve-Care/Health-Technology-Assessment
Searched; nothing found	The Hospital for Sick Children (SickKids) https://lab.research.sickkids.ca/task/reports-theses/
Searched; nothing found	Institut national d'excellence en santé et en services sociaux (INESSS) https://www.inesss.qc.ca/en/publications/publications.html
Searched; nothing found	Institute of Health Economics https://www.ihe.ca/index.php?/publications
Searched; nothing found	Manitoba Centre for Health Policy http://mchp-appserv.cpe.umanitoba.ca/deliverablesList.html
Searched; nothing found	McGill University Health Centre https://muhc.ca/tau/tau-reports
Searched; nothing found	Newfoundland and Labrador Centre for Applied Health Research. Contextualized Health Research Synthesis Program https://www.mun.ca/nlcahr/chrsp/completed-chrsp-projects/
Searched; nothing found	Ottawa Hospital Research Institute https://www.ohri.ca/home.asp
Searched; nothing found	Programs for Assessment of Technology in Health (Canada) https://www.path-hta.com/research-1
Searched; nothing found	Therapeutics Initiative https://www.ti.ubc.ca/therapeutics-letter/
Searched; nothing found	University of British Columbia https://chspr.ubc.ca/publications/
Searched; nothing found	Alberta Medical Association https://www.albertadoctors.org/
Searched; nothing found	British Columbia Ministry of Health https://www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/bc-guidelines
Searched; nothing found	Canadian Medical Association https://joulecma.ca/cpg/homepage
Searched; nothing found	Canadian Partnership Against Cancer https://www.partnershipagainstcancer.ca/work-with-us/procurement/procurement-bid/cancer-guidelines-database/

Searched; nothing found	Canadian Standards Association https://www.csagroup.org/store/
Searched; nothing found	The College of Physicians and Surgeons of Ontario https://www.cpso.on.ca/en
Searched; nothing found	Ontario Association of Medical Laboratories https://oaml.com/guidelines/
Searched; nothing found	Public Health Agency of Canada https://www.canada.ca/en/public-health/services/reports-publications/disease-prevention-control-guidelines.html
Searched; nothing found	Winnipeg Regional Health Authority https://professionals.wrha.mb.ca/old/extranet/eipt/
Searched; **results found**	Registered Nurses' Association of Ontario https://rnao.ca/bpg
Searched; nothing found	Canadian Nurses Association https://www.cna-aiic.ca/download-buy
Searched; nothing found	National Emergency Nurses Association https://nena.ca/
Searched; nothing found	Ontario Nurses' Association https://www.ona.org/
Searched; **results found**	College of Nurses of Ontario https://www.cno.org/en/
Searched; nothing found	IWK Health Centre https://www.iwk.nshealth.ca/
Searched; nothing found	Children's Hospital of Eastern Ontario https://www.cheo.on.ca/en/index.aspx
Searched; nothing found	BC Children's Hospital http://www.bcchildrens.ca/
International Health-Related Grey Literature	
Searched; nothing found	International Network of Agencies for Health Technology Assessment https://www.inahta.org/publications/
Searched; nothing found	World Health Organization Regional Office for Europe https://www.who.int/europe/home?v=welcome
Searched; nothing found	Australian Government. Department of Health and Aged Care https://www.health.gov.au/
Searched; nothing found	Australian Government. Medical Services Advisory Committee http://www.msac.gov.au/internet/msac/publishing.nsf/Content/application-page
Searched; nothing found	Joanna Briggs Institute EBP Database https://jbi.global/products#database
Searched; nothing found	Monash Health. Centre for Clinical Effectiveness https://monashhealth.org/health-professionals/cce/cce-publications/
Searched; nothing found	Queensland Government (Australia). https://www.qld.gov.au/
Searched; nothing found	Institute of Technology Assessment https://www.oeaw.ac.at/

Searched; nothing found	Ludwig Boltzmann Institut fur Health Technology Assessment https://eprints.hta.lbg.ac.at/
Searched; nothing found	Belgian Health Care Knowledge Centre https://kce.fgov.be/en/all-reports
Searched; nothing found	Danish Health and Medicines Authority https://www.sst.dk/en/English
Searched; nothing found	Comité d'Evaluation de Diffusion des Innovations Technologiques http://cedit.aphp.fr/cedit-hta-agency/recommendations-reports/
Searched; nothing found	French National Authority for Health https://www.has-sante.fr/jcms/c_946986/en/english-toutes-nos-publications-ligne-principale?portal=r_1457306
Searched; nothing found	German Institute of Medical Documentation and Information https://www.dimdi.de/dynamic/en/homepage/
Searched; nothing found	Health Information and Quality Authority (Ireland) https://www.hiqa.ie/reports-and-publications/health-technology-assessments
Searched; nothing found	Health Service Executive. Irish Health Repository https://www.lenus.ie/hse/
Searched; nothing found	Health Council of the Netherlands https://www.gezondheidsraad.nl/
Searched; nothing found	National Health Care Institute Netherlands https://english.zorginstituutnederland.nl/publications
Searched; nothing found	Norwegian Institute of Public Health https://www.fhi.no/en/publ/
Searched; nothing found	Institute of Health Carlos III (Spain) https://publicaciones.isciii.es/
Searched; nothing found	Agency for Health Quality and Assessment of Catalonia https://aquas.gencat.cat/ca/publicacions/
Searched; nothing found	Sahlgrenska University Hospital https://www.sahlgrenska.se/
Searched; nothing found	Swedish Council on Health Technology Assessment https://www.sbu.se/en/publications/
Searched; **results found**	Healthcare Improvement Scotland https://www.healthcareimprovementscotland.org/
Searched; **results found**	National Institute for Health and Care Excellence https://www.nice.org.uk/
Searched; nothing found	National Institute for Health Research https://www.io.nihr.ac.uk/
Searched; nothing found	NHS Purchasing and Supply Agency https://worldcat.org/identities/
Searched; nothing found	National Institute for Health Research https://www.journalslibrary.nihr.ac.uk/programmes/
Searched; nothing found	UK Department of Health https://www.nric.org.uk/resources
Searched; nothing found	National Health Service UK https://www.england.nhs.uk/

Searched; nothing found	Agency for Healthcare Research and Quality https://www.ahrq.gov/cpi/about/index.html
Searched; nothing found	Centers for Medicare and Medicaid Services https://www.cms.gov/medicare-coverage-database/reports/national-coverage-technology-assessments-report.aspx?year=0#
Searched; nothing found	ECRI Institute https://www.ecri.org/
Searched; nothing found	Institute for Clinical and Economic Review https://icer.org/
Searched; nothing found	Washington State Health Care Authority https://www.hca.wa.gov/about-hca/programs-and-initiatives/health-technology-assessment/topic-selection
Searched; nothing found	Academy of Medicine of Malaysia https://www.acadmed.org.my/index.cfm?&menuid=67
Searched; nothing found	Aetna. Clinical Policy Bulletins https://www.aetna.com/health-care-professionals.html
Searched; nothing found	American Association for Clinical Chemistry https://www.aacc.org/science-and-research/practice-guidelines
Searched; nothing found	Best Practice Advocacy Centre New Zealand https://bpac.org.nz/Default.aspx
Searched; nothing found	Centers for Disease Control and Prevention https://phgkb.cdc.gov/PHGKB/phgHome.action?action=home
Searched; nothing found	The Regulation and Quality Improvement Authority https://www.rqia.org.uk/
Searched; nothing found	French National Authority for Health https://www.has-sante.fr/jcms/c_6056/en/recherche-avancee?portlet=c_39085&search_antidot=&lang=en&typesf=guidelines
Searched; nothing found	Institute for Clinical Systems Improvement https://www.icsi.org/
Searched; nothing found	National Health and Medical Research Council https://www.nhmrc.gov.au/guidelines
Searched; nothing found	Scottish Intercollegiate Guidelines Network https://www.sign.ac.uk/
Searched; nothing found	Bandolier Knowledge http://www.bandolier.org.uk/knowledge.html
Searched; nothing found	Latin-American and Caribbean Center on Health Sciences Information http://bases.bireme.br/cgi-bin/wxislind.exe/iah/online/?IsisScript=iah/iah.xis&base=LILACS&lang=I
Searched; nothing found	McMaster University, McMaster Health Forum https://www.healthsystemsevidence.org/
Searched; nothing found	Google (first 3 pages of data) https://www.google.com/

Searched; nothing found	Google Scholar (first 3 pages of data) https://scholar.google.ca/schhp?hl=en&as_sdt=0,5
Searched; nothing found	Emergency Nurses Association https://www.ena.org/
Searched; nothing found	Lund University Libraries https://www.doaj.org/

This grey literature search was assisted by the CADTH Grey Matters grey literature search tool (CADTH, 2018). The full CADTH tool is available on request.

Appendix C: Blank Communication Intervention Data Extraction Form

Article citation in APA	Communication intervention *Questions to guide what information to pull:* *What category of intervention does it belong to ?* ***general strategies/frameworks*** *(ex. frequent updates, respect, etc.),* ***staff based intervention*** *(ex. WRN, staff training),* ***family-based intervention*** *(ex. app, posters, etc.)* *What specific thing is being recommended to improve communication?* *Who does the intervention target?* *Who implements/offers the intervention?* *What does the intervention consist of?* *Target* *Format* *Duration* *Content (themes)*
1.	

Appendix D: Blank Data Extraction Form

Article	Country	Context	Participant details	Study type	Research aim	Results	Communication intervention	Phase of Peplau's theory	Comments	Appraisal instrument	Appraisal rating	Verified by second reviewer

Appendix E: Blank Grey Literature Data Extraction Form

Citation	Communication Interventions	Phase of Peplau's Theory
1.		

Appendix F: Critical Appraisals

Table F1

Qualitative Critical Appraisals

JBI Checklist for Qualitative Research	Blackburn et al., 2019	Cameron et al., 2010	Elmqvist et al., 2012	Emmamally et al., 2020	Fry et al., 2013	Hermann et al., 2019	Innes et al., 2021 **PART 1**	Lau et al., 2012 **PART 1**	Perret et al., 2017	Phiri et al., 2020	Westphal et al., 2020 **PART 1**
1. Is there congruity between the stated philosophical perspective and the research methodology?	N/A	N/A	Y	N/A	Y	N/A	Y	Y	N/A	Y	N/A
2. Is there congruity between the research methodology and the research question or objectives?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
3. Is there congruity between the research methodology and the methods used to collect data?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
4. Is there congruity between the research methodology and the representation and analysis of data?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
5. Is there congruity between the research methodology and the interpretation of results?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
6. Is there a statement locating the researcher culturally or theoretically?	Y	N	N	N	N	N	N	N	N	N	N
7. Is the influence of the researcher on the research, and vice- versa, addressed?	N	N	Y	N	N	N	N	N	N	Y	N
8. Are participants, and their voices, adequately represented?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
9. Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
10. Do the conclusions drawn in the research report flow from the analysis, or interpretation, of the data?	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Total appraisal score	8/10	7/10	9/10	7/10	8/10	7/10	8/10	8/10	7/10	9/10	6/10

Note: N/A = not applicable, Y = Yes, N = No, U = Unclear

(JBI, n.d.)

Table F2

Quasi-Experimental Critical Appraisals

JBI Checklist for Quasi-Experimental Studies	AK et al., 2011	Cahill et al., 2008	Emerson et al., 2021	Lowe et al., 2018	Meade et al., 2010	Porter et al., 2011	Taylor et al., 2006	Tothy et al., 2016	Westphal et al., 2020 **PART 2**
1. Is it clear in the study what is the 'cause' and what is the 'effect' (i.e. there is no confusion about which variable comes first)?	Y	Y	Y	Y	Y	Y	Y	Y	Y
2. Were the participants included in any comparisons similar?	Y	N	N	Y	Y	Y	Y	U	Y
3. Were the participants included in any comparisons receiving similar treatment/care, other than the exposure or intervention of interest?	Y	N	Y	Y	Y	Y	Y	Y	Y
4. Was there a control group?	N	Y	N	N	N	N	N	N	Y
5. Were there multiple measurements of the outcome both pre and post the intervention/exposure?	N	N	Y	N	N	Y	N	Y	N
6. Was follow up complete and if not, were differences between groups in terms of their follow up adequately described and analyzed?	N	N	Y	N	N	Y	N	Y	N
7. Were the outcomes of participants included in any comparisons measured in the same way?	Y	Y	Y	Y	Y	Y	Y	Y	Y
8. Were outcomes measured in a reliable way?	Y	N	Y	U	Y	Y	Y	Y	U
9. Was appropriate statistical analysis used?	Y	Y	Y	Y	Y	Y	Y	Y	N
Total critical appraisal score	6/9	4/9	7/9	5/9	6/9	8/9	6/9	7/9	5/9

Note: N/A = not applicable, Y = Yes, N = No, U = Unclear

(JBI, n.d.)

Table F3

Prevalence Studies Critical Appraisals

JBI Checklist for Prevalence Studies	Paavilainen et al., 2009	Innes et al., 2021 **PART 2**	Lau et al., 2012 **PART 2**
1. Was the sample frame appropriate to address the target population?	Y	Y	Y
2. Were study participants sampled in an appropriate way?	Y	Y	Y
3. Was the sample size adequate?	N	U	U
4. Were the study subjects and the setting described in detail?	N	Y	Y
5. Was the data analysis conducted with sufficient coverage of the identified sample?	Y	Y	U
6. Were valid methods used for the identification of the condition?	Y	Y	U
7. Was the condition measured in a standard, reliable way for all participants?	U	Y	Y
8. Was there appropriate statistical analysis?	Y	Y	U
9. Was the response rate adequate, and if not, was the low response rate managed appropriately?	Y	Y	U
Total critical appraisal score	6/9	8/9	4/9

Note: N/A = not applicable, Y = Yes, N = No, U = Unclear

(JBI, n.d.)

Appendix G: PRISMA-ScR Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Title	1	Identify the report as a scoping review.	Title page
ABSTRACT			
Structured summary	2	Provide a structured summary that includes (as applicable): background, objectives, eligibility criteria, sources of evidence, charting methods, results, and conclusions that relate to the review questions and objectives.	v
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known. Explain why the review questions/objectives lend themselves to a scoping review approach.	1-6 and 42
Objectives	4	Provide an explicit statement of the questions and objectives being addressed with reference to their key elements (e.g., population or participants, concepts, and context) or other relevant key elements used to conceptualize the review questions and/or objectives.	6 and 43
METHODS			
Protocol and registration	5	Indicate whether a review protocol exists; state if and where it can be accessed (e.g., a Web address); and if available, provide registration information, including the registration number.	42
Eligibility criteria	6	Specify characteristics of the sources of evidence used as eligibility criteria (e.g., years considered, language, and publication status), and provide a rationale.	44-45
Information sources	7	Describe all information sources in the search (e.g., databases with dates of coverage and contact with authors to identify additional sources), as well as the date the most recent search was executed.	45-46 and 138-149
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	138-149
Selection of sources of evidence	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	43-45
Data charting process	10	Describe the methods of charting data from the included sources of evidence (e.g., calibrated forms or forms that have been tested by the team before their use, and whether data charting was done independently or in duplicate) and any processes for obtaining and confirming data from investigators.	46
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	43-44
Critical appraisal of individual sources of evidence	12	If done, provide a rationale for conducting a critical appraisal of included sources of evidence; describe the methods used and how this information was used in any data synthesis (if appropriate).	46, 57-58 and 153-155
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	47
RESULTS			

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
Selection of sources of evidence	14	Give numbers of sources of evidence screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally using a flow diagram.	49-50
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	49-57
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	58
Results of individual sources of evidence	17	For each included source of evidence, present the relevant data that were charted that relate to the review questions and objectives.	58-90
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	58-90
DISCUSSION			
Summary of evidence	19	Summarize the main results (including an overview of concepts, themes, and types of evidence available), link to the review questions and objectives, and consider the relevance to key groups.	91-107
Limitations	20	Discuss the limitations of the scoping review process.	112
Conclusions	21	Provide a general interpretation of the results with respect to the review questions and objectives, as well as potential implications and/or next steps.	104-113
FUNDING			
Funding	22	Describe sources of funding for the included sources of evidence, as well as sources of funding for the scoping review. Describe the role of the funders of the scoping review.	42, 50-51

(Tricco et al., 2018)