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**Development of clinical practice guidelines for person-centred
handover practices in the emergency department**

by

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Declaration

DECLARATION

I declare that the thesis titled: "Development of clinical practice guidelines for person-centred handover practice in the emergency department" which I hereby submit for the degree Doctor of Philosophy in Nursing Science at the University of Pretoria is my own work and has not previously been submitted by me for a degree to any other university.

All the sources that have been used or quoted have been indicated and acknowledged by complete references in the text and bibliography.

Lange

Signature of Student

29 January 2024

Date

Abstract

ABSTRACT

Background: Handover practices are an integral part of an emergency department's activities and ensures continuity of patient care and patient safety. Handover practices between emergency care practitioners and healthcare professionals in the emergency department are a crucial point of information transfer and should involve the patient and/or significant others. This handover should be done in a structured, yet context-specific manner, and directed towards person-centredness. The gold standard for a structured, context-specific manner has not been determined. Determining this gold standard is important to improve person-centred handover practices.

Aim of the study: The aim of the study was to establish the elements underpinning a person-centred approach to handover practices between emergency care practitioners and healthcare professionals in the emergency department.

Methodology: The study followed a sequential multimethod approach in phases. For phase 1, objective 1, the researcher conducted a concept analysis using Walker and Avant's (2014) 8-step method followed by an online modified Delphi study to achieve objective 2, reach consensus on the concept definition of person-centred handover and related attributes. Phase 2, objective 3 involved a scoping review using the Johanna Briggs Institute guidelines (2021) for conducting scoping reviews, to inform clinical practice guidelines. For objectives 4 and 5 in phase three guideline development method was used. Sampling for the Delphi study involved purposive and snowball sampling. The context of the study involved emergency departments, and experts in person-centred care, handover practices and guideline development were involved in the various phases.

In phase 3, objective 4 was to develop preliminary clinical practice guidelines for person-centred handover practices in the emergency department and objective 5 was to achieve consensus on clinical practice guidelines for person-centred handover practices in the emergency department. A Delphi study, involving

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experts in person-centred care practices, emergency care practitioners involved in handover practices in the emergency department, was conducted.

Results: The concept of person-centred handover practices was defined with its related attributes. The scoping review produced one clinical practice guideline together with information on current national and international handover practices. Preliminary guidelines were developed, and an expert Delphi panel achieved consensus on the final definition and the clinical practice guidelines. The external panel's comments were integrated into the final clinical practice guidelines.

Conclusion: This study contributes to the body of knowledge on person-centred care and handover practices. The study developed an agreed upon concept definition for person-centred handover practices to identify and guide structured person-centred handover practices. Furthermore, the developed clinical practice guidelines for person-centred handover practices in the emergency department should provide the gold standard to perform person-centred handover practices in future.

Key words: person-centred; handover; emergency care practitioners; healthcare professionals; emergency department

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ED	Emergency Department

CHAPTER 1

ORIENTATION TO THE STUDY

1.1 INTRODUCTION

Handover practices are an integral part of healthcare activities. In the emergency department (ED) handover can take several forms: handover at shift change, handover between different healthcare categories and on admission into different departments in the hospital. The handover between emergency care practitioners (pre-hospital) and healthcare professionals (doctors and nurses) during a patient's arrival in the ED is a high-risk activity yet important for continuity of patient care.

1.2 BACKGROUND TO THE STUDY

Handover is in essence the transfer of responsibility and accountability for a patient from one healthcare provider to the next (Kalyani, Fereidouni, Sarvestani et al, 2017; Sanjuan-Quiles, Hernández-Ramón, Juliá-Sanchis et al, 2018). Handover has been part of healthcare delivery for the last 100 years in various settings in healthcare and has more recently moved to being more person-centred (Redley, Botti, Wood & Bucknall, 2017; Ellis, Carpenter, Lowthian et al, 2018; Swallmeh, Byers & Arisha, 2018). To ensure continuity of care, handover should be done effectively and in a standardized manner (Abdellatif, Bagian, Barajas et al, 2007; Merten, van Galen & Wagner, 2017). Effective interprofessional communication is important for comprehensive handover practices (Redley et al, 2017). The handover between emergency care practitioners and healthcare professionals is important for continuity of care and involves interprofessional communication to ensure all information from the pre-hospital environment is transferred upon the patient's arrival at the emergency department (ED).

1.2.1 Handover practices

Patients can arrive in the ED in various ways, such as in their own vehicle or via emergency services. During the last twenty years emergency medical services have developed significantly, increasing the likelihood of the first transition of care occurring at the ED (Meisel, Shea, Peacock et al, 2015; Yegane, Shahrami, Hatamabadi et al, 2017). Globally, high-acuity patients are transported directly via ambulance to the ED by trained emergency care practitioners requiring handover which serves as the first intersection point for the continuity of patient care (Makkink, Stein & Bruijns, 2019; Yegane et al, 2017; Ellis et al, 2018). It is in

this first intersection point that emergency care practitioners have an opportunity to do the handover in an 'as well as possible' manner in order to convey information regarding the patients' history, treatment received and current condition (Shah, Alinier & Pillay, 2016; Sanjuan-Quiles et al, 2018). The mode of the handover is usually verbal, but must be documented to (Kalyani et al, 2017). The handover between emergency care practitioners and healthcare professionals is a sophisticated process, requiring two separate professions with different extrinsic and intrinsic factors coming together and therefore making this handover different to other types occurring in healthcare settings (Kalyani et al, 2017; Meisel et al, 2015).

Handover practices in the ED differ from those done in other environments, as it presents some unique challenges (de Lange, van Eeden & Heyns, 2018; Sanjuan-Quiles et al, 2018). Firstly, the ED is a complex environment in which reliable communication is vital (Benjamin & Carney, 2018; de Lange, van Eeden & Heyns, 2018; White-Trevino & Dearmon, 2018), but is characterized by constant interruptions (multi-tasking, workload), distractions (alarms, noise, overcrowding), high patient acuity levels, short patient encounters (Sanjuan-Quiles et al, 2018; Maharani & Thabrany, 2019) and high stress levels (Sanjuan-Quiles et al, 2018). Within this complex environment, handover practices need to occur while multiple healthcare professionals interact with the patient at the same time (Sanjuan-Quiles et al, 2018) and all these elements may negatively affect the handover (de Lange, van Eeden & Heyns, 2018; Campbell & Dontje, 2019). The ED environment can also be seen as a bio-medical technical environment where emphasis is placed on clinical skills and saving lives and where handover often takes second place (McConnell, McCance & Melby, 2016; de Lange, van Eeden & Heyns, 2018; Deasey, Kable & Jeong, 2018). If the handover is ineffective, there is information loss, inappropriate treatment, and decreased patient safety (Abdellatif et al, 2007; Milano, Stankewicz, Stoltzfus et al, 2018). Therefore, for handover practices to be effective they should be done in a meticulous and standardized way so as to prevent errors (Shah, Alinier & Pillay, 2016; Merten, van Galen & Wagner, 2017; Maharani & Thabrany, 2019). One way of potentially guiding handover practices towards standardization is the use of clinical practice guidelines. Clinical practice guidelines are "systematically developed statements to assist practitioner and patient decisions about appropriate healthcare for specific clinical circumstances" (Woolf, Schünemann, Eccles et al 2012).

1.2.2 Standardization

Standardized handovers provide structure for the communication (verbal and/or written) to occur during handover practices (WHO 2007). Standardized handover practices have been

found to increase patient safety (Redley et al, 2017; Hovenkamp, Olgers, Wortel et al, 2018), prevent the loss of information (Shah, Alinier & Pillay, 2016; Sanjuan-Quiles et al, 2018), reduce handover duration (Fitzpatrick, McKenna, Duncan et al, 2018) and improve information transfer (Anderson, Malone, Shanahan & Manning, 2015; Merten, van Galen & Wagner, 2017; Maharani & Thabrany, 2019).

Globally and in South Africa different strategies to perform handover practices are implemented in ED environments, such as the use of mnemonics (Yegane et al, 2017). But it is not a case of one size-fits-all and most of these mnemonics are not suitable for handover between emergency care practitioners and healthcare professionals in the ED (Hovenkamp et al, 2018; Makkink et al, 2019). Furthermore, in the South African context, the use of the mnemonic DeMist (**D**emographics, **M**echanism, **I**njuries, **S**igns, **T**reatment) has been recommended by the Emergency Medicine Society of South Africa's practice guidelines, but seems not to be used by emergency care practitioners (Bost, Crilly, Wallis et al, 2010; de Lange, van Eeden & Heyns, 2018) which is in correlation with practices observed elsewhere in the world (Yegane et al, 2017). In some countries in the United Kingdom, United States of America and Australia the use of the IMIST-AMBO (**I**dentification, **M**echanism, **I**njuries, **S**igns, **T**reatment, **A**llergies, **M**edication, **B**ackground history, **O**ther information) and MIST ICE (**M**echanism, **I**njuries, **S**igns, **T**reatment, **I**njury, **C**ondition, **T**ime to hospital) mnemonics has been suggested and specifically designed for the handover between emergency care practitioners and healthcare professionals in the ED (Shah et al, 2016; Wood, Crouch, Rowland & Pope, 2015). In Italy the mnemonic ISBAR (**I**ntroduction, **S**ituation, **B**ackground, **A**ssessment and **R**ecommendation) is used (Delupis, Mancini, di Nota, & Pisanelli, P, 2015). No studies could be found on the handover practices in the ED on the African continent and therefore it is unclear how these handover practices might differ or be similar from the rest of the world. However, several studies recommend that a standardized and more context-specific ED handover should be developed followed by training (Kullberg, Sharp, Johansson et al, 2017; Merten, van Galen & Wagner, 2017; Sanjuan-Quiles et al, 2018; Dojmi Di Delupis, Mancini, Ruggeri & Pisanelli, 2020). In addition, current commonly used handover tools do not include the patient as a contributor to the process. The patient is the only constant factor during handover and is therefore a valuable addition in ensuring continuity of care (Merten et al, 2017) and a deliberate effort needs to be made to include patients in the handover process. Person-centred handover is a relatively new concept focusing on involving patients, their families and/or carers during handover.

1.2.3 Person-centred care

Person-centredness is an approach to practice that is established through the formation and fostering of healthful relationships between all care providers, service users and their significant others. It is underpinned by values of respect for persons (personhood), individual right to self-determination, mutual respect and understanding (Dewing & McCormack, 2017). An element of healthful relationships is communication, and communication between emergency care practitioners, healthcare professionals, patients, family and/or significant others is essential to improve coordination of and for care delivery processes (Mørk, Krupp, Hankwitz & Malec, 2018). Effective communication amongst these groups of people in healthcare has several advantages, including increased patient satisfaction (Swalmeh, Byers & Arisha, 2018; White-Trevino & Dearmon, 2018; Nilsson, Edvardsson & Rushton, 2019), increased participation in self-care (Malfait, Eeckloo, Lust et al, 2017; White-Trevino & Dearmon, 2018) and reduction in communication errors (Malfait et al, 2017) by enabling the patient, family and/or significant other to add or validate information which was shared during the handover (Anderson et al, 2015). The use of person-centred approaches in handover is advocated to move towards person-centredness as the core approach in ED handover practices (Abraham, Kannampallil & Patel, 2014).

1.2.4 Clinical practice guidelines

Although there is an increased focus on handover practices between emergency care practitioners and healthcare professionals in the ED, there is limited evidence of clinical practice guidelines to direct person-centred handover practices in the ED. Furthermore, at the time of the study no guidelines existed for these specific handover practices, and guidelines direct patient care. Standardized handover practices in the ED are required to improve patient satisfaction as well patient care delivery (White-Trevino & Dearmon, 2018). Decisive efforts should be made by emergency care practitioners and healthcare professionals to move towards person centredness during handover currently absent from handover practices (Merten et al, 2017).

The handover practices between emergency care practitioners and healthcare professionals in the ED are unique as emergency care practitioners have a single opportunity to transfer information to healthcare professionals taking over the management of the patient in the ED. Vital information will be lost if this handover opportunity is not used optimally (Kalyani et al, 2017; Yegane et al, 2017; Sanjuan-Quiles et al, 2018). It is therefore important to develop clinical practice guidelines which will guide context-specific person-centred handover practices in the ED.

1.3 PROBLEM STATEMENT

Handover is one of the most complex yet important tasks for healthcare professionals to achieve efficiently and correctly in the ED (Meisel et al, 2015; de Lange, van Eeden & Heyns, 2018; Makkink et al, 2019) as this information transfer plays a pivotal role in the quality of patient care (Anderson et al, 2015; Wood et al, 2015). Standardized handover practices prevent information loss (Sanjuan-Quiles et al, 2018) and contribute to improved patient outcomes (Abraham, Kannampallil & Patel, 2014; de Lange, van Eeden & Heyns, 2018).

However, current practice in EDs globally and nationally is not directed towards conducting handover in a standardized manner using guidelines (Wood et al, 2015; Geuzebroek, Zwaan, de Vries et al, 2018; Kwok, Clapham, White et al, 2020) and is not underpinned by the principles of person-centredness (Kullberg, Sharp, Johansson et al, 2017; de Lange, van Eeden & Heyns, 2018; Sanjuan-Quiles et al, 2018). Moreover, at the time of the study a review of the literature yielded no national or international clinical practice guidelines were available for person-centred handover practices in the ED between emergency care practitioners and healthcare professionals.

A standardized person-centred approach to handover could lead to effective handover practices supporting continuity of care, increased patient safety, and quality person-centred care delivery. Patient and context-specific clinical practice guidelines could direct person-centred handover practices in the ED. Due to the lack of patient and/or family involvement in handover practices and following standardized practices for conducting handover, this study focused on person-centred handover practices with the inclusion of clinical practice guidelines for standardization.

1.4 RESEARCH AIM AND OBJECTIVES

The aim of the study was to establish the elements underpinning a person-centred approach to handover practices between emergency care practitioners and healthcare professionals in the ED.

In order to achieve the aim, the study was conducted in phases with the following objectives:

Phase 1: Concept analysis

Objective 1: Define the concept of person-centred handover in the ED.

Objective 2: Reach consensus on the definition of person-centred handover in the ED.

Phase 2: Mine the literature

Objective 3: Explore current literature on person-centred handover practices in the ED to inform clinical practice guidelines.

Phase 3: Guideline development

Objective 4: Develop preliminary clinical practice guidelines for person-centred handover practices.

Objective 5: Reach consensus on clinical practice guidelines for person-centred handover practices.

1.5 RESEARCH QUESTION

The study wished to answer the following question:

What do guidelines for a person-centred approach to handover practices between emergency care practitioners and healthcare professionals in the ED encompass?

1.6 CONTEXT

The ED serves as the entrance to a hospital visited by many patients daily to access emergency treatment and care. Emergency departments usually provide a 24-hour service and are considered the busiest department in a hospital (Aminuddin, Ismail, Harunarashid et al, 2016). The ED can be a complex environment with an unpredictable workflow, with the possibility for overcrowding, constant interruptions, and distractions (Ahiable, Lahri & Bruijns, 2017; Sanjuan-Quiles et al, 2018; Maharani & Thabrany, 2019).

Acutely ill or injured people seek emergency care daily. Emergency departments deliver care to children and adults with medical, surgical, and obstetrical emergencies. In some countries and areas access to emergency care is limited, especially where the larger population live far away from a hospital (Burkholder, Ross, Vartanyan & Bergquist 2021). For some it will be the primary point of access to the health system (Reynolds, Sawe, Rubiano et al 2018). Overcrowding and long waiting times are among the challenges faced in EDs. In many countries, access to emergency care varies from universal access to limited access to citizens only (Baier, Geissler, Bech et al 2019). Not all countries provide free emergency care and affordability is a problem and harsh reality (Baier et al, 2019). As the population grows and the burden of diseases and injury increases in Africa, ED visits will rise (Mould-Millman, Dixon,

Sefa et al 2017). In 2021, the Centre of Disease Control (CDC) health statistics indicated 139 781 ED visits in the US over a randomly assigned 4-week reporting period (Cairns & Kang, 2021). In a systematic review of emergency care usage rates in 40 low- and middle-income countries (LMICs), Chang, Abujaber, Reynolds et al (2016:795) found a usage of 591 visits per 1000 population in Saudi Arabia classified as a high-income country to 0.7 visits per 1000 population in Nigeria, a middle-income country, and between 3 and 11 visits per 1,000 population for low-income countries. The median ED usage for high-income countries was 33 times greater than that of low-income countries and could be attributed due to the ease of access. Care in the ED may involve early recognition (triage) and initial resuscitation for life-threatening conditions (Reynolds et al 2018).

In South Africa, EDs are classified into levels 1 to 4 with each providing access to different levels of patient care (Trauma Society of South Africa, 2019). Level 1 is a comprehensive tertiary care facility capable of providing holistic trauma care; Level 2 is a hospital able to initiate definitive care for all injured patients; a Level 3 hospital can provide prompt assessment, resuscitation, surgery, intensive care and stabilization of injured patients, and a Level 4 hospital can provide initial evaluation, stabilization and diagnostic capabilities and prepare patients for transfer to higher levels of care. In 2020, between 2,000 and 4,500 patients were seen monthly in public emergency centres in Cape Town (van de Ruit, Lahri & Wallis, 2020).

Patients from all age groups with undiagnosed illnesses and injuries are admitted and treated in the ED. The South African Triage Scale (SATS) is used to triage all patients upon arrival in the ED. Patients are sorted according to four different colours depending on the nature and severity of their illness or injury. “Red” category patients are critically ill or injured and require immediate treatment. “Orange” category patients are very urgent and should be treated within 10 minutes. “Yellow” category patients have urgent illnesses or injuries and need to be treated within one hour of arrival at the ED and “green” category patients are regarded as non-urgent and should be treated within four hours of arrival at the ED (Cheema & Twomey, 2012). Patients can arrive at the ED via ambulance, private transport or as walk- ins. Emergency services provide emergency prehospital care on a basic to advanced level to patients experiencing medical or trauma emergencies (Wilde, 2014). Emergency medical services (EMS) systems include formalized pre-hospital care provided by trained emergency care professionals responding to emergencies, and play a critical role in emergency care (Mould-Millman et al, 2017:274). The use of ambulances has increased over the past two decades for various reasons, such as ageing populations requiring transport via ambulance, increased

chronic medical conditions, social support (elderly people living alone) and increased health awareness (Lowthian, Cameron, Stoelwinder et al, 2011). Once patients in the pre-hospital environment are stabilized, emergency care practitioners will transport them to a health establishment where they will hand over the patient to healthcare professionals for continuation in treatment.

1.7 PARADIGM AND ASSUMPTIONS

A paradigm is a worldview or a way of looking at natural phenomena that encompasses philosophical assumptions and that guides one's approach to enquiry (Polit & Beck 2017:571; Morgan 2007). Polit and Beck (2012:571) add that paradigms are lenses that help to sharpen the researcher's focus on a phenomenon. Assumptions are principles that are accepted as true based on logic or reason, without proof (Polit & Beck 2012:572).

In this study, the researcher selected pragmatism to guide the study because it is outcomes orientated, focuses on determining the meaning of things and emphasises communication (Shannon-Baker, 2016). Pragmatism believes in utilizing the best methods to investigate real-world problems, allowing for the use of multiple sources of data and knowledge to answer research questions (Allemang, Sitter & Dimitropoulos 2022). Pragmatists believe that knowledge is not about an abstract relationship between the knower and the known but an active process of enquiry that creates a continual back-and-forth movement between beliefs and actions (Morgan 2014). Morgan (2014) maintains that more attention should be given to the reasons why certain choices are made in research and that these choices be interpreted. Pragmatism's ability to use multiple sources of data makes it ideal for mixed methods research (Allemang et al 2022). Furthermore, pragmatism is a fitting paradigm for patient-oriented research because it aligns with patient-identified priorities and generates findings leading to the improvement of health systems (Allemang et al 2022)

In this study, the researcher identified handover practices as an area of improvement in the ED. Handover practices were not person-centred or done in a standardized form. This frequently led to incomplete handovers, affecting patient care delivery. This motivated the researcher to conduct the study. The study was conducted in phases with one informing the next. Phase 1 commenced with establishing the meaning of person-centred handover practices through a concept analysis of person-centred handover. Since no formal definition of patient-centred handover practices existed, the first step was to define the concept. The views of experts in the field of person-centred care and handover practices in the ED were needed to finalise the concept and the related attributes, and this formed objective 2 of phase

1 of the study. Consensus on the concept definition was reached through a modified online Delphi study consisting of three rounds. Information from each round was used to adapt and reform the definition to ultimately arrive at an agreed upon definition which would work in practice. Phase 2 involved a scoping review on available clinical practice guidelines for person-centred handover practices. The best evidence was needed to formulate the clinical practice guidelines in phase 3. Information obtained in the concept analysis and the scoping review guided the development of preliminary clinical practice guidelines followed by a review from an external panel and formulation of the final clinical practice guidelines. The rounds in the study contributed to utilizing the best methods from multiple resources to obtain the data to reach the research aim of this study. Data were collected, solutions obtained and accepted or rejected to arrive at the final product.

Pragmatism is underpinned by ontological, epistemological, and methodological assumptions (Mustafa, 2011; Polit & Beck, 2012; Shannon-Baker, 2016).

Ontology is the study of being or reality (Mustafa, 2011; Polit & Beck, 2012). Ontological assumptions are concerned with the reality that is being investigated. Pragmatists believe that reality exists independently of the mind but at the same time cannot be separated from what is in the mind, such as experiences, beliefs and habits. Reality within the pragmatic paradigm is constructed and always related to the context of the existing problem and the participants' experience (Morgan, 2007; Willis, 2012; Polit & Beck, 2012). In this study, the researcher first established the meaning of person-centred handover through a concept analysis in Phase 1, Objective 1, and then obtained stakeholders' views and reached consensus on the definition. Establishing a definition of the concept person-centred handover practices was needed to create a definition that all emergency care practitioners and healthcare professionals could use. This ensure that the concept under investigation was universally defined and thereafter used in the same manner by all involved in person-centred handover practices. Reaching consensus in Objective 2 of Phase 1 obtained the views and experiences of experts involved in person-centred care and handover practices to ensure that reality is not independent from experiences, beliefs, and habits. The final review to reach consensus on the preliminary clinical practice guidelines in Phase 3, Objective 5 ensured that the experiences and views of experts in handover practices and person-centred care amongst emergency care practitioners and healthcare professionals in the ED is included.

Epistemology is concerned with the nature of knowledge, its possibility, scope and general basis (Morgan, 2007; Willis, 2012). Epistemology refers to the way individuals understand reality from what they know and what is observed through interaction with the environment

(Polit & Beck, 2012). Pragmatists believe that knowledge is constructed by enquiry, cannot be separated from experiences, and is always related to context (Polit & Beck, 2012). The researcher gained a clear understanding of the meaning of person-centred handover practices from the concept analysis conducted in Phase 1, Objective 1, the scoping review in Phase 2, Objective 3, and validated it by means of the Delphi study with the stakeholders in Phase 1 Objective 2. Knowledge was gained through enquiry when the concept analysis was conducted in Phase 1 and the experiences of experts in person-centred care and handover practices was obtained in the Delphi study in Phase 1, Objective 2 and Phase 3, Objective 5. Knowledge was further constructed through enquiry when a scoping review was conducted in Phase 2, Objective 3 to explore current literature on person-centred handover practices in the ED to inform clinical practice guidelines. The inclusion of experts in person-centred care and handover practices as well as emergency care providers and healthcare professionals in the ED ensured that the clinical practice guidelines developed in Phase 3 was relevant to the context of the ED and the handover practices which occurs between emergency care providers and healthcare professionals in the ED.

Methodology is a strategy or plan of action that links methods to outcomes and governs researchers' choice and use of methods and the process of the research (Creswell & Plano Clark, 2018). Methodological assumptions refer to how the researcher will gain knowledge from the participants to answer the research questions (Polit & Beck, 2012). In the pragmatic paradigm, the research questions dictate the methodological choices while the orientation remains solving problems in the context in which they occur. The researcher used different data-collection methods and phases to ensure rigorous data collection. In Phase 1 Objective 1 a concept analysis of person-centred handover in the ED was performed and for Objective 2 a Delphi study was performed to reach consensus on the definition of person-centred handover in the ED. During Phase 2 to reach objective 3 a scoping review was conducted to explore current literature on person-centred handover practices in the ED to inform clinical practice guidelines. And lastly during Phase 3 to achieve Objective 4 The SAGE Clinical Practice Guideline Development Framework (Dizon et al 2016:1-8) was used to develop the clinical practice guideline which was reviewed by experts to finalize the preliminary clinical practice guidelines (Objective 5).

1.8 SIGNIFICANCE

A research study should be significant to the nursing profession and contribute to the body of knowledge (Polit & Beck, 2012). The research significance refers to the impact and benefits of the study. This study built on prior knowledge and looked at the topic from a different angle,

which led to a new conceptualization. The research study had significance in the areas of:

- *Nursing education:* For nursing education the concept definition as well the developed clinical practice guidelines could be used in the nursing curricula of undergraduate and postgraduate programmes to teach nurses how to perform person-centred handover practices in the ED.
- *Research:* The findings and clinical practice guidelines should lay the foundation for further research in other contexts. The implementation of clinical practice guidelines serves as further areas for research and improvement to ensure context specific person-centred handover practices. The evaluation of the implemented guidelines is an further research opportunity.
- *Clinical practice:* The definition of person-centred handover practices should raise awareness amongst emergency care practitioners and healthcare professionals of its attributes and definition. The clinical practice guidelines provide a patient and context- specific standardized manner in which person-centred handover practices between emergency care practitioners and healthcare professionals in the ED should be conducted. The use of guideline development methods ensured that evidence-based recommendations were formulated to ultimately improve patient care delivery, patient safety, and patient outcomes. The guidelines should equip the staff to provide high-quality care in the ED.
- *Administration:* For managers and policy makers the concept definition and clinical practice guidelines could guide policy making and procedural development in the various EDs to ensure the implementation of person-centred handover practices and potentially improve patient care deliver.

1.9 RESEARCH DESIGN AND METHODOLOGY

The researcher selected a multimethod research design to answer the research question and achieve the aim and objectives. Multimethod studies use two or more research methods and triangulate the results to form a complete whole (Esteves & Pastor, 2003; Anguera, Blanco-Villaseñor, Losada et al, 2018). Table 1.1 summarises the research design and methodology of the study.

Chapter 1: Orientation to the study

Table 1.1 Summary of the research design and methodology

Phase	Objective	Research Methods	Population/ Unit of analysis	Sampling	Data collection	Data analysis	Rigour
Phase 1: Concept analysis	Objective 1: To define the concept person-centred handover in the ED	Concept analysis	n/a	n/a	Literature review	Walker and Avant (2014)	Walker and Avant's model of concept analysis to guide the process
	Objective 2: Reach consensus on the definition of person-centred handover in the ED	Online Delphi study	Experts in person-centred care and/ or handover practices	Purposive sampling	Delphi method	Delphi method	Basic statistical analysis of mean and percentage analysis and inductive content analysis
Phase 2: Scoping review and clinical practice guideline development	Objective 3: To explore current literature on person-centred handover practices in the ED to inform clinical practice guidelines	Scoping review	n/a	n/a	Scoping review	Johanna Briggs Institute (JBI) scoping review	JBI framework for conducting scoping reviews
Phase 3: Reaching consensus	Objective 4: To develop preliminary clinical practice guidelines for person-centred handover practice	Clinical practice guideline development	n/a	n/a	The SAGE Clinical Practice Guideline Development Framework (Dizon et al 2016:1-8)	The SAGE Clinical Practice Guideline Development and AGREE II for guideline reporting.	AGREE II tool for reporting and The SAGE Clinical Practice Guideline Development
	Objective 5: To reach consensus on clinical practice guidelines for person-centred handover practices	Delphi	Experts with in-depth knowledge in person-centred practices, clinical practice guideline development as well as handover practices related to the ED and specifically those	Purposive and snowball sampling	Delphi method	Delphi method	Basic statistical analysis of mean and percentage analysis and inductive content analysis

Chapter 1: Orientation to the study

			handover practices between emergency care practitioners and healthcare professionals				
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Chapter 2 discusses the research design and methodology in detail.

1.10 DEFINITION OF KEY TERMS

For the purposes of the study, the following key terms were used as defined below.

- **Clinical practice guidelines:** The Institute of Medicine (IOM 2011:4) defines clinical practice guidelines (CPGs) as “statements that include recommendations intended to optimize patient care that are informed by a systematic review of evidence and an assessment of the benefits and harms of alternative care options”. In this study, clinical practice guidelines referred to the guidelines developed to guide person-centred handover practices between emergency care practitioners and healthcare professionals in the ED. These guidelines will include the process to follow and the content for handover practices.
- **Emergency care practitioners:** Emergency care practitioners refer to healthcare professionals with the necessary knowledge, skills and attitude required to deliver holistic care in the pre-hospital environment (Ainsworth-Smith 2012:4). In this study, emergency care practitioners referred to all personnel delivering pre-hospital emergency care and transporting patients to the ED where handover to healthcare professionals occurs. Emergency care practitioners included:
 - Basic life support (BLS): a level of care provided primarily by emergency care providers that practise within the Basic Ambulance Assistant scope of practice.
 - Intermediate life support (ILS): a level of care provided within the Ambulance Emergency Assistant and Emergency Care Assistant scope of practice.
 - Advanced life support (ALS): level of care provided within the Paramedic, Emergency Care Technician or Emergency Care Practitioner scope of practice (NDOH, 2017)
- **Emergency department:** Emergency departments are also referred to as Accident and Emergency departments and were initially established for the treatment and care of patients who had suffered a serious injury or accident or had developed a sudden serious illness or medical condition (Burton, 1981). In this study, the emergency department (ED) referred to the department in a hospital to which patients are transported from the pre-hospital environment and where emergency care is provided.

- **Family and/ or significant others:** In this study family and/ or significant others will refer to a patient's direct family or those responsible for their care and caring for them.
- **Handover practices:** Handover practices refer to the transfer of both accountability and responsibility from one healthcare provider to the next (Shah, Alinier & Pillay, 2016; Merten et al, 2017; Milano et al, 2018; Campbell & Dontje, 2019). In this study, handover practices referred to all handover practices occurring in the ED between emergency care practitioners and healthcare professionals about the management patients received in the pre-hospital environment.
- **Healthcare professional:** A healthcare professional is a person that provides healthcare services in terms of the National Health Act, 61 of 2003 and/or the Nursing Act, 33 of 2005 rendering care to patients in healthcare facilities. In this study, healthcare professionals referred to medical doctors registered with the Health Professions Council of South Africa (HPCSA) as well as Professional Nurses and Enrolled Nurses registered and enrolled with the South African Nursing Council (SANC).
- **Person-centredness:** In person-centred care, healthcare professionals establish a partnership with the patient in which the patient plays an active role, and the healthcare professionals take the patient's rights and preferences into account (Kullberg, Sharp, Johannson et al, 2017; Zhang, Yokum, Repplinger et al, 2018). Dewing and McCormack (2017:2509) define person-centredness as "an approach to practice, established through the formation and fostering of healthful relationships between all care providers, service users and others significant to them in their lives. It is underpinned by values of respect for persons (personhood), individual right to self- determination, mutual respect and understanding. It is enabled by cultures of empowerment that foster continuous approaches to practice development." In this study, Dewing and McCormack's (2017) was used.

1.11 ETHICAL CONSIDERATIONS

Ethics deals with matters of right and wrong. When humans are used as study participants, care must be taken to ensure that their wellbeing and rights are protected (National Institute of Health [NIH], 1979; Hewitt, 2007; Polit & Beck 2012). In 1947, the Nuremberg Code was developed to protect the rights of

research subjects and distinguished between therapeutic and non-therapeutic research. In 1964, the World Medical Association (WMA) developed the Declaration of Helsinki as a set of ethical principles to protect human subjects participating in medical research (WHO 2001:373-374). The Belmont Report, 1979 established the difference between biomedical and behavioural research, and allowed for the protection of participants in research studies and clinical trials with human subjects. The three core principles are respect for persons, beneficence and justice and the primary areas of application are informed consent, privacy and confidentiality (Polit & Beck 2017:210). Accordingly, the researcher obtained permission and ethical approval to conduct the study, and upheld the ethical principles of autonomy, beneficence, and justice.

- **Permission and ethical approval:** The researcher obtained ethical approval and permission to conduct the study from the Research Ethics Committee of the Faculty of Health Sciences (205/2022) of the University of Pretoria (see Annexure A1.1 and A1.2).
- **Beneficence:** The principle of beneficence refers to the duty of the researcher to protect study participants against discomfort and harm. The participants were protected from any harm.
- **Autonomy:** The principle of autonomy refers to the right to self-determination, voluntary participation, and the right to withdraw from the study. The participants in the Delphi rounds were informed that they had the option to withdraw from the study at any time should they wish to do so without penalty.
- **Justice:** The principle of justice includes the right to fair treatment and the right to privacy. The researcher treated all the participants fairly and with respect. There were no direct benefits for participating in the study other than the potential for clinical practice guidelines to improve handover practices in the ED. In addition, with the written permission of participants, they were acknowledged in the article publications.
- **Informed consent:** The researcher informed the participants of the purpose and significance of the study, and that participation was voluntary (Polit & Beck, 2012). The Delphi panel of experts was provided with a participant information leaflet regarding the study to make an informed decision regarding participation and their option to withdraw from the study at any time without penalty. Thereafter written informed consent was signed by each participant (see Annexure A.1.3). The external review panel were also provided with an informational leaflet and signed informed consent

before reviewing the clinical practices guidelines (see Annexure A1.4).

- Privacy and confidentiality:** The participants were assured of privacy and confidentiality and that their information would be kept confidentially (Polit & Beck, 2012). Only the researcher sent out and received responses from the Delphi panel of experts and the researcher together with her supervisors analysed the responses and provided summarized feedback. This ensured that the information provided by the experts was kept confidential. All participant information was kept confidential. Participant information in each of the Delphi rounds was kept anonymous with only the researcher and supervisors having access to their information. Each round and its related summary feedback were sent via individual email to each participant.

The ethical considerations applicable to each phase of the study are discussed in depth in Chapter 2.

1.12 LAYOUT OF THE STUDY

The study consists of seven chapters. Table 1.2 presents the layout of the study.

Table 1.2 Layout of the study

Chapter	Title	Description
1	Orientation to the study	Introduces and describes the study, including the research problem, aim and objectives, significance, paradigm, research design and methodology, and ethical considerations.
2	Research methodology	Discusses the research design and methodology used in each phase, and rigour.
3	Concept analysis	Provides the article submitted for publication on the concept analysis of person-centred handover practices and their meaning in emergency departments.
4	Consensus: Person-centred handover practices	Provides the published article on consensus reached on person-centred handover practices, including the definition of person-centred handover in emergency departments.
5	Scoping review	Provides the article submitted on the scoping review conducted to guide the development of the preliminary clinical practice guidelines.
6	Clinical practice guidelines	Provides the final clinical practice guidelines for person-centred handover practices between emergency care providers and healthcare professionals in the emergency department.
7	Conclusion, contribution, implication, limitations, and	Concludes the study, states the contribution to practice, research and education, implications, and limitations of the study, and makes recommendations for further research.

	recommendations	
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1.13 SUMMARY

This chapter outlined the problem, aim, paradigm, research design and methodology, and context of the study. Chapter 2 discusses the research design and methodology of the study.

CHAPTER 2

RESEARCH DESIGN AND METHODOLOGY

2.1 INTRODUCTION

Chapter 1 introduced and outlined the study. This chapter discusses the research design and methodology, including the aim and objectives, phases and data collection and analysis.

2.2 AIM AND OBJECTIVES

The aim of the study was to establish the elements underpinning a person-centred approach to handover practices between emergency care practitioners and healthcare professionals in the emergency department (ED).

In order to achieve the aim, the study was conducted in phases with the following objectives:

Phase 1: Concept analysis

Objective 1: Define the concept person-centred handover in the ED.

Objective 2: Reach consensus on the definition of person-centred handover in the ED.

Phase 2: Mine the literature

Objective 3: Explore current literature on person-centred handover practices in the ED to inform clinical practice guidelines.

Phase 3: Guideline development

- Objective 4: Develop preliminary clinical practice guidelines for person-centred handover practices.
- Objective 5: Reach consensus on clinical practice guidelines for person-centred handover practices.

To achieve the aim and objectives, the study wished to answer the following question:

- What do guidelines for a person-centred approach to handover practices between emergency care practitioners and healthcare professionals in the ED encompass?

2.3 RESEARCH DESIGN

The researcher selected a multimethod research design to answer the research question and achieve the aim and objectives. Multimethod studies use two or more research methods and triangulate the results to form a complete whole (Esteves & Pastor, 2003; Anguera, Blanco-Villaseñor, Losada et al, 2018). The researcher considered a multimethod research design appropriate to generate quality data, acquire deeper insight into the phenomenon and evaluate the findings (Polit & Beck 2012:167; Creswell & Plano Clark, 2018). Multimethod studies draw on the strengths of both qualitative and quantitative methods (Creswell & Plano Clark, 2018; Mik-Meyer, 2021). Accordingly, the researcher conducted the study in phases in order to achieve the objectives.

The study involved a broad topic under investigation. The researcher considered it best to divide it into smaller pieces by completing each phase separately to solve the bigger problem under investigation. This required the use of multiple methods to achieve the objectives for each phase (Esteves & Pastor 2003:69). In multimethod research, words can add meaning to numbers and numbers can add precision to words (Mik-Meyer 2021:359). In this study, Phase 1 (concept analysis and Delphi consensus), Phase 2 (scoping review) and Phase 3 (guideline development) were complete studies on their own (Anguera et al, 2018; Kasirye, 2021).

An advantage of multimethod research is that it allows for creativity through the discovery of new or paradoxical factors which can stimulate new work. It also allows for expansion of the study by widening the scope to take in contextual aspects of the situation (Esteves & Pastor, 2003; Kasirye, 2021). In Phase 1, the researcher used a concept analysis and then a Delphi study to reach consensus on and confirm the definition of the concept of person-centred handover in the ED (objectives 1 and 2). Reaching consensus during the Delphi method allowed for national and international perspectives on contextual aspects of the topic. Data collection by multiple methods enabled a fuller picture of the phenomenon under investigation and contributed to a deeper understanding of the problem (Creswell & Plano Clark, 2018; Esteves & Pastor, 2003; Mik-Meyer, 2021).

In this study, the researcher selected a multimethod research design and pragmatism to investigate a real-world problem and answer the research question (Creswell & Plano Clark, 2018:72). The researcher considered a pragmatic paradigm suitable to concentrate on the consequences of the investigation. To conduct multimethod studies requires certain skills, time, and resources for extensive data collection and analysis (Creswell & Plano Clark 2018:47). The researcher underwent training (see Annexure H.1) on conducting scoping

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reviews and obtained the expertise of a guideline development expert for Phase 3: guideline development. The researcher gained experience and knowledge of data collection and analysis in her Master's degree and the assistance of her supervisors added to her knowledge (Creswell & Plano Clark, 2018). Working within a team (student and supervisors) for data collection and analysis assisted in overcoming the time and resources constraints (Creswell & Plano Clark 2018:48).

The research design and methods for each phase are discussed next.

2.4 PHASE 1: CONCEPT ANALYSIS

Phase 1 focused on defining and reaching consensus on the concept of person-centred handover practices in the ED.

2.4.1 Objective 1: Define person-centred handover

The researcher conducted a concept analysis to define person-centred handover. Concepts are the building blocks of scientific knowledge or theoretical frameworks for any discipline (Botes 2002:23; Foley & Davis 2017:70). Concepts can also be described as mental pictures about a specific thing or action and necessary to develop theories (Kemp, 1985). According to Bousso, Poles and da Cruz (2014:141), a concept must be included in a context in a manner that allows meaning and application and thus advances knowledge in a specific area. Concepts can be abstract (care, respect, and collaboration) or relatively concrete. People create concepts through words to communicate their meaning or provide meaning to the phenomenon through direct or indirect experience (Bousso et al, 2014:142).

Kemp (1985:383) defines concept analysis as a “formal, linguistic procedure to determine the essential attributes of concepts”. The purpose is to precisely delineate which characteristics of the concept are critical for expressing the desired meaning; which are related to the meaning but not necessary to understand the concept, and which are clearly not related to the concept under examination. It must be a clear, valid argument of the analyzer's ideas and conclusions by forcing the analyzer to identify the essential characteristics of the concept and develop a valid argument for the results. A conceptual analysis can also clarify the meaning of a concept in current use, which can contribute to future development of the concept (Foley & Davis 2017:71). In this study, the researcher did a concept analysis in order to define the concept of person-centred handover, which was currently in use in clinical practice, but for which there was no formal definition at the time. Moreover, it was necessary to establish the

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uses and characteristics of person-centred handover practices as the concept only existed as separate entities.

The purpose of conceptual analysis is to give meaning, develop, delineate, compare, classify, correct, refine, and validate concepts (Botes 2002:24). By constructing a definition of “person-centred handover”, awareness and appreciation for person-centred handover could be raised amongst emergency care practitioners and healthcare professionals. Concepts encourage communication, and carefully defining the attributes of a concept facilitates and promotes understanding about the phenomenon under discussion and finding ways to recognize and/or measure the concept in the work environment (Walker & Avant 2014:164). Concept analysis is the development of standardized language to describe nursing practice. Through conducting a concept analysis and developing the definition of the concept, person-centred handover in the ED could be thoroughly grounded in and based on theoretical and research literature (Walker & Avant 2014:165).

The use of concept analysis in nursing began in the early 1990s and included the use of models developed by Rodgers and Knafl (1993), Walker and Avant (1994), Morse (1995) and Chinn and Kramer (1995) with Walker and Avant’s (1994) eight-step model most frequently used (Fitzpatrick & McCarthy 2016:4). This study used Walker and Avant’s (2014:166) eight steps, namely (1) select a concept, (2) determine the aims or purpose of the analysis, (3) identify all uses of the concept that you can discover, (4) determine the defining attributes, (5) identify a model case, (6) identify borderline, related, contrary, invented and illegitimate cases, (7) identify antecedents and consequences, and (8) define empirical referents.

The analysis commenced with an extensive literature review to explore the concept and set the boundary within which the concept analysis was done. An initial literature review provided insight into the concept and enabled the researcher to discover what is known, not known, or confusing about the concept (Foley & Davis 2017:71). It sets the boundary that will guide and form the links between research, theory, and practice. Without a clear conceptual foundation, the quality of the research and theory construction could be weak, and the maturity compromised.

The researcher then critically analysed the literature for rigour, clarification of the conceptual problem, and to align with the study objectives (Bousso et al 2014:142). Due to the nature of the concept and limited research available on person-centred handover, the concept was

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broken down into handover practices in the ED between emergency care practitioners and healthcare professionals and person-centred handover in the ED. The literature review included dictionary and thesaurus searches as well as online databases (CINAHL (EBSCO), MEDLINE (PubMed), and Wiley Online Library) and the web - Google scholar searches. The databases and the web were searched for all types of publications, limited to the English language and no year restrictions between May and December 2021. The same Boolean search was conducted on all databases with the keywords person-centred, emergency department, and handover practices. A further manual search of the reference lists of selected articles for additional relevant sources was also performed. Only publications on handover practices between emergency care practitioners and healthcare professionals and person-centred handover in nursing and the ED were included. All duplicate publications and ones on general handover practices were excluded. The PRISMA flow chart reporting guideline was used to document the identification of studies via data bases and registers (see Chapter 3).

Each article was critically analyzed to determine the uses and defining attributes of the concept; identify model cases; describe additional cases; identify the antecedents and consequences and identify the empirical referents (see Annexure B.2 for data sheet of the data analysis and Annexure B.1 for the data extraction sheet). A matrix on an Excel spreadsheet was used for the results matrix (Polit & Beck 2012:108) on all the publications included in the final literature review (see Annexure B.2). Once the final publications had been screened, coding was used to organize the literature and determine the characteristics of the concept and the variables.

The following pitfalls were guarded against and addressed (Walker & Avant 2014:166):

- The tendency to moralize when the concept being analyzed has some value implications: The concept under analysis was objectively managed to construct a definition and define the related attributes. The importance of creating this definition for practice and the further phases of the study were constantly kept in mind.
- The feeling of being absolutely in over your head: Walker and Avant's (2014) eight steps were used throughout to guide the concept analysis process. Three members in the research team (the student, supervisor, and co-supervisor) determined the final concept definition based on the literature.
- The feeling that concept analysis is too easy: A vigorous approach was followed to the concept analysis, using Walker and Avant's (2014) steps. Data analysis was done over a period of six months. The research team (the student, supervisor, and co-supervisor) assisted with the concept analysis. A total of 787 records were screened over various

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databases and the world-wide web to identify the 31 articles to be included for the final review.

- The compulsion to analyze everything: A thorough determination of the aim and scope of the concept analysis was done prior to commencing the concept analysis (see the three reasons identified in step 2 below of the concept analysis).
- The need to protect oneself from others' criticism or debate: Once the concept analysis was completed, a Delphi study was conducted to reach consensus on the concept definition and its related attributes. It was important for the researcher to obtain the views and input of international and national experts in the fields of person-centred care and handover practices. Having an agreed upon definition for the concept would make the concept definition more robust and acceptable by individuals in practice.
- The feeling that verbal facility equals thinking: In order to ensure a meaningful concept analysis, a rigorous approach was followed to conduct the concept analysis (see section 2.4.1.2).
- The attempt to add superfluous defining attributes: Once the original analysis was completed the process ended. No additional information was searched for or added.

2.4.1.1 Walker and Avant's (2014) 8-step concept analysis

The study followed Walker and Avant's (2014) 8 steps of concept analysis.

- *Step 1: Concept:*

The concept "person-centred handover" emerged when the researcher conducted research on handover practices in the ED between emergency care practitioners and healthcare professionals during her Master's studies. During handovers between these two disciplines, the researcher observed that the patient and/or significant others were not included even though they were alert or present and able to be included in the handover. In addition, no specific structure was used to conduct handovers despite recommendations for structured and person-centred handovers (Makkink et al 2021:316; White-Trevino & Dearmon 2018:262).

Various definitions for handover and person-centred care exist as separate entities (Dúason, Gunnarsson & Svavarsdóttir 2021:2; McConnell, McCance & Melby 2016:39; Sanjuan-Quiles, Hernández-Ramón, Juliá-Sanchis et al 2018:169). However, operationalization of the concept "person-centred handover" is not yet fully realized. The concept "person-centred handover" is an abstract concept that requires clarification for its use in practice. Moreover, as far as the researcher could determine, the concept person-

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centred handover had not been cited in the literature.

- *Step 2: Determination of aims and purpose:*

The researcher selected the concept person-centred handover for analysis for the following reasons:

- It reflects the main interest area of the research study.
- Its analysis would further the theoretical development of the concept in handovers in the ED.
- It would provide the groundwork for the further development of clinical practice guidelines underpinned by the principles of person-centredness.

- *Step 3: Identification of uses of the concept:*

Most of the studies focused on person-centred care and handover practices as separate entities. Handover practices amongst emergency care practitioners and healthcare professionals in the ED are limited. Therefore, the researcher sought the uses and definition of the concepts (person-centred care and handover practices) separately from the fields of nursing, healthcare, emergency medicine and pre-hospital emergency care. This assisted in establishing the clear meaning of person-centred care and handover practices as they occur in the specific context of the ED.

- *Step 4: Determine the defining attributes:*

The researcher explored definitions and descriptions of person-centred care and handover practices in the literature to uncover the defining attributes. This involved vigorously reading all the available literature to determine the identifying characteristics which recurrently appeared regarding the concepts. The attributes for each concept were then finalized by identifying and analysing repetitive attributes for each of the concepts.

- *Step 5: Developing a model case:*

The researcher determined the identifying characteristics of a model case. Once the defining attributes of the concept had been identified, a model case was developed. The model case was a pure example of what person-centred handover are and all the critical attributes.

- *Step 6: Identifying borderline, related and contrary cases:*

The researcher identified borderline, related and contrary cases during the literature review as those that only included some of the attributes, those connected to the concept, and those not related to the concept at all. Identification of these cases assisted in the

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identification of the critically defining attributes related to the concept of person-centred handover practices. Once the model case had been identified through the attributes, the border line case could be identified. Once the borderline case was developed, the contrary case could be identified.

- *Step 7: Identifying the antecedents and consequences:*

Upon identification of the attributes and model case, the antecedents could be developed. Antecedents are the events or incidents that must be in place for the concept to occur (Walker & Avant 2014:173).

Consequences are the outcomes that occur because of the concept (Walker & Avant, 2014:173). Although these might change over time, for the purpose of the concept analysis they were identified for that period.

- *Step 8: Defining the empirical referents:*

The attributes, antecedents and model case guided the development of the empirical referents.

See Chapter 3 for the application of Walker and Avant's (2014) concept analysis and the outcome of Phase 1, Objective 1.

2.4.1.2 Rigour

A concept analysis should be rigorous; that is, thorough and careful. In 1996, Morse, Hupcey, Mitcham and Lenz (1996:271) identified criteria to evaluate the rigour of a concept analysis. Concept analysis should have an adequate database containing rich and comprehensive data, and ample literature with thick descriptions of the content is required (Morse et al 1996:272). For the purpose of this study, the researcher used a Boolean search with identified keywords on all databases, which assisted in maintaining consistency throughout for both concepts and all databases. Literature from four different databases, online dictionaries and thesaurus was analysed to develop an extensive database. A total of 791 records were retrieved.

A systematic presentation of the results should be provided to demonstrate the depth of analysis done. The research should be logical, rigorous and creatively presented (Morse et al 1996:271). A spreadsheet was developed to provide a detailed description of the data analysis and identification of each component of the concept analysis (see Annexure B.2). Each step was clearly described, and a spreadsheet developed to provide a logical flow of how the final attributes, antecedents and consequences were formulated in order to provide a trial. Validity was ensured through the description of the inclusion criteria (see Chapter 3). Data analysis by coding on the spreadsheet allowed for a trial of all the literature reviewed. The three-member

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research team (the researcher, supervisor and co-supervisor) was involved in the data retrieval and analysis process thereby avoiding any bias.

Finally, the results of the analysis should make a contribution to knowledge, make intuitive sense, and be recognizable, yet appear innovative (Morse et al 1996:272). The concept analysis was thorough, which ensured that the definition of the concept contributes to the body of knowledge.

Walker and Avant's (2014) model of concept analysis was used to guide the concept analysis process throughout to ensure that a specific approach was used. The researcher guarded against Walker and Avant's (2014) pitfalls in exploring a wide variety of literature on the concept (see section 2.4.1).

After completing the concept definition, consensus amongst the users of the concept (emergency care practitioners and healthcare professionals) had to be obtained. This would further strengthen the concept definition and related attributes.

2.4.2 Objective 2: Reach consensus

The second objective of Phase 1 was to reach consensus on the definition of person-centred handover in the ED.

2.4.2.1 Research design

Consensus methods are used to define levels of agreement on controversial subjects (Fink, Kosecoff, Chassin & Brook 1984:979; Nasa, Jain & Juneja 2021:117). The Delphi and nominal group consensus are examples of consensus methods. Consensus studies use the knowledge and experience of experts and practitioners and merge them with available data (Fink et al 1984:979).

The researcher selected a Delphi study to reach consensus on the concept definition of person-centred handover practices and related attributes.

The Delphi is a useful method to gather information on a topic with limited information available (Avella 2016:306; Beiderbeck et al 2021:2). The broad approach of the Delphi can lead to variation in the number of rounds, how questions are posed and responses collected as well as how consensus is reached (Barrett & Heale 2020:68; Beiderbeck, Frevel, von der Gracht et al 2021:2). This allows for a flexible approach to obtaining experts' opinions on an area of interest, as well as the introduction and integration of opinions and insights (Barrett & Heale, 2020:68; Habibi, Sarafrazi & Izadyar 2014:9; Varndell, Fry & Elliott 2021:149). The ability of participants to view others' contributions and change their opinions allows for an element of

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reflection, which is missing in interviews or focus groups (Avella 2016:308; Barrett & Heale 2020:68; Varndell et al 2021:2). The anonymity of Delphi studies allows for honesty amongst participants and reduces the risk of the “halo effect”, where the views of a more dominant or high-profile member is given preference (Barrett & Heale 2020:68; Habibi et al 2014:9). Ultimately the collective decision-making is more comprehensive (Habibi et al 2014:9). The results of a Delphi study can provide stand-alone insights, but are also linked to scenario analytics, fulfilment of idea generation, and consolidation of judgement functions (Beiderbeck et al, 2021). In nursing practice, the Delphi study is particularly useful for exploring standards of practice (Varndell et al, 2021).

The researcher selected the Delphi study to obtain the views of a variety of experts on the concept definition of person-centred handover. It was necessary to obtain consensus on the definition of person-centred handover and the constructed attributes for use in practice. It would also create awareness of the concept of person-centred care and person-centred handover as well as the importance of person-centred handover practices in the ED. The researcher considered a Delphi method appropriate for obtaining expert views on the constructed definition of the concept and its related attributes, answering the research question, and creating a standard in person-centred handover practices.

The Delphi method was first developed in the 1950s by Dalkey and Helmer to forecast the impact of technology on warfare and gain reliable expert consensus which promoted anonymity and avoided direct confrontation between experts (Avella, 2016; Barrett & Heale, 2020). Subsequently, different types of Delphi techniques were developed, such as modified Delphi, policy Delphi and real-time Delphi classified under three broad categories namely classical, policy and decision (Habibi et al, 2014; Varndell et al, 2021).

For this study, the researcher selected a modified online Delphi. In the modified Delphi, the researcher generated the first round of responses through the literature review and then disseminated it to the expert panel (participants). The researcher conducted a literature review to define the concept of person-centred handover in the ED and related attributes (see Chapter 3). The constructed concept definition and related attributes were then provided to the participants in round 1 of the Delphi study and the participants were asked to rate the list and provide additional information based on their expertise (Avella, 2016; Hasson & Keeney, 2011).

In the Delphi study, the questions for each round were based on the findings of the previous round which allowed for the study to develop over time in response to earlier findings (Barrett & Heale 2020:68). Building towards consensus through the various rounds led to answering the research question (Barrett & Heale, 2020; Beiderbeck et al, 2021). After each round, the participants viewed the results of the previous one, which allowed them to reflect on their

responses and adapt them based on the other responses (Barrett & Heale 2020:68). Feedback was shared anonymously to avoid bias from participants changing their responses in the light of the responses of other panel members (Avella 2016:309; Barrett & Heale 2020:68). Rounds were repeated with the aim of reducing the range of responses until consensus is achieved (Avella, 2016; Varndell et al, 2021).

2.4.2.2 Advantages and disadvantages of the Delphi method

An advantage of the Delphi involves assembling a panel of experts without concern for geographical location in replying to a number of rounds to a specific question or questions. The e-Delphi involves the administration of the questionnaire to participants via email or online web survey (Hasson & Keeney 2011:1697) which furthers broaden the panel of experts to be included. In this study, the researcher sent the questionnaire to participants via email, which ensured both national and international experts could be reached.

The disadvantages of Delphi studies include that they can be time consuming and complex and the need for participants to respond in various rounds can lead to a high dropout rate, which impacts the validity of the study (Barrett & Heale 2020:68; Varndell et al 2021:2). The ability of participants to change their response based on reflection of others' responses could be problematic. This flexibility could introduce bias when participants change their views to comply with those of others (Barrett & Heale 2020:68). In this study, the participants were provided with anonymous feedback after each round and were able to view the responses of others and make adjustments accordingly. However, none of the participants in any of the rounds made any adjustments to their comments. A further limitation is related to the quality of the evidence as Delphi studies rely purely on expert opinion to generate findings and researchers should carefully consider whether the research questions can be answered through expert consensus or whether other approaches would be more appropriate (Barrett & Heale 2020:69). In this study, the researcher used a literature review to create the initial concept definition and related attributes, therefore the experts' opinion to reach consensus assisted in strengthening the initial concept definition and related attributes and was therefore not based on expert opinion alone.

2.4.2.3 Preparation for the Delphi study

To ensure validity and accuracy, thorough preparation was necessary. The preparation phase had four goals, namely the definition of research goals, the Delphi format, Delphi statements, and additional questions (Beiderbeck et al 2021:5). The research goal of the Delphi study was

to reach consensus on the definition of person-centred handover in emergency departments. An online modified Delphi was used, enabling the inclusion of expert opinions nationally and globally (Barrett & Heale 2020:68). The use of a modified Delphi study allowed the researcher to obtain information from other sources such as a literature review (Phase 1, Objective 1) and present it to the panel of experts (Avella, 2016). Since the Delphi study followed the concept analysis, it assisted with the creation of the Delphi statement and the related questions asked in the first round. The researcher used the initial concept definition and related attributes to formulate the questions for round 1.

2.4.2.4 Conducting the Delphi study

This phase involved selecting the software to use, expert selection and invitation, conducting the study and expert follow-up (Beiderbeck et al 2021:10-12). Expert selection can be done according to panel size, level of expertise, level of heterogeneity, level of interest, and access to the panel (Beiderbeck et al, 2021).

- *Population and sampling:*

The Delphi study uses experts to make up the panel members, who are known as participants. The selection of members for the expert panel is most important and involves identifying the disciplines that will be invited to participate (Avella, 2016). Although there are no standard criteria for panel members, the level of heterogeneity of the panel, panel size and when to label a panel member an expert should be considered. An expert refers to someone with expert knowledge and expertise in a specific subject (Avella 2016:308; Habibi et al 2014:10; Nasa et al 2021:118). Habibi et al (2014:10) describe a Delphi expert as a highly trained and competent individual within the specialized area of knowledge related to the research problem. Moreover, the Delphi expert is someone who not only holds a certain role but also possesses certain attributes such as knowledge and experience (Varndell et al 2021:7). The goal of experts are to increase the qualitative strength of consensus and therefore the panel should meet pre-set criteria (Nasa et al 2021:118).

Recruiting experts involved defining the relevant expertise, identifying individuals with the desired knowledge and experience, and retaining panel members (Varndell et al, 2021).

In this study, the Delphi panel members were recruited based on identified inclusion criteria. All invited experts had extensive knowledge of person-centred care, handover practices, or both, and had to be:

- Experts in person-centred practices with two or more publications on person-centred

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care research conducted.

- Emergency care practitioners involved in handover practices in the ED to healthcare professionals (those currently working in the pre-hospital environment with more than three years' experience in handover practices and emergency care).
- Nurses involved in handover practices in the ED from emergency care practitioners (those registered and enrolled nurses working in the ED with more than three years' experience in emergency nursing and handover practices).

Final Delphi panel members comprised of emergency care practitioners and healthcare professionals providing person-centred care and involved in handover practices (all the participants had more than 10 years' experience in person-centred care and handover practices), authors of publications on person-centred care (all the participants had at least two publications in the last five years), involved in academia (two participants had masters degrees and seven had doctoral degrees, with a minimum of four years' and a maximum of 32 years' experience in academia and clinical experience as nurses and emergency care practitioners) (see Annexure B3 for a summary of participants' demographic profile). The panel composition allowed for a heterogeneous sample ensuring diverse knowledge and experience and enabled a wider range of perspectives (Trevelyan & Robinson 2015:425).

The panel size has no set standard and may vary according to the topics covered, the nature of the different viewpoints, time and money available (Habibi et al, 2014). Panel size may also vary according to the complexity of the problem, homogeneity or heterogeneity of the panel and available resources (Nasa et al 2021:119). Panels usually fall between 10 and 100 participants and can consist of two or three expert groups depending on the stakeholder interest (Avella 2016:308; Habibi et al 2014:10; Varndell et al 2021:7). Habibi et al (2014:10) maintain that six to 12 members are ideal with a combination of experts with different specialities included in the panel. No specific sampling method is prescribed in Delphi studies to invite members for the panel. Snowball sampling is commonly used as it allows for random selection and works well in communities where members cannot be easily identified (Habibi et al 2014:10).

The researcher used purposive and snowballing sampling to identify experts. Initially, the researcher identified experts through a literature search on the Internet. Experts that met the inclusion criteria were contacted via email to participate in the study and provided with a participant information leaflet. Further experts were identified through recommendations from the initial participants. These experts were then also contacted via email to participate in the study (Habibi et al 2014:10). A total of 17 participants were invited to participate in the study. Nine participants responded and signed informed consent to participate in the study. Five to ten panel members are enough for a heterogeneous population to ensure that expertise on

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the particular topic comes from different social/professional stratifications, such as teachers, university academics and clinicians (Clayton 1997:378). In this study, the panel was heterogeneous and consisted of experts in the field of person-centred care and/or handover practices.

- *Data collection:*

Likert scales are frequently used in Delphi studies to facilitate the calculation of the data median and interquartile ranges (Taylor 2020:16; Taze et al 2022:161). Five- or seven-point Likert scales are commonly used to gather expert opinions (Habibi et al, 2014). To underline the participants' ratings, they can describe the reasoning behind their selections which the other members can view (Varndell et al 2021:6). After collecting the participants' views, the mean score of their opinions on each question is calculated. Should no consensus be reached, participants are then provided with the calculated mean as controlled feedback (Habibi et al, 2014:11). There is no agreed upon rating scale size for Delphi studies and the accuracy of the data could be improved if participants provided quantitative and qualitative arguments (Varndell et al 2021:6).

The number of rounds may vary from 2 to 10 or more (Habibi et al 2014:11; Humphrey-Murto et al 2017:15). In this study, data were collected over a period of 15 weeks and a three-round modified online Delphi conducted. The participants were required to rate their level of agreement on a 4-point Likert-scale, with 1 strongly disagree to 4 strongly agree. The 4-point Likert scale was selected due to ability of participants to either err on the side of agree or disagree and eliminate those sitting in the middle which could potentially drag the process out longer. To augment the Likert-scale approach, the participants were provided with the opportunity to indicate their reason for applying each specific rating and general feedback at the end of the survey. This ensured more in-depth data collection.

In round one, each participant received an email containing a document explaining the constructed attributes and concept definition with a link to the Google form to complete. For rounds two and three, the researcher sent a summary of the anonymous responses from the previous round and a link to the new Google form with adjusted attributes and concept definition. After each round, the responses were analysed, changes made to the attributes and concept definition and a summary of the responses was sent to participants (see Annexure B.4 for a summary of each round).

The retention of the participants by keeping them fully engaged once recruited was important. Engagement can also be challenging and high attrition rates can negatively impact the clarity and validity of the results (Varndell et al 2021:7). Email reminders can potentially increase retention and response activity (Varndell et al 2021:8). To keep the participants engaged and

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ensure retention, the researcher requested them to respond within two weeks for each round and sent a reminder to ones who had not responded one week after commencement of the round and three days before the due date. The researcher and supervisors analysed each round immediately after the due date in order to keep the momentum going and provided the participants with feedback as soon as possible to keep them engaged. In this study, the level of response activity indicated that the retention and engagement strategies were effective, with a 100% response rate for round one and 89% response rate for the second and third rounds.

- *Data analysis:*

Data analysis can be done in various ways, depending on the type of data collected: quantitative, qualitative or both (Beiderbeck et al 2021:12). In Delphi studies, analysis of each round provides an opportunity to evaluate data for consensus, and is useful for gathering qualitative information, improving the construction of information and reaching consensus (Nasa et al 2021:119). The most commonly used consensus definition is the percentage of agreement (50%-97%) based on a pre-determined cut-off, central tendency or a combination of both (Nasa et al 2021:120; Taylor 2020:17; Varndell et al 2021:8). The stability of responses along an interval scale can also be used, for example a mean score of 5 or more on a 7-point scale (Taylor 2020:18). Two statistical criteria which could be applied to make decisions on consensus are (1) strong consensus amongst the panel members based on Kendall's coefficient of concordance or (2) no negligible growth in two successive rounds shows that consensus has not increased and the process can be stopped (Habibi et al 2014:12). The issues surrounding consensus can be a disadvantage. Even with the level of flexibility and reflexivity, the likelihood of reaching 100% consensus is low (Barrett & Heale 2020:69). With consensus being a requirement, it must be judged when this point is reached in a study; in other words, identifying the level of consensus (Barrett & Heale 2020:69). It should be remembered that consensus does not mean 100% agreement and typically ranges between 55 and 100% with 70% considered the standard (Avella 2016:307; Barrett & Heale 2020:69). Collecting quantifiable data could assist in identifying consensus while collecting qualitative data makes reaching consensus more subjective on the part of the researcher and potentially open to bias (Barrett & Heale 2020:69).

In this study, consensus was pre-determined as the percentage of agreement above 80% (a rating of 3 and 4-points on the Likert scale) or when no new additional suggestions were provided from the participants (Varndell et al, 2021). The data in each round was analysed using basic analysis of the percentage agreement of each participant with each question (attribute and concept definition). The explanation for each rating provided was analysed using

content analysis. Content analysis can be used in quantitative and qualitative methodologies and in an inductive and deductive way. In qualitative content analysis, data are presented in words and themes (Bengtsson 2016:10). The researcher analysed the feedback on each question and identified recurrent words. Themes were created based on the combination of identified repetitive words. Data were read again to confirm the developed themes. The final themes were then checked and correlated by the two supervisors to confirm correctness. After the last round, a summary of the final attributes and how they related to the literature was provided to each participant with the final opportunity to add any additional information. See Chapter 4 for the application and outcome of the Delphi study.

2.4.2.5 Rigour

The validity of the research data, results and their interpretation are an important component of research (Creswell & Plano Clark 2018:261; Hasson & Keeney 2011:1695). Validity and reliability are important in ensuring the validity of data collected, analysed and interpreted (Creswell & Plano Clark 2018:261). In Delphi studies, accurate reporting of the study design and analysis throughout the process is a key aspect of rigour, irrespective of Delphi design used (Varndell et al, 2021). The use of a modified Delphi increased content and face validity and feedback to panel members allowed for construct validity (Hasson & Keeney 2011:1699). The selection of a knowledgeable and competent expert panel ensured validity of the results therefore the selection of panel members were one of the most important phases of the Delphi study (Habibi et al, 2014:10). The Recommendations for the Conducting and Reporting of DElphi Studies (CREDES) was used to guide the undertaking of the Delphi study (Jünger, Payne, Brine et al 2017:701):

Rationale for the choice of the Delphi technique: Justification

The reason for the use of a Delphi study was to reach consensus on the concept definition and related attributes constructed during a concept analysis (see section 2.4.1).

- *Planning and design: planning and process:*

The researcher followed Beiderbeck et al's (2021) steps in planning and conducting the modified e-Delphi study.

- *Planning and design: definition of consensus*

Pre-defined consensus level was defined for the Delphi study.

- *Study conduct: informational input*

Material provided to the expert panel was pre-developed based on the concept analysis process. Using the modified Delphi method increased content and face validity and excluded biases.

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- *Study conduct: Prevention of bias*

None of the researchers in the study had any conflict of interest. The researcher did not directly or indirectly influence the results from participants and acted as a planner and facilitator, to ensure minimal risk of bias.

Moreover, to maintain rigour in this study, the researcher followed the guidelines for conducting Delphi studies, panel selection, panel size, expert definition, number of rounds, reaching consensus. Methodological accuracy was ensured because data collection was done over a short period, and regular reminders were sent to panel members to adhere to the two-week response period for each round. The regular reminders also assisted in maintaining a constant response rate throughout the Delphi study. The careful selection of participants ensured an expert panel with the required knowledge and experience. The researcher analysed the data from each round which was then checked by the two supervisors to ensure accuracy of data interpretation and avoid subjective data analysis. The researcher used Walker and Avant's model of concept analysis to develop round one of the Delphi. Changes were made to the questions based on participants' responses who rated their agreement with each attribute and the concept definition. The researcher's role in a Delphi study was that of a planner and later a facilitator, which ensured that the risk of bias was minimal and the back-and-forth communication between the researcher and the participants provided for internal process auditing (Avella 2016:307).

2.4.2.6 Ethical considerations

To ensure ethical research is conducted the Belmont Report (1974) established three core principles for ethical research, namely beneficence, respect for human dignity or autonomy and justice (National Institute of Health, 1979; Hewitt, 2007). In addition, the Declaration of Helsinki (1964 and revised in 2008) emphasised the protection of life, health, privacy and dignity, and protection from harm (Grove, Gray & Burns 2015:97). The human rights to self-determination, privacy, anonymity and confidentiality, fair selection and treatment, and protection from discomfort and harm should also be protected (Grove et al 2015:100). In this study, researcher upheld the following ethical considerations.

- **Ethical approval and permission:** Ethical approval and permission for the study was granted by the University of Pretoria (205/2022) (see Annexure A1.1 and A1.2).
- **Self-determination:** Participants should be informed of the study, have the option to choose whether to participate or not and be allowed to withdraw from the study at any time (Creswell & Plano Clark 2018; Grove et al, 2015). For the Delphi study, the participants were provided with a participant information leaflet (see Annexure A1.4) containing information about the study. Participation was voluntary and the participants

were informed that they could withdraw from the study at any time without penalty. One participant withdrew after round 1 of the Delphi study and was not penalised.

- **Right to privacy:** Privacy in research is adhered to when participants have been informed, consent obtained and information is shared voluntarily. Keeping information regarding participants' identity private is important (Creswell & Plano Clark, 2018; Grove et al, 2015). Once participants had read the information leaflet, written informed consent was obtained prior to commencement of the first round of the Delphi study. Each participant was then provided with the link to complete the information for each round online and share their information voluntarily. Written consent was also obtained from participants to be acknowledged in the publication of the article.
- **Right to anonymity and confidentiality:** Based on the right to privacy, participants have the right to anonymity and confidentiality. Complete anonymity occurs when not even the researcher can link a participant's identity to their response (Grove et al 2015:106). Confidentiality is ensured by keeping data private from others and not sharing information without the consent of the participant (Grove et al 2015:107). The participants' anonymity and confidentiality was maintained throughout each round of the Delphi study by assigning numbers to each panel member's response. No participant's response number was the same in each round as these were assigned according to the order of responding from first to last. This ensured that not even the researcher would be able to link responses to participants. Anonymous feedback was provided to the panel members after each round. Once written consent was obtained from participants, their names were acknowledged in the published article.
- **Right to fair selection and treatment:** The random selection of participants can eliminate researcher bias on the grounds of subject selection and furthermore strengthens the study design (Grove et al 2015:108). During the study participants should be treated fairly and benefits promised should be provided on an equal basis (Grove et al, 2015). Participants should be selected based on the problem under investigation with fair and equal treatment during data collection (Grove et al, 2015). The researcher used purposive and snowball sampling to select participants for the Delphi study. This ensured that participants were selected met the required inclusion criteria to solve the problem under investigation. The participant information leaflet stated clearly that participants would not receive any physical benefit from the study. The researcher treated the participants fairly and equally throughout the data collection in each round. All the participants were provided with the link to complete the round at the same time and the due date and reminder emails were sent to all participants on the same date. All the participants received feedback on each Delphi round and could view the anonymous responses of all participants.

- **Right to protection from discomfort and harm:** The right to protection from discomfort and harm is based on the ethical principle of beneficence. Beneficence includes doing good and doing no harm. In research this includes physical, emotional, social or economic harm or a combination of the four (Grove et al, 2015). Most nursing studies require the completion of a questionnaire or participant interviews which involves minimal risk or inconvenience for participants such as physical discomfort (fatigue), emotional and social risks (anxiety and embarrassment) and economic risks (time commitment or travel costs) (Grove et al 2015:108). In this Delphi study, the researcher anticipated that the participants could experience some physical discomfort due to the time spent in front of the computer to complete the online Delphi. In order to minimize this risk, the participants were given two weeks' time to complete each round and could go back and continue completing the information. Feedback from each round was provided anonymously, which ensured privacy and confidentiality and prevented embarrassment. As the Delphi study was conducted online, no travel time or costs were required from participants. Each Delphi round was kept short so as not to prolong the process and require additional time commitment from participants.

In the concept analysis, it is important to guard against plagiarism. Creswell and Plano Clark (2018:95) point out that copying extensive material from others is an ethical issue. Credit should be provided to when reporting others' work. For the concept analysis, references were provided for all material used during the literature review. A reference list and in-text referencing were also provided in the article submitted for publication.

2.4.2.7 Trustworthiness

To enhance the trustworthiness of the modified online Delphi, the researcher followed Hasson and Keeney's (2011:1700) strategies:

- **Credibility:** Credibility was enhanced by ongoing iteration and feedback to panellists which was considered member checking (Hasson & Keeney 2011:1700). A summary of the anonymous responses was shared with each panellist after each round, which provided controlled feedback to panellists. The Delphi study was based on consensus amongst experts familiar with the phenomenon under investigation, namely person-centred handover practices (Varndell et al 2021:8). Questions developed in round 1 were based on the concept analysis completed in phase 1, objective 1, which made it a credible way to determine question content.
- **Dependability:** Dependability was achieved through the inclusion of a range and representative sample of experts in the Delphi study (Hasson & Keeney 2011:1700).

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In this study, the experts were carefully selected based on inclusion criteria ranging from clinical to academic experience and experience in person-centred care and/or handover practices. The panel consisted of national and international experts. In addition, question development was guided by the concept analysis for round 1 and subsequently adapted according to participant responses.

- **Confirmability:** Confirmability was assessed by maintaining a detailed description of the Delphi collection and analysis process (Hasson & Keeney 2011:1700). Data for each round was collected via a pre-developed electronic form of which the link and a description of each attribute and the concept definition was individually emailed to each panellist. The responses were received by the researcher and the two supervisors who analysed the data. The researcher kept the data analysis documents in an electronic cloud-based storage and shared them with the two supervisors. The names of the participants who responded in each round were kept confidential and a number was assigned to each to maintain anonymity. The researcher also kept a transcription of the responses and a detailed recording of the response rates for each round. The data set was then uploaded onto the university's data management system – Figshare.
- **Transferability:** Transferability was achieved by the use of verification of the applicability of Delphi findings (Hasson & Keeney 2011:1700). Verification of the data analysed by the researcher was done by the supervisors. Data analysed was also verified against the objective of the phase to ensure that the objective and aim were achieved.

See Chapter 4 for the outcome of Phase 1, Objective 2 in the published article.

2.5 PHASE 2: MINING THE LITERATURE

The objective was to explore current literature on person-centred handover practices in the ED to inform clinical practice guidelines.

The methodology used in Phase 2, Objective 3 of the study was a scoping review based on the Johanna Briggs Institute (JBI) guidelines for scoping reviews. A scoping review is a method of analysing diverse types of evidence (Chrastina 2020:557; Peters, Marnie, Tricco et al 2021:2123). In 2005, Arksey and O'Malley published the first guidelines on conducting scoping reviews (Munn, Aromataris, Tufanaru et al 2019:36; Peters, Marnie, Tricco et al 2021:2123). Later, Levac, Colquhoun and O'Brien expanded the guidelines (Peters, Marnie, Tricco et al 2021:2124). In 2018, the JBI provided guidance for authors of scoping reviews with the development of the Preferred Reporting Items for Systematic Reviews extension for Scoping

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Reviews in 2018 (Peters, Marnie, Tricco et al 2021:2124). A scoping review requires at least two reviewers and a priori scoping review protocol should be developed prior to undertaking the review (Peters, Godfrey, Khalil et al 2015:142).

In this study, the researcher conducted the scoping review in two stages. Stage 1 focused on developing a scoping review protocol and Stage 2 focused on conducting the scoping review.

2.5.1 Stage 1: Scoping review protocol

Although the development of a priori (scoping review) protocol is not regarded as a must for conducting scoping reviews (Peters, Godfrey, McInerney et al 2022:954), the researcher considered it important to guide the scoping review of this study. Priori review protocols provide researchers with guidance on how to conduct the review and the recipe for the review, specifying the ingredients (inclusion criteria), where and how to get them (databases and search strategy) and the method (Peters, Godfrey, McInerney et al, 2022). Priori review protocols help reduce bias by reducing subjective decisions during the review and unintended duplication of existing reviews; foster collaboration and facilitate detection of selective reporting. In addition, they enable researchers to produce more transparent conducted and reported scoping reviews (Peters, Godfrey, McInerney et al, 2022). To reduce the time spent on screening and selecting sources to include for the search, the protocol can set clear parameters of the review inclusion/exclusion criteria (Peters, Godfrey, McInerney et al, 2022). The protocol was completed prior to performing the scoping review. The researcher included a comprehensive plan on how the review will be conducted and reported in the scoping review protocol (Peters, Godfrey, McInerney et al 2022:955).

Once the protocol is developed, Peters, Marnie, Tricco et al (2021:6) suggest that researchers register it on available platforms such as Figshare, Open Science Framework, ResearchGate, Research Square or similar ones. This scoping review protocol was developed and then registered on Figshare (2021), a repository for research outputs, registration no: [10.6084/m9.figshare.21731528](https://doi.org/10.6084/m9.figshare.21731528). The protocol guided the scoping review and the researcher explained deviations made in the final review manuscript. See Chapter 5 and Annexure B.5 for the outcome of the scoping review protocol.

2.5.2 Stage 2: Conducting the scoping review

Scoping reviews are a legitimate and rigorous methodology for providing an overview of available evidence on subjects that are emerging, poorly known, interdisciplinary, complex or dispersed across varied methodologies (Peters, Godfrey, McInerney et al 2022:954). A scoping review can address broader questions than traditional systematic reviews therefore

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the steps of scoping reviews and those of systematic reviews differ (Peters, Godfrey, McInerney et al 2022:954).

Scoping reviews explore the breadth and depth of the literature; map and summarise evidence; inform future research and identify or address knowledge gaps; are useful for complex and heterogeneous literature; can provide insight into the nature of concepts and how concepts have been studied over time, which is useful for decision-makers; are used to develop research agendas; advance the field; identify areas for future systematic reviews or other types of evidence synthesis; identify and analyse knowledge gaps, examine how research is conducted in a certain topic or field, and identify key characteristics of a concept (Levac, Colquhoun & O'Brien 2010:2; Peters, Marnie, Tricco et al 2021:2123; Tricco, Lillie, Zarin et al 2018:469) and identify evidence gaps and future research opportunities (Tricco, Lillie, Zarin et al 2018:470).

Critical appraisal of the sources of evidence is often omitted as the main aim of the scoping review is to describe and map the body of evidence in relation to the review question(s), objectives and inclusion criteria (Arksey & O'Malley 2005:21; Levac et al 2010:2; Peters, Godfrey, McInerney et al 2022:954; Tricco, Lillie, Zain et al 2018:467). The questions posed in scoping reviews are different from systematic reviews and therefore have inclusion and exclusion criteria based on different parameters (Peters, Godfrey, McInerney et al 2022:954). Scoping reviews in general are concerned with identifying broader, more descriptive elements of the literature rather than answering a specific question of effectiveness. The inclusion of "concept" and "context" is used in scoping reviews (Peters, Godfrey, McInerney et al 2022:954). The descriptive nature of scoping reviews might result in them having quite specific questions and inclusion/exclusion criteria and result in the identification of several potentially relevant sources of evidence (Peters, Godfrey, McInerney et al 2022:954). Scoping reviews are more appropriate to assess and understand the extent of knowledge available in an emerging field, or to map, identify or discuss the characteristics or concepts in a field, or to investigate various types of literature. The ultimate decision on the use of a scoping review depends on the objective (Levac et al 2010:2; Peters, Marnie, Tricco et al 2021:2125).

In 2005, Arksey and O'Malley identified the need to develop a framework to guide scoping reviews and to standardise terminology used. Arksey and O'Malley (2009:20) described five stages to conduct the scoping review: identify the research question; identify relevant studies; select studies; chart the data, and collate, summarize and report the results. An optional stage was also suggested, namely consultation exercise. In their framework, they suggest that researchers take the framework and develop it further to enhance methodology (Arksey & O'Malley 2009:32). Levac, Colquhoun and O'Brien (2010) advanced Arksey and O'Malley's methodology and made recommendations to enhance and clarify each stage of the

Chapter 2: Research design and methodology

framework. In 2015, the Johanna Briggs Institute developed guidelines for conducting systematic scoping reviews (Peters, Godfrey, Khalil, McInerney et al, 2015) The guidelines were updated in 2020 (Peters, Marnie, Tricco et al, 2021). The steps in their guidelines include: title and review question, inclusion criteria (participants, concept, context, types of evidence sources), search strategy, evidence screening and selection, data extraction, data analysis and presentation of results.

The researcher used the JBI methodology (Peters, Marnie, Tricco et al, 2021) to conduct this scoping review. A scoping review was selected based on the objectives and the research questions of the review. The researcher considered a scoping review appropriate to identify and present the available information on clinical practice guidelines on person-centred handover practices between emergency care practitioners and healthcare professionals in the ED. The review questions were:

- What clinical practice guidelines are available on person-centred handover practices between emergency care practitioners and healthcare professionals in the ED?
- What content is included in the available clinical practice guidelines for handover practices?

Literature on clinical practice guidelines for person-centred handover practices is still emerging and limited literature is available. Moreover, the researcher wished to map the evidence available on the topic therefore all types of evidence was included not only research studies. Lastly, the ultimate aim of the larger research study was to develop clinical practice guidelines for person-centred handover practices and information gathered from the scoping review informed the development of recommendations. The researcher did not consider a systematic review appropriate as systematic reviews evaluate large amounts of information and use evidence from research studies only (Owens, 2021). Systematic reviews also synthesize and summarize existing knowledge (Santos, Secoli & Püschel 2018:1). Limited information is available on person-centred handover making a scoping review more appropriate.

Based on the JBI methodology (Peters, Marnie, Tricco et al, 2021) and following the scoping review protocol, the following steps were followed to conduct the scoping review:

- The researcher developed a title and review questions for the review. The title included the words scoping review and contained key elements of the inclusion criteria (PCC framework), and words currently used in practice were used to refer to the different concepts. Two review questions were developed incorporating the PCC (**P**articipants, **C**oncept and **C**ontext) with congruence between the title, review questions, and inclusion criteria.

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- Inclusion criteria were developed and included the PCC framework. For this study, the participants were emergency care practitioners transporting patients to the ED and involved in handover practices and healthcare professionals (doctors and nurses) in the ED receiving handovers from emergency care practitioners. These participants were included based on their involvement in the specific handover practices. The concept of interest was clinical practice guidelines for person-centred handover practices between emergency care practitioners and healthcare professionals in the ED. Studies related to person-centred handover practices were included. The context included all studies conducted in EDs, emergency rooms or emergency centres in any geographical area.
- Sources of evidence included in the review were both primary sources and evidence synthesis that included primary sources, all types of research designs: experimental, quasi-experimental, randomized controlled trials, non-randomized controlled trials, pre-test-post-test studies. Observational studies including prospective and retrospective cohort studies, case control studies, and analytical cross-sectional studies. Descriptive observational studies, including case series, individual case reports and descriptive cross-sectional studies were included. Qualitative studies such as phenomenology, grounded theory, ethnography, qualitative descriptive, action research and feminist research were included. Systematic reviews on person-centred handover practices and text and opinion papers were included.
- For the search strategy, the researcher used the assistance of a research librarian who designed the search strategy. Both published and unpublished studies were searched for with no time or language limit. Due to the limited evidence available on the topic, it was decided not to include time or language limit in the initial search. However, only studies in the English language were included in the final review. The search was conducted between January and February 2023. An initial search was conducted on MEDLINE (PubMed) to identify literature on the topic. Text words contained in the titles and abstracts of relevant literature together with the index terms used to describe the articles were used to develop the search strategy. Information on the detailed search strategy used for MEDLINE (PubMed) is found in Annexure B.6. From there CINAHL (EBSCO) and Scopus were searched. Web of Science database was not searched as indicated in the protocol because of the number of duplicate studies found on EBSCO and Scopus. A search for organizations that publish clinical practice guidelines indicated the National Institutes of Health (NIH), American College of Physicians, Royal College of Nursing (RCN), and the Registered Nurses Association of Ontario (RNAO). A manual search of the reference lists of all included studies was done to identify additional studies. The researcher did not conduct a search on Google Scholar

and ResearchGate to avoid duplicate studies.

- Evidence screening and selection was done after the literature search. Study selection was based on the inclusion criteria and as specified in the review protocol. The screening and selection were done between 29 May 2023 and 7 June 2023. All identified citations were uploaded into Mendeley reference management software 2022 (Mendeley Ltd., Elsevier, New York) and duplicates were removed. Identified citations were then uploaded onto Rayyan (2022) software program to assist with the collaborative review of the citations. The JBI SUMARI software was not used due to not all the reviewers having access to the software and training on its use. After a pilot test, the titles and abstracts were screened by two reviewers and any disagreements were resolved by a third reviewer. Full text retrieval was then done of all the potentially relevant evidence for further review by two reviewers and a third reviewer resolved any disagreements. The initial search delivered 133 citations (129 articles and 3 handover guidelines). The PRISMA flow diagram was completed to showcase the article selection process (see Chapter 5).
- Data extraction and synthesis were done in line with the objectives and research question. Data extraction was done by two reviewers using the pilot tested data extraction tool (see Annexure B.7). No modifications were made to the tool developed in the review protocol. There was no need to contact the authors of any of the studies for additional information.
- Results were presented in a tabular format with accompanying narrative to describe the results of the scoping review (see Annexure B.8 for the data analysis sheet).

2.5.3 Rigour

As a characteristic of rigorous evidence synthesis, scoping reviews should be well planned and driven by a protocol (Peters, Marnie, Tricco et al 2021:2125). For this study, a priori scoping review protocol was developed and published on Figshare (see Annexure B.5). The development of the review protocol enhanced the transparency, utility and trustworthiness of the scoping review. The JBI methodology (2020) was used to guide the review protocol development and conduct the scoping review rigorously and concisely (see Chapter 5). Reporting guidelines outlines the minimum number of items to be included in research reports to increase methodological transparency (Tricco, Lillie, Zarin et al 2018:467). The PRISMA-ScR (PRISMA extension for scoping reviews) was developed and guided by the EQUATOR (Enhancing the Quality and Transparency Of health Research) Network for the development of reporting guidelines (Tricco, Lillie, Zarin et al, 2018). The reporting guidelines provide a minimum set of items to report on in the review report (Tricco, Lillie, Zarin et al 2018:467). For

this scoping review, the PRISMA-ScR checklist was used to ensure methodological transparency, rigour and that all items were reported (see Annexure B.9). See Chapter 5 for the outcome of Phase 2, Objective 3, mining the literature in a scoping review.

2.6 PHASE 3: GUIDELINE DEVELOPMENT

Phase 3 focused on the development of clinical practice guidelines for person-centred handover practices in the ED.

The objectives were to develop preliminary clinical practice guidelines for person-centred handover practices (Objective 4) and to reach consensus on clinical practice guidelines for person-centred handover practices (Objective 5).

2.6.1 Introduction

Since the 1960s the use of evidence-based practices (EBP) has received increasing attention from policy makers, researchers and practitioners. The term evidence-based practice gained momentum in a number of primary disciplines and human services, such as healthcare, rehabilitation and education (Schalock, Gomez, Verdugo & Claes 2017:112). The application of evidence to clinical practice is a requirement for the delivery of best patient care (Lim, Arnold, Bachanova et al 2008:26; Mackey & Bassendowski 2017:52). Evidence-based practice involves the utilization of the most appropriate available information to make decisions regarding patient care delivery (McKibbon 1998:396). Evidence based practice involves compound and meticulous decision making based not only on the best available evidence but also including patient characteristics, preferences, and context (McKibbon 1998:397). Evidence-based practice utilizes a patient-centred approach to patient care delivery (Mackey & Bassendowski 2017:53). One way in which healthcare professionals rely on evidence-based practice to enhance patient outcomes and patient care is through the use of clinical practice guidelines (Fujimoto, Kon, Takasugi & Nakayama 2017:199; Mackey & Bassendowski 2017:53). The use of clinical practice guidelines promotes the delivery of cost-effective, safe, and consistent patient care through the application of evidence-based practice (White & Spruce, 2015).

Clinical practice guidelines “are systematically developed statements to assist practitioners and patient decisions about appropriate health care for specific clinical circumstances” (Gonzalez-Suarez, Grimmer-Somers, Dizon et al 2012:141). Clinical practice guidelines mostly provide recommendations on what to do, based on intervention studies. Evidence on how services should best be provided (the ‘who, how, when, how much, why’ questions) are

Chapter 2: Research design and methodology

usually reported in clinical practice guidelines as consensus or practice points, and written by local clinical and policy experts (Grimmer, Louw, Dizon et al 2019:56). The essential components of guideline development include systematic literature searches, clear inclusion and exclusion criteria and evidence appraisal (Gonzalez-Suarez et al 2012:141).

Clinical practice guidelines can be developed de novo “from scratch”, adapted from other guidelines or guidelines can be adopted (Dizon, Machingaidze & Grimmer 2016:56). De novo clinical practice guideline development is usually an expensive and time-consuming undertaking that requires teams of methodologists and experts who search, critique and debate the usefulness and relevance of the body of evidence which could provide relevant clinical guidance (Dizon et al, 2016). For guideline adaptation, the ADAPTE process provides a systematic approach to adapt guidelines previously developed in one setting for use in another different setting. This process ensures that the adapted guidelines not only address specific health questions relevant to the context but are also suited to the needs, priorities, legislation and policies of the targeted settings.

The ADAPTE process is useful for healthcare providers, guideline developers and implementers, policy makers and other stakeholders involved in guideline development or implementation (The ADAPTE Collaboration 2009:7). Gonzalez-Suarez, Grimmer-Somers, Dizon et al (2012:141) proposed an innovative, simple, and practical approach to contextualizing high-quality Western guidelines for application to a middle-income country which was also a form of guideline adaptation. The Philippine Academy of Rehabilitation Medicine (PARM) worked on the premise that contextualizing a guideline for use in a developing country meant retaining its current form and writing strategies to assist with its implementation and operationalization in the local context (Gonzalez-Suarez et al 2012:142). The process did not involve de novo clinical practice guideline development but instead how to best translate available evidence statements into the local context (Gonzalez-Suarez et al 2012:142).

In their study, Dizon, Machingaidze and Grimmer (2016:442) proposed a clinical practice guideline classification system, ‘The South African Guideline Evaluation (SAGE) Clinical Practice Guideline Development Framework’ based on a transparent evidence synthesis process. This clinical practice guideline classification system can be used to guide the development of clinical practice guidelines where recommendations are not developed from scratch or adapted or adopted from other guidelines.

The SAGE Clinical Practice Guideline Development Framework consists of three tiers: Tier one (body of evidence), tier two (expert input and consultation processes), and tier three (end-

user guidance documents) (Dizon et al 2016:442) (see Figure 2.1).

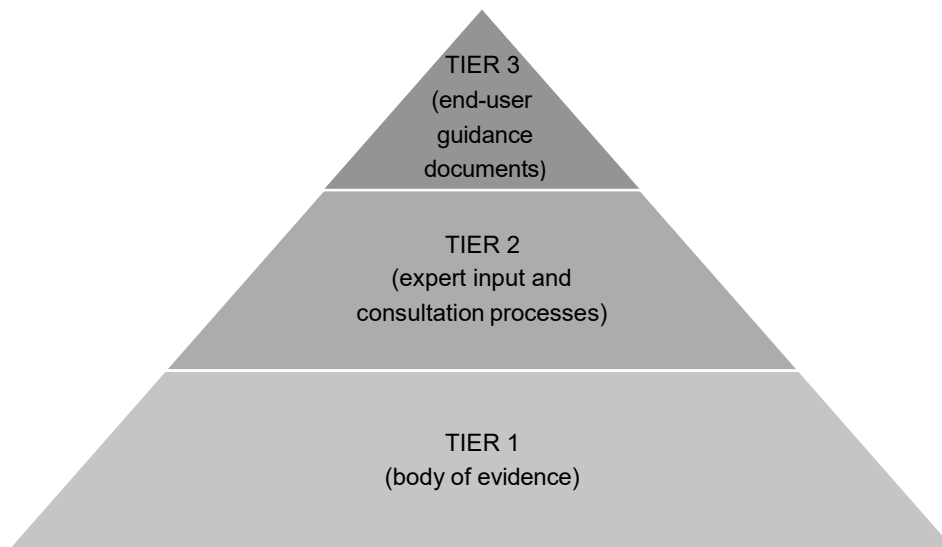


Figure 2.1 SAGE CPG development framework

Adapted from: Dizon, Machingaidze and Gimmer (2016:445).

2.6.2 Application of the SAGE clinical practice guideline framework

The overall objective of this clinical practice guideline was to provide the best available recommendations for person-centred handover practices between emergency care practitioners and health care professionals in the ED. The SAGE Clinical Practice Guideline Development Framework (Dizon et al 2016:1-8) was used to develop the clinical practice guideline. Due to time constraints and the nature of clinical practice guideline development from scratch, the researcher decided against de novo clinical practice guideline development. In Phase 2, the scoping review revealed no clinical practice guidelines for person-centred handover practices in the ED. This, then, prevented the researcher from using any of the adaptation or adoption guideline development methods. The researcher considered the three tiers of the SAGE Clinical Practice Guideline Development Framework a suitable framework for the development of clinical practice guidelines for person-centred handover practices in the ED. Evidence from Phase 1 and Phase 2 of the study could be used in Tier 1 of the framework. Expert input and consultation from experts were received once the preliminary clinical practice guideline was drafted and sent out to an external panel for review and comments to complete Tier 2. An end-user guideline document and algorithm were developed for Tier 3 (see Chapter 6).

- **Tier 1 (evidence):**

Evidence forms the foundation for all recommendations in clinical practice guidelines. It

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supports the credibility of recommendations and answers the health questions posed. The evidence should be derived from a transparent and complete literature review relevant to the guideline questions (Dizon et al 2016:2). The researcher used the information from Phase 1 and Phase 2 of the study to develop the recommendations for the clinical practice guideline. Phase 1 generated the primary data used for the development of the recommendations. Information from the Delphi study (Phase 1, Objective 2) provided expert opinions which were used in conjunction with the literature of the scoping review (Phase 2) to develop recommendations. Phase 1, Objective 2 concluded six attributes for person-centred handover practices. These attributes formulated the key recommendations for the clinical practice guideline (recommendations 1 to 6). The sequence of the key recommendations was established as recommendations related to handover practices (recommendations 1 to 2) and to person-centred handover practices (recommendations 3 to 6).

Although the recommendations are numbered 1 to 6, no recommendation is seen as more important than the others and should be read as a unit when implementing the clinical practice guideline (see Chapter 6). The scoping review on available clinical practice guidelines for person-centred handover practices (Phase 2) generated the secondary data used to develop sub- recommendations. The best available evidence was used to formulate the guideline recommendations and therefore required a robust search of the literature (Lim, Arnold, Bachanova et al 2008:27). The JBI methodology for scoping reviews guided the scoping review (see Section 2.5). The search was conducted through various databases for clinical practice guidelines on person- centred handover practices. Guideline Clearing Houses and Google Scholar were also searched, using the same search strategy. Evidence not available in the English language was excluded from the review. Only guidelines which included person-centred handover practices and handover practices between emergency care practitioners and healthcare professionals in the ED were included. Following the analysis of the scoping review, the review question for the clinical practice guideline was formulated:

What is the best available evidence for person-centred handover practices between emergency care practitioners and healthcare professionals in the emergency department?

Systematic reviews, literature reviews, observational studies, document audits and quantitative questionnaires were amongst the included. Once the search process was completed the three-member (the researcher and two supervisors) guideline development group scrutinized and extracted the recommendations. The Appraisal of Guideline Research and Evaluation AGREE II tool was used for the critical appraisal of the guidelines extracted (Brouwers et al, 2013). Only one clinical practice guideline was included containing 29

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recommendations. Sub-recommendations and their underlying evidence, and references supporting the key recommendations, were extracted from the clinical practice guideline included in the scoping review. The critical appraisal of the one guideline extracted was done by two independent reviewers. A third reviewer assisted with the final check and cleared any disagreements. Following the critical appraisal process the one extracted guideline obtained a score of >70% and was selected for final inclusion.

A total of 29 recommendations contained in the clinical handover guideline were scrutinized word-for-word by the guideline development group for consistency and currency. The recommendations were reduced from 29 to four and was then included in the clinical practice guideline (see Figure 2.2).

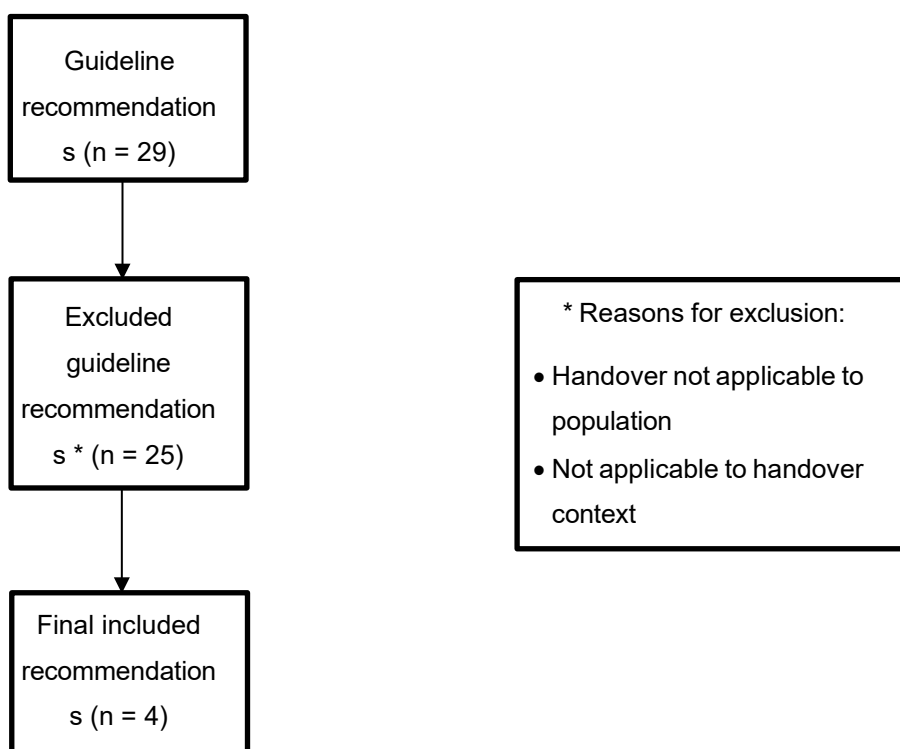


Figure 2.2 Flow chart for recommendation selection for clinical practice guideline

The wording of the recommendations in the clinical practice guideline was adapted to fit the context of the clinical practice guideline following consensus between the members of the guideline development group.

The draft clinical practice guideline was developed by the guideline development group in consultation with a guideline development expert. The six domains of The Appraisal of Guideline Research and Evaluation (AGREE II) (Brouwers et al, 2013) were used as part of the guideline development:

- Scope and purpose
- Stakeholder involvement
- Rigour of development
- Clarity of presentation
- Applicability
- Editorial independence

See Chapter 6 for the outcome of Objective 3, the Clinical Practice Guideline document.

- ***Tier 2 (expert input and consultation process):***

In circumstances where there are evidence gaps (no research has been conducted, or the research is of questionable value), expert opinion is recognised as a credible evidence source. Evidence generated through robust qualitative studies such as Delphi studies provides credible “best available evidence” statements in the absence of sound research evidence (Dizon et al, 2016). Due to the limited available evidence on the topic as well as paucity in the literature from 2015, finding appropriate evidence to support recommendations for the clinical practice guideline was problematic. The guideline development group then opted to use experts’ opinion from Phase 1, Objective 2 (Delphi study) to supplement the data from the scoping review (Phase 2) and formulate recommendations. Tier 2 requires expert input to determine the relevance of evidence in local context (Dizon, Machingaidze & Grimmer 2016:442). For this clinical practice guideline, data from the Delphi study (Phase 1, Objective 2) guided the development of three recommendations (1, 2 and 4) supported by evidence from the scoping review (Phase 2).

Once the draft clinical practice guideline was developed, it was sent to an external review panel. The purpose of the external review was to gather feedback on the draft guideline and assess applicability and feasibility. The review panel included a guideline development expert,

Chapter 2: Research design and methodology

emergency care practitioners involved in handover practices in the ED, healthcare professionals (including emergency medicine doctors and nurses), and person-centred care experts. Members of the external review panel were invited through purposive sampling based on publications in the field of person-centred care, handover practices and guideline development. Further snowball sampling was used through the referral of further panel members by the initial identified members of the review panel. Each member was provided with the draft guideline and the AGREE II tool for evaluation. Feedback and suggestions from the panel were incorporated into the final guideline (see Annexure F.2).

Once the final recommendations had been drafted, the clinical practice guideline could be finalised.

- ***Tier 3 (end-user guidance documents):***

Evidence in conjunction with expert input produced the final clinical practice guideline. Guidance can be presented in various forms to meet end-user needs; for example, short evidence summaries, management tools, algorithms, or protocols (Dizon et al, 2016:3). The guideline development group evaluated the data from the scoping review (Phase 2), using the Philippine Academy of Rehabilitation Medicine (PARM) guide for summarizing the strength of evidence and guide for writing endorsements (Gonzalez-Suarez, Grimmer-Somers, Dizon et al 2012:146) and from there used the guide to formulate the wording of the recommendations in the guideline. Spreadsheets of the evidence extracted from the secondary data were developed and according to the amount of evidence supporting a specific recommendation as well as data from Phase 1, Objective 2 supporting the recommendation was then included in the guideline. A rationale for each recommendation was provided. Where excising guidance was used to inform the recommendation, it was specified as such. Where empirical literature was used to inform a recommendation, it was prescribed as such. Key recommendations were numbered 1 to 6 and sub-recommendations 1.1 to 6.1 and are linked to the best available evidence and/or expert opinion.

2.6.3 Rigour

Guidelines can be developed by bodies producing national and international guidelines or individuals that could help ensure best practice in a setting or standardized practice amongst members of a team (Haroon, Ranmal, McElroy & Dudley 2015:90).

The researcher used the steps of the South African Guideline Evaluation (SAGE) Clinical Practice Guideline Development Framework (Tier 1 to 3) (Dizon et al 2016:7) in developing the guidelines and recommendations to ensure rigour. Additionally, the six domains of the

Chapter 2: Research design and methodology

AGREE II tool (Brouwers et al, 2013) were used to ensure methodological rigour. Finally, the external review panel used the AGREE II tool to appraise the clinical practice guideline.

A list of references was provided for each recommendation in the guideline. A discussion of the evidence is also included with the rationale for each recommendation with related recommendations. Guidelines for inclusion were selected after appraisal with the AGREE II tool. Evidence-based recommendations were developed based on evidence from clinical guidelines, service standards and supporting literature.

Chapter 6 discusses the outcome of phase 3: development of clinical practice guidelines.

2.7 SUMMARY

This chapter discussed the research methodology of the different phases of the study in detail, including the research design, data collection and analysis, ethical considerations, trustworthiness and rigour.

Chapter 3 discusses the results of Phase 1, Objective 1 of the study.

CHAPTER 3

PHASE 1: CONCEPT ANALYSIS

OBJECTIVE 1

To define the concept person-centred handover in the emergency department

3.1 INTRODUCTION

Chapter 2 discussed the research methodology in detail. This chapter describes Phase 1, Objective 1 of the study. Phase 1, Objective 1 was to define the concept “person-centred handover in the emergency department” (ED).

The researcher used Walker and Avant's (2014) eight modified steps for the concept analysis (Walker & Avant, 2014).

3.2 OUTCOME

This phase developed the definition of “person-centred handover practices in the ED” and its related attributes.

Person-centred handover practices were defined as those handovers performed that included all the identified defining attributes. The six attributes were structure, verbal and written information transfer, interprofessional process, inclusion of the patient and/or family, occurs at the bedside, and without interruptions.

The article was accepted for publication in a peer reviewed journal: *International Emergency Nursing* on 24 March 2024.

De Lange, S., Filmlalter, C. and Heyns, T. 2024. A concept analysis of person-centred handover practices: The meaning in emergency departments. *International Emergency Nursing*.

See Annexure C.1 for evidence of submission for peer review. This chapter will be presented according to the headings of the authors guidelines as specified by the journal. View author guidelines here:

<https://www.sciencedirect.com/journal/international-emergency-nursing/publish/guide-for-authors>

3.3 SUMMARY

This chapter provided a definition of person-centred handover in the ED. The definition derived from the concept analysis was presented to a panel of experts to reach consensus on the definition and attributes (see Chapter 4).

1

ARTICLE

Title: A concept analysis of person-centred handover practices: The meaning in emergency Departments.

Citation: De Lange, S., Filmalter, C. and Heyns, T. 2024. A concept analysis of person-centred handover practices: The meaning in emergency departments. *International Emergency Nursing*.

Journal: International Emergency Nursing.

Status: Accepted for publication on 23 March 2024.

1. INTRODUCTION

The emergency department (ED) is a complex and busy environment with multiple activities occurring simultaneously to manage a vast variety of patient needs. Patients arrive from the prehospital environment to the ED via their own transport or ambulance with or without family members¹. Patients arriving via ambulance are assessed and managed in the prehospital environment and will require the transfer of information regarding their complaints and initiated treatment². Handover ensures the continuity of patient care with emergency care practitioners often only having one opportunity to this optimally to prevent information loss^{3,4}. Handover is an interprofessional process involving at least two professional groups⁵ at various intersection points.

2. BACKGROUND

Handover practices in the ED occurs between emergency care practitioners (basic, intermediate, and advanced life support practitioners providing patient care in the prehospital environment) and healthcare professionals (doctors and nurses providing patient care in the ED) upon a patient's arrival in the unit. This is the first intersection point where the transfer of information is crucial to prevent information loss, ensure continuity of care and patient safety^{1,5}. Information regarding the patient's main complaint, condition of the patient on scene, the assessment data collected, and interventions performed is included in the verbal and written information being transferred⁶.

Handover practices are a frequently performed and highly critical task in clinical practise that protects continuity of care leading to improved patient outcomes and patient safety^{7,8}. Handover practices have been defined as the transfer of responsibility, clinical information, and care of a patient from one provider to another^{2,5,9}. The optimal transfer of responsibility and accountability during handover have been of importance for many years to ensure patient safety^{2,5,10}. Literature suggests the need for structure when performing handovers to ensure the comprehensive transfer of information^{2,3,5}. One way of ensuring structure could be accomplished with the use of mnemonics. Various mnemonics on the components of a handover is available, such as MIST (**M**echanism, **I**njuries, **S**igns, **T**reatment), DeMIST (**D**emographics, **M**echanism, **I**njuries, **S**igns, **T**reatment) and SBAR (**S**ituation, **B**ackground, **A**ssessment, **R**ecommendation) to assist providers in the conducting of a handover across different categories of healthcare providers¹¹.

Chapter 3: Article

Furthermore, handover cannot only be structured it should be patient and context specific to include the element of person-centred care^{1,12}. Handover should occur at the patient's bedside where the patient can be included and participate in decision making regarding their care and be able to add information regarding their complaints which might have been omitted by emergency care practitioners during handover¹³. The inclusion of patients and/ or family in handover practices is seen as a form of person-centred care delivery. Research on handover practices is increasing, yet information on the inclusion of the patient and/or family to move towards person-centred care delivery in the ED remains limited.

Person-centred care has been gaining momentum in healthcare and involves placing the patient at the centre of care delivery¹⁴. Person-centred care includes listening to patients and/ or families and incorporating their values, knowledge, and beliefs into the care provided^{15,16}. Patients and/ or families can provide valuable information regarding their health and illness. The patient is the only constant factor during handover and, therefore, is a valuable addition in ensuring continuity of care¹⁷. Person-centred care has been shown to increase patient satisfaction, improve quality of care, and patient safety¹³. The environment in the ED influences the ability of healthcare professionals to provide person-centred care, and deliberate efforts must be made to move towards person-centred care delivery¹⁴. Handover practices provide an opportunity for the initiation of person-centred care in the ED through the inclusion of patients and/ or families in the process.

Despite the available literature on how handover practices should be conducted³ and the importance of person-centred care in the ED¹⁴, there are limited recommendations on how person-centred handover practices could be established between emergency care practitioners and healthcare professionals in the ED. The concept of person-centred care delivery is still novel to the ED and at the time of conducting the concept analysis no literature could be found on the conducting of person-centred handover between emergency care practitioners and healthcare professionals in the ED. Furthermore, there is also a pause in the literature as to what person-centred handover practices mean. The development of a shared definition of the concept person-centred handover practices could be the first step in developing person-centred handover practices in the ED. The definition could additionally ensure that emergency care practitioners and healthcare professionals could have a shared understanding of the concept which could improve the implementation of such handover practices in the ED. Here we report on the concept definition for person-centred handover practices in the ED.

3. METHODS

3.1 Purpose of the concept analysis

This paper explores the concept of person-centred handover practices to clarify its meaning and provide an operational definition that can be used in the emergency environment.

3.2 Design

Walker and Avant's¹⁸ eight-step model of concept analysis was used. These steps were selected based on the usefulness of the Walker and Avant model in clarifying the vague concepts customary used by nurses and other healthcare professionals. The steps were used as follows: 1) select a concept, 2) determine the aim or purpose of the analysis, 3) identify all uses of the concept, 4) determine the defining attributes, 5) identify a model case, 6) describe the additional cases (related, contrary), 7) identify antecedents and consequences, and 8) define empirical referents.

3.2.1 Data Sources

Multiple databases for all types of publications were searched, including CINAHL (EBSCO), Google Scholar, MEDLINE (PubMed), and Wiley Online Library. The same Boolean search of the keyword's person-centred, emergency department, and handover practices was carried out between May 2021 and December 2021 on each database using the search string: ('Person-centered' OR 'person centered' OR 'person centeredness') AND ('emergency department' OR 'ED' 'casualty' OR 'accident and emergency unit' OR A&E unit OR 'emergency center'). No online dictionary searches yielded any results for the concept. No restrictions were applied to the literature search, however only articles published in the English language were included. A further manual search of the reference lists of selected articles for additional relevant sources was also performed (view Figure 1).

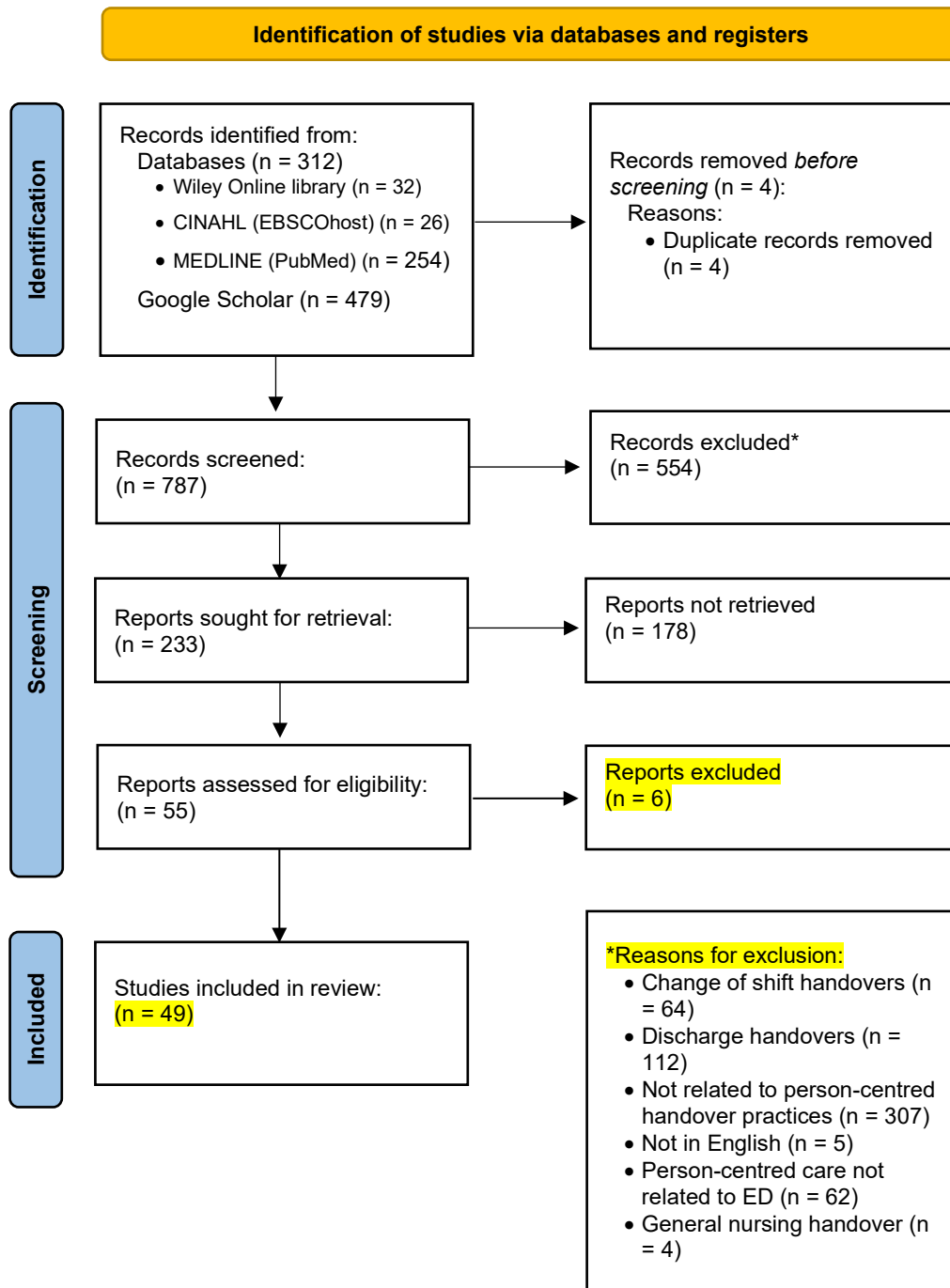


Figure 1: PRISMA flow diagram – search and retrieval

Only publications on handover practices between emergency care practitioners and healthcare professionals and person-centred handover practices in nursing and emergency department were included. Duplicate publications and those on general handover practices were excluded.

4. DATA ANALYSIS

Using the Walker and Avant's¹⁸ model of concept analysis, each step was separately analysed in the literature reviewed and discussed in the results section. The last five steps were analysed by 1) identifying all uses of the concept, 2) determining the defining attributes, 3) identifying a model case, 3) describing the additional cases (related, contrary), 4) identifying the antecedents and consequences, and 5) defining the empirical referents. Lastly the final definition for the concept was developed based on the golden standard on what person-centred handover practices would look like in practice. Each article was read by the primary author to first identify the defining attributes, the antecedents, the consequences, and empirical referents. Thereafter the uses of the concept, the model case and the additional cases were derived. Articles was then reviewed by the co-authors for verifying purposes and to complete the coding process. Initially each term was analysed individually on an excel spreadsheet. From there the themes were categorised into antecedents, consequences, attributes, and empirical referents.

5. RESULTS

Applying Walker and Avant's¹⁸ model of concept analysis uses of the concept, defining attributes, antecedents, consequences, and empirical referents (view Table 1) were distinguished leading to the final concept definition.

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Table 1: Summary of the defining attributes, antecedents, consequences and empirical referents, consequences and empirical referents

Author	Year	Defining attributes	Antecedents	Consequences	Empirical referents
Bagnasco, A., Costa, A., Catania, G., et al	2019	Good communication. Medical diagnosis should be comprehensive and holistic. Communication should be standardized (e.g., SBAR), use of transfer forms during handover to improve communication. Handover should be done verbally. Communicate in a concise and methodical way. Structure = time efficient handovers.			
Bruce, K & Suserud, B.	2005	Information exchange between professionals. Should be done verbally but must also be documented for quality assurance. Should be holistic to meet individual patient needs. Should involve pre-notification which is brief and structured. Handover should be brief. Personnel to listen attentively to handover. Takes place when the patient has either moved on his own onto the ED bed or is lifted from the ambulance stretcher onto ED bed. Effective handover = physical handover of the patient accompanied by verbal account of what happened and handing over any written documents. Contain information regarding how patient was found and the condition, Information transferred should be patient focused and problems clearly stated. The including of the EC nurse + the patient + ambulance	Experience (longer the better) for more knowledge on patient treatment. Effective interaction between health care personnel. Done at the patients' bedside. Standardized documentation.	Ideal handover meets patients' needs.	

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		nurse. The ED environment (busy, noisy, interruptions) makes these handovers unique. Structure is suggested. Patient-focused process.			
Ehlers, P., Seidel, M., Schacher, S., et al.	2021	<p>Important type of handover for relaying information on what was done, and plan further care.</p> <p>Involves at least two professional groups - interprofessional process. Structured handovers using ABCDE/ SAMPLER.</p> <p>The ED handover requires a specific mnemonic.</p>	<p>Specifically adapted mnemonic to conduct the handover from. No actions to be performed during handover. All team members to be present.</p> <p>Face-face communication. Users of the standardized tool should be orientated to it. Training on the content to be included in the curricula of EMS and ED personnel.</p>	<p>Subsequent treatment depends on the handover.</p> <p>Patient outcomes depend on good handover. Improve patient safety and patient outcomes.</p>	
Kalyani, MN., Fereidouni, Z., Sarvestani, R., et al.	2017	<p>ED environment influences this handover. Done verbally. Must also be documented to provide a formal record. It is an interprofessional handover. Should be done in a specific location. Standardized approach to be followed.</p>	<p>Quiet environment, free from noise and distractions. Necessary knowledge regarding patient transfers. Inservice education on how to perform a handover as well as practice in it.</p>	<p>Ensures continuity of care and patient safety. Effective handover is necessary to achieve optimum management of all patients.</p>	
Dawson, S., King, L., and Grantham, H.	2013	<p>These handovers are vulnerable (busy, overcrowded, noisy, distracting environment). Occurs between nurses and paramedics mostly - interprofessional transfer of information. Requires effective communication. Structured form of conducting handover. Handover from paramedics to a team should be done to prevent repetition of information and information loss. Should</p>	<p>Effective communication. Space to conduct the handover in. Face to face communication. Experience in performing handovers. ED staff should listen actively. Eye contact between team members. Handover training for both paramedics and ED staff, including in-service</p>	<p>Effective handover leads to optimum patient management.</p>	

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		contain baseline information on airway, breathing, circulation, level of consciousness, and changes in condition should be included in a comprehensive verbal handover. Verbal handover should be accompanied by written documentation,	training. Structured documentation for the written handover.		
Flynn, D., Francis, R., Robalino, S., et al.	2017	Direct communication with ED clinician. Standardising some aspects of the handover. Generic protocols/ checklists should be followed. The use of an adapted MIST tool. Important to deliver concise structured information regarding treatment. Eye contact during handover. Structured handover tools to improve communication during handover.	Develop checklists which guides the handover process. Shared respect between the two areas. Training on handover for both sides.	Effective handover will lead to less questions asked for clarification from ED staff and a shorter handover duration.	
Ebben, R., van Grunsvan, P., Moors, M., et al.	2015	Involves two or more professionals. Two-way communication between ambulance crew and ED staff. There is exchange of verbal and/ or written information about the patient's diagnosis, treatment and care. It involves the transition of responsibility. This handover is the only opportunity to transfer information from the ambulance crew. Standardization is important to prevent errors. Structured models include DeMIST, AMPLE, ASHICE, IMIST-AMBO, SOAP, BAUM and DeMIST. Handover should take place before patient transfer. Ambulance crew should verify if the handover was clear. Handover should be documented while in progress by the ED staff. All involved in patient care should be present at the	Structured models for handover to facilitate standardization. Evidence-based guidelines for the performing of the handover. Training on handover.	Transition of patient responsibility occurs after handover.	

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		handover. Information on treatment given and vital signs is important.			
Budd, H., Almond, L. and Porter, K.	2007	Includes information on the mechanism of injury and vital signs. Structured approach such as ASCHICE is used. Involve the whole trauma team. Two-way communication between the EMS and hospital.	Handover protocols and training. Devise a communication pathway for vital information to rapidly be collected and transmitted from scene to the ED in a standardised format.	Facilitates the transition from prehospital care to ED.	
Bost, N., Crilly, J., Wallis, M., et al.	2010	This type of handover is the first physical interface of pre-hospital and ED staff. Involves the transfer of information on the patient's clinical condition and professional responsibility and accountability. Often occurs in a setting with high patient acuity and overcrowding. Includes detailed information given by an experienced ambulance personnel member. Detailed information includes patient problems, incident, patient assessment. It is done in a verbal and written form. Standardised approach e.g. DeMIST. The ideal handover includes clearly stated problems. It involves interprofessional communication.	Requires attentive listening from staff to the handover. Staff should be experienced in handover. Pre-hospital personnel requires training in handover to provide a detailed handover. ED staff to also have knowledge and experience to improve the quality of information received. Flexible structured tools for standardization and which can be adapted to the context of the patient. Use of guidelines to provide uniform information and to improve teamwork.	Detailed handover leads to enhanced patient care. Leads to the transfer of responsibility and accountability.	
Jamshidi, H., Jazani, R., Alibabaei, A., et al.	2019		Adequate space to provide the handover in (physical space), crowded areas influence the adequacy of the handover. Adequate amount of ED staff to attend handover and listen to the handover.		

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			Experienced staff improves handover.		
Thakore, S. and Morrison, W.	2001	Should be quick and effective. ED staff to listen attentively to EMS during the handover. One person to listen to the handover and the others treat the patient.	Training of EMS staff. Training in paediatric handovers specifically. Active listening from ED staff to handovers. Process in place of who takes the handover, one person listens while the rest continue with patient treatment.	Handover transfer ensure continuity of care, patient safety, and teamwork.	
Meisel, Z., Shea, J., Peacock, N., et al.	2015	Handover should be fast, but clear, effective, and delivered to the right person (ED physician). Most handovers involve the ED nurse and EMS staff. Handovers should be verbal and written. "A critical, brief window (or golden minute) in which EMS staff could influence the course of their patient's hospital-based care". Certain aspects of the verbal handover can be standardized.	Standardizing and automating patient viewpoints and the development of policies. Appropriate staff to be available to handover to. Training of staff on handovers.		
Bost, N., Crilly, J., Patterson, E., et al.	2012	Clear, concise communication between healthcare providers. It should only be done once from EMS to ED staff. No repetition. ED personnel should be listening attentively. Verbal in nature. Information provided to the nurse or team of nurses. Sometimes it is given to the attending doctor. AMIST was used to guide the handover process - Age, MIST). Written report is also provided after the handover, but not referred to during the handover. Ideally handovers should be	A dedicated area for handover should be available. Good interpersonal relationships between EMS and ED staff. Interdisciplinary education to enhance teamwork. Guidelines regarding the handover process and when transfer of responsibility occur. Correct person available to receive the handover the first time.		

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		done to the whole team looking after the patient (nurses + doctor). Using a structured form of handover.			
Duason, S., Gunnarsson, B., Svavarsdottir, M.	2021	To use patient handover tools to make the process more structured. Responsibility is handed over after the patient is moved onto the bed. Verbal handover completed and written documentation handed over. One person from each side should be the responsible person for providing and receiving the handover. Handover should be done verbally (face-to-face) and a written report. It should be short, contain structured information, be undisturbed, attention provided - active listening (eye contact) and precise written report should be given.	Persons providing handovers should be trained and professionally competent. Quiet environment. Attentive listening. Collaboration and teamwork.		
Talbot, R. and Bleetman, A.	2007	Structured approach to handover to be used to ensure all information is transferred. Accurate written information should be provided to ensure no information is lost or forgotten. Staff giving and receiving the handover should be familiar with the tool used to ensure retention of information.	Attentive listening. Knowledge regarding tool being used on both sides.		
Jensen, S., Lippert, A. and Ostergaard, D.	2013	Combination of verbal and written elements in the handover. Detailed information should be written down and should correspond with verbal handover. ED staff to listen attentively as to not repeat information and loose information due to repetition. Use of structured tools	Attentive listening. Correct staff member to receive handover the first time.		

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		e.g. BAUM, MIST, IMIST-AMBO, DeMIST. IMIST-AMBO mostly suggested. Standardization of both verbal and written handover. Patient to be included as part of the team for handover. "Handovers are a dialogue between health professionals that also might foster empathy, equity and common ground". The process should include the handing over of responsibility.			
Makkink, A., Stein, C. and Bruijns, S.	2021	Structured format that facilitates optimal information transfer. Handover should be provided to the highest qualified person - doctor, with handover provided once and not multiple times to prevent information loss. Providing the handover without any interruptions.	Quite environment. Correct staff to attend the handover from the start.	Continuity of patient care.	
Makkink, A., Stein, C., Bruijns, S., Gottschalk, S.	2019	Use of mnemonics to guide a structured handover.	Training in providing handovers and the use of mnemonics. Simulation training in handovers.		
Bridges, J., Meyer, J., Dethick, L.	2005	High patient satisfaction rates correlated with having a relationship of trust between patient and ED staff, receiving explanations on why things are being done, being involved in care decisions.	Staff views on including patients in care decisions, developing trust relationships and explanations should be positive for person-centred care to take place. Replacing the focus of moving patients quickly to spending quality time with patients. The development of an integrated care model to include person-centred in care delivery.	Increased patient satisfaction reported by patients.	Patient experience measurement.
Walker, W. and	2016	Person-centred care place patients and	Establishing a rapport with	Enhanced care experiences.	Families' verbal expressions of

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Deacon, K.		families at the heart of care decisions. Communicating frequently with families regarding care. Simple term communication to enhance patient and family understanding. Family participation in decision making.	families. Developing a trusting relationship with families. Formal education, role modelling, peer support and experiential learning can result in personal development to provide person-centred care. Staff commitment to practice in a person-centred way.		gratitude.
Nicholas, D., Muskat, B., Zwaigenbaum, L., et al.	2020	Person and family centred care portrays 1) dignity and respect (listening to families and incorporating their values, knowledge and beliefs in care), 2) participation (encouraging families to participate in care and decision-making), 3) collaboration (families included in care delivery, institutional policy and programme development), 4) information sharing (sharing of timely, complete and accurate information with families).	Active training and modelling of person-centred and family centred care for staff.		Family satisfaction with regards to communication and interpersonal skills.
Almaze, J. and de Beer, J.	2017	Inclusion of family members in patients' care, to provide information and to be part of care. Providing family members with information - timely accurate information. Inclusion of family members in decision making.	Staff being responsive to the needs, values and cultural needs of pts and family. ED staff should be knowledgeable in person-centred care practices	Reduces family members stress and anxiety and enhances patient satisfaction. Increased staff satisfaction, decrease costs and improve patient outcomes.	
McConnell, D., McCance, T. and Melby, V.	2016	Being cared for with kindness, compassion, and respect. Putting the patient at the centre of care delivery. Care that is relationship-focused, holistic, and collaborative.	Staff attributes include prerequisites: being professionally competent, developed interpersonal skills, committed to the job, clear beliefs and values. Care	Satisfaction with care delivery, involvement in care and a feeling of well-being.	

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			environment: appropriate skill mix, shared decision-making systems, effective staff relationships, supportive organisational systems, power sharing, the potential for innovation and risk taking.		
Dellenborg, L., Wikstrom, E. and Anderson, EA.	2019	Seeing the person as a person with their own will, regardless of their physical or cognitive capacity. Patient is free to act and take responsibility for making choices, family members are to be involved in care decisions and decision making to be conducted in partnership with the patient and family members.			
Kennedy, C.	2017	Shared decision making. Incorporating patient's values, belief and cultures into the treatment process. Communication between ED staff, patients and families.	Continuous professional development. ED nurses to realise their role in delivery of person-centred care. Changing ED staff's attitude through training and development to enable them to determine patient's social, psychological, and spiritual concerns at triage. Changing their perspectives from not only lifesaving to holistic care provision.	Increased patient satisfaction and improved health outcomes.	
Brown, K., Mace, S., Dietrich, A., et al.	2008	Treating patients and family with dignity and respect. Patient and family to participate in activities. Communication is an important aspect of family centred care. Family presence during care	Policies and procedures should be in place providing the principles of person-centred care. Staff to be educated on person-centred		

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		delivery.	care.		
Cohen, E., Wilkin, H., Tannebaum, M., et al.	2013	Providing care that is respectful, individualized to patient preferences, needs and values.		Increase patient satisfaction.	
Shankar, K., Bhatia, B. and Schuur, J.	2014	Where healthcare workers display an attitude in which patients have an active role in their own care. Respect for patient values, preferences and needs.		Improve the patient's overall experience. Enhance the effectiveness of care delivery. Guide clinical decisions based on patients' unique needs.	
White-Trevino, K. and Dearmon, V.	2018	Handover performed at the bedside as this provides healthcare workers the opportunity to connect with patients. Handover where patients are involved in the handover communication process.		Trusting and caring relationship being formed which results in patients being satisfied with their care.	
Bruce, K. and Suserud, B.	2005	When the handover is performed in the patient's presence. Patient is greeted by the staff, and they introduce themselves.			
Kullberg, A., Sharp, L., Johansson, H., et al.	2017	Patient involvement and effective communication. This handover follows a set structure focussing on relevant clinical information, patient safety issues. Patients are involved in the handover occurring at the bedside.		Improved patient safety and nurse and patient satisfaction.	

5.1 Identifying all possible uses of the concept in nursing

The concept of person-centred handover practices has not been cited in the existing literature. Most studies have focused on person-centred care and handover as separate entities, furthermore studies on specific handover practices between emergency care practitioners and healthcare professionals in the ED are limited.

5.2 Defining concept attributes

An extensive review of the literature revealed salient characteristics reflecting the most frequently used terms associated with the concept¹⁹. These terms include *structure*^{2,20} *verbal and written information transfer*², *interprofessional process*^{5,21} *inclusion of the patient and/ or family*^{15,16}, *occurs at the bedside*¹³, *without interruptions*¹⁰. Notably the attributes can be divided into two main themes: Person-centredness and handover practices (Table 2).

Table 1: Person-centred handover attributes

Defining	Sources
PERSON- CENTREDNESS	
Inclusion of the patient and/or family	Bruce, K & Suserud, B. 2005 ²² ; Ehlers et al., 2021 ⁵ ; Kalyani et al., 2017 ²¹ ; Dawson et al., 2013 ²³ ; Flynn et al., 2017 ²⁰ ; Bost et al., 2012 ²⁴ ; Makkink et al., 2019 ¹ ; Sujan et al., 2014 ²⁵ ; Sanjuan-Quiles et al., 2018 ⁹ ; Dúason et al., 2021 ² .
It occurs at the bedside.	
HANDOVER PRACTICES	
Structure	Reay et al., 2018 ²⁶ ; Nicholas et al., 2020 ²⁷ ;
Transfer of verbal and written information	Almaze & de Beer, 2017 ²⁸ ; McConnell, McCance & Melby, 2016 ¹⁴ ; Dellenborg,

Interprofessional Process	Wikström & Andersson Erichsen, 2019 ²⁹ ;
Without interruptions	White-Trevino & Dearmon, 2018 ³⁰ .

5.2.1 Structure

Following a specific structure aid in the transfer of all required information^{5,21,22} and is required to plan the unique treatment and care for the patient going forward^{31,32}. Structured person-centred handover practices are performed in verbal and written format.

5.2.2 Verbal and written information transfer

Handover practices should occur verbally followed by a written document to prevent information loss³². Verbal handovers ensures the transfer of first-hand information upon arrival of a patient in the ED and requires attentive listening from healthcare professionals to prevent information loss³². It is during this information transfer process where professionals interact.

5.2.3 Interprofessional process

According to Ehlers et al., (2021) the handover process is an interprofessional process involving at least two different professional groups⁶. The handover between emergency care practitioners and healthcare professionals (nurses and doctors) in the ED is one example of this interprofessional process. The transfer of information during this interprofessional process should also occur without interruptions.

5.2.4 Without interruptions

Interruptions place handover practices at risk of information loss which could negatively impact patient care delivery. Various studies have indicated that handover practices should occur with minimal to no interruptions^{2,3,33}.

5.2.5 Occurs at the bedside

Handover at the patient's bedside could reduce interruptions and noise levels and provide an opportunity for healthcare professionals to listen attentively^{34,35}. To provide person-centred care patients should be included in the handover and when performing handover at the bedside this could be achieved.

5.2.6 Inclusion of the patient and/or family

Bedside handover gives the patient the opportunity to be part of the handover process providing them the opportunity to provide additional information as required. This can guide the planning of their care and offers them the opportunity to be part of decision-making facilitating person-centred care¹³. The patient is the only constant factor in the whole handover process and could provide valuable information. Person-centred handover practices includes the patient which increases patient and staff satisfaction, enhances continuity of care and improves patient outcomes^{30,36}.

5.3 Constructing cases

Constructed cases are cases that contain all, some, or none of the defining attributes¹⁸ and can help to understand the difference between person-centred handover practices and other similar concepts. The model case refers to a perfect example of the use of the concept, the borderline case contains some but not all defining attributes of a concept, and contrary cases are examples that clearly do not apply to the concept under investigation¹⁸.

5.3.1 Model case

Emergency care practitioners transport the patient to the ED after initiating emergency care. On arrival in the ED, they greet the healthcare professionals on duty, report to the nurse in charge, or the assigned team of healthcare professionals and proceed to take the patient to an assigned bed. The emergency care practitioner provides a verbal handover to the healthcare professional/s in charge of taking over the patient's care. Healthcare professionals listen attentively to the handover at the patient's bedside. The information being transferred is focused on the patient's needs and problems identified, and the treatment provided by emergency care practitioners. The patient and/ or family is involved in the handover process. On completion of the verbal handover, a written document is provided.

5.3.2 Boderline case

Emergency care practitioners transport a patient to the ED. Upon arrival, they greet the healthcare professionals, and all proceed down the corridor. The handover commences prior to arriving at the patient's allocated bed. The handover is interrupted by noise and the multiple ED activities whilst healthcare professionals attempt to listen attentively. In

between, the patient and/ or family members asks questions and participates in the handover. Once the patient is transferred onto the ED bed, emergency care practitioners leave and do not provide healthcare professionals with a written copy of the handover. The borderline case contained some of the defined attributes such as verbal information transfer, interprofessional process, and patient and/ or family included, there was interruptions in the process, and it did not occur at the bedside and no written document was provided.

5.3.3 Contrary case

Emergency care practitioners arrive at the ED. They proceed directly to an unoccupied bed and transfer the patient to the bed without reporting to the nurse in charge. No verbal handover occurs resulting in an interruption in the continuity of care. This is an example of a contrary case as none of the defining attributes of person-centred handover practices is present.

5.4 Identifying antecedents and consequences of the concept

Antecedents are those events or incidents that must be in place for the concept to occur¹⁸. Following the analysis of the literature the following four antecedents were identified as having to be present to ensure person-centred handover practices: experienced staff^{22,28,37,38}, staff trained in person-centred care and handover practices^{1,2,5,20,21,23,24,27,28,37-44}, prenotification of the emergency department²², and assigned healthcare professional/s to receive handover^{3,5,24,33,41,42}. Each of the identified antecedents is related to the defining attributes of person-centred handover practices.

5.4.1 Experienced staff

A strong body of evidence suggests that experienced staff perform person-centred handovers that tend to result in more effective handover practices^{32,45}. Experience also results in a more detailed and structured verbal and written handover being performed. Furthermore, the knowledge and experience of healthcare professionals have an impact on the amount and quality of information received⁴⁶.

5.4.2 Staff trained in person-centred care and handover practices

The necessary training, role modelling, and peer support is required for the implementation of person-centred handover practices. Activities such as including the

patient and/ or family, and regular communication between healthcare professionals and the patient and/ or family could potentially lead to person-centred handover practices^{47,48} and ultimately person-centred care. Training in handover practices is needed to ensure that emergency care practitioners and healthcare professionals are aware of how to do it^{6,31}. Handover is a skill that requires both education and practise and can lead to improved patient outcomes and continuity of care³⁴.

5.4.3 Pre-notification of the ED

Pre-notification of the ED by emergency care practitioners offers healthcare professionals the opportunity to prepare for the arrival of the patient^{35,49}. Being prepared will ensure that both a bed and the required staff are available, saving time, and ensuring that person-centred handover practices are being performed.

5.4.4 Assigned healthcare professional/s

Multiple handovers lead to information loss and can be prevented by ensuring that handover is received only once by the healthcare professional/s responsible for patient care¹¹. This contributes to the interprofessional communication process and assists with decreasing interruptions during the handover. Additionally, providing the handover to a dedicated healthcare professional or team results in attentive listening further, avoiding repetition and information loss. Therefore, it should be standard practice that once emergency care practitioners arrive in the ED that they report to the nurse in charge and are assigned to a bed and a team (the healthcare professionals responsible for patient care). The handover will occur, and the team receives the verbal handover once.

5.4.5 Consequences

Consequences are outcomes that occur because of the concept¹⁸. Person-centred handover practices could lead to continuity of patient care from the prehospital environment to the ED and improved patient outcomes resulting in patient and staff satisfaction¹⁵. The consequences of person-centred handover practices in the ED were identified as: the inclusion of patients and/ or families in the handover process resulting in them contributing to their care and being involved in decision making, which results in person-centred care delivery^{14,28,30,36,37,40,50–52}. Additionally, following a structured approach to person-centred handover practices can lead to a unique patient-specific care

delivery^{3,21,38,42}, as a form of person-centred care delivery, as all required information regarding the patient will be transferred^{38,43,44}.

5.5 Defining empirical referents of the model

Empirical referents identify the occurrence of the concept¹⁸. Being able to measure the occurrence of the concept. Upon the review and analysis of the literature it was determined that person-centred handover practices would be present if one is able to identify components of mutual trust and respect between emergency care practitioners and healthcare professionals during the interprofessional process^{2,5,20–24,38,43,44}. When uninterrupted structured^{2,3,5,10,20–24,33,41,43,44,53} verbal and written handover practices^{2,10,21–24,33,38,41,44,53} occur at the bedside with patient and/ or family participation^{22,30,36,37,39}, it results in patient-focused care delivery.

6. OPERATIONAL DEFINITION

Results from the literature search delineated the concept and its related attributes. The concept analysis was focused on two aspects: person-centred care and handover practices in the ED between emergency care practitioners and healthcare professionals. This concept analysis produced the following theoretical definition of the concept person-centred handover practices:

Person-centred handover practices are those handovers being performed while including all identified defining attributes such as structure, verbal, and written information transfer, interprofessional process, inclusion of the patient and/ or family, occurs at the bedside, without interruption.

7. DISCUSSION

To our knowledge and at the time of the literature review, no definition of person-centred handover practices has been documented in the existing literature. To our knowledge and at the time of the concept analysis no definition of person-centred handover practices have been documented in the existing literature. Person-centred care is defined as an approach to practice, established through the formation and promotion of therapeutic relationships between care providers, patients, and their significant others. The values

that underpin person-centred care are respect for people, individual right to self-determination, mutual respect, and understanding.⁵⁴ In a concept analysis by Morgan and Yoder⁵⁵, person-centred care was defined as a holistic approach to providing respectful and individualised care, offering individual choice, and allowing negotiation. All existing definitions of person-centred care are based on individual, preferences, a mutual trust relationship, and shared decision making^{56–58}.

Handover, also referred to as handoff, clinical handover, patient handover, or patient handoff, is defined as the transfer of accountability and responsibility for some or all aspects of care for a patient or a group of patients from one healthcare professional to the next¹⁷. Literature has indicated the importance of handover practices in the ED and especially between emergency care practitioners and healthcare professionals^{10,22}. This handover should be done in a structured, verbal manner to ensure all information related to a patient's assessment and treatment provided in the pre-hospital environment are transferred to healthcare professionals in the ED. Obtaining all relevant information from emergency care practitioners enables healthcare professionals to plan for continued and focused patient care^{2,5,22}. Ideally, a team of healthcare professionals (doctors and nurses) who will be responsible for the patient's care should be involved in the handover from the start, to decrease handover repetition and potential information loss¹¹. In addition to prevent information loss during handover the handover should be performed in an area with little to no interruptions which could also assist in achieving person-centred handover practices without interruptions. Once the verbal handover is completed a written document should be provided to refer back to once emergency care practitioners has left and so preventing any information loss²¹.

The handover process should be person-centred. The inclusion of the patient and/ or family is important to achieve person-centred handover practices. By conducting handover practices at the patient's bedside, the patient can be included in the handover process. This offers the opportunity to ask the patient and/or family questions once the emergency care practitioner completed their handover and for the patient to add information not mentioned^{30,36}. The findings of this concept analysis propose a formalised definition of person-centred handover practices, the related attributes that should be present during person-centred handover practices and the consequences thereof.

7.1 Implications for person-centred handover practices

7.1 Implications for Practice

Handover practices are important to ensure continuity of patient care⁵⁹. Person-centred handover practices can advance person-centred care. Having an operational definition for person-centred handover practices will alert emergency care practitioners and healthcare professionals to what it is and how it is done. This could spill over into person-centred handover practices being performed leading to person-centred care delivery.

7.2 Implications for education and research

Education and training are important for person-centred handover practices to occur. If emergency care practitioners and healthcare professionals do not receive training on the provision of person-centred handover practices, it will not be implemented and will not be part of their daily practise. Therefore, the concept definition of person-centred handover practices can be used to educate nurses, doctors, and emergency care practitioners in the provision of person-centred handover practices in the ED.

8. STRENGTHS AND LIMITATIONS

Having performed the concept analysis, it yielded the concept definition for person-centred handover practices in the ED. At the time of conducting the concept analysis no concept definition existed for the concept person-centred handover practices. The use of Walker and Avant's model ensured that a robust process was followed in developing the final concept definition. Although several databases have been searched, we might still have missed some reports published in the field explored. Selection bias might have also been an issue as reports not published in English were excluded from the final included studies. Additionally, concepts change over time and it is acknowledged that this concept definition might change over time.

9. CONCLUSIONS

The concept analysis provided the following definition for person-centred handover practices: Person-centred handover practices are those handovers being performed while including all identified defining attributes such as structure, verbal, and written information transfer, interprofessional process, inclusion of the patient and/ or family, occurs at the bedside, without interruption. Handover practices are used daily in various healthcare settings, and there are various definitions. The implementation of person-centred care in

nursing and specifically the ED are steadily on the increase. This necessitated the need for the analysis of the concept person-centred handover practices. Emergency care practitioners and healthcare professionals should have a shared understanding of the meaning of the concept and be able to differentiate it from other related concepts with the intention to improve patient outcomes.

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CHAPTER 4

PHASE 1: REACHING CONSENSUS

OBJECTIVE 2

To reach consensus on the definition of person-centred handover in the emergency department

4.1 INTRODUCTION

Chapter 3 discussed Phase 1, Objective 1 of the study, namely developing a concept definition for person-centred handover in the emergency department (ED). This chapter discusses Phase 1, Objective 2 of the study: to reach consensus on the definition of person-centred handover in the ED.

A Delphi study was conducted. The research methodology was described in detail in chapter 2.

4.2 OUTCOME

In this phase, consensus was reached on a final concept definition and related attributes with the input of international experts in person-centred care and handover practices.

Participants for the Delphi panel of experts were recruited nationally and internationally. The researcher invited 17 participants from 10 countries of which nine consented to participate from three countries. This diversity further increased the heterogeneity of the sample as national and international contexts were included. In round one, nine participants participated and in rounds two and three, eight participants participated.

The participants arrived at the following final definition: Person-centred handover practices is a context-specific approach involving the interprofessional sharing of verbal, non-verbal, and written information that occurs in a dedicated space at the patient's bedside with minimal interruptions and facilitates patients' and/or their significant others' active engagement.

Chapter 4: Phase 1: Reaching consensus

The final six attributes were: context-specific approach, verbal, non-verbal and written information sharing, person-centred interprofessional activities, inclusion of the patient and/or significant other, dedicated space, person-centred handover approach.

The article was accepted in a peer reviewed journal: The Journal of Clinical Nursing on 4 December 2023.

de Lange, S., Heyns, T. and Filmlalter, C. 2023. Reaching consensus on the definition of person-centred handover practices in emergency departments: A modified online Delphi. *Journal of Clinical Nursing*.

See Annexure D.1 for evidence of acceptance of article into journal. This chapter will be presented according to the headings of the authors guidelines as specified by the journal.

Find author guidelines here:

<https://onlinelibrary.wiley.com/page/journal/13652702/homepage/forauthors.html>

4.3 SUMMARY

This chapter provided consensus and the final concept definition of person-centred handover in the ED and its related attributes. Phase 1 contributed the concept definition of person-centred handover practices. Phase 2 explored the current literature available on person-centred handover practices in the ED to inform clinical practice guidelines.

Article

Title: Reaching consensus on the definition of person-centred handover practices in emergency departments: A modified online Delphi

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ABSTRACT

Aim(s): To reach consensus on the definition and attributes of ‘person-centred handover practices’ in emergency departments.

Background: Handover practices between emergency care practitioners and healthcare professionals in emergency departments are important and should be conducted meticulously. Person-centred handover practices may enhance the delivery of person-centred care in emergency departments.

Design: A three-round online Delphi survey.

Keywords: concept, Delphi, emergency department, handover practices, person-centred care

Methods: Nine experts participated in a three round Delphi survey. The expert panel comprised experts from three countries. Quantitative data were descriptively analysed, and qualitative data were thematically analysed. A consensus of 80% had to be reached before an attribute and definition could be accepted.

Results: Experts reached a consensus of 79% in round one, 95% in round two, and 95% in round three. A final set of six attributes were agreed upon and the final concept definition was formulated.

Conclusion: Person-centred handover practices have not been implemented in emergency departments. Yet, person-centred handover practices may enhance the delivery of person-centred care, which has multiple benefits for patients and healthcare practitioners.

Implications for the profession and/ or patient care: Person-centred care is not generally implemented in emergency departments. Person-centred handover practices can lead to person-centred care. Handover practices in emergency departments are a high-risk activity. Despite numerous calls to standardise and improve handover practices, they remain a problem. Developing a standardised definition could be a first step towards implementing person-centred handover practices in emergency departments.

Reporting method: The study adhered to the relevant EQUATOR reporting guidelines: Guidance on Conducting and Reporting Delphi Studies (CREDES) checklist.

Impact (Addressing)

- Improve handover practices and patient care.
- Improve person-centred care in emergency departments.

Patient or public contribution: Emergency care practitioners and nurses experienced in handover practices and/or person-centred care, working in clinical and academic fields, participated in the study by sharing their expert knowledge during each of the Delphi rounds.

What does this paper contribute to the wider global clinical community?

- This is the first study to define person-centred handover practices and related attributes.
- Experts agreed that there is a need to define person-centred handover practices.
- This research will ultimately benefit emergency care practitioners, healthcare professionals, and patients in emergency departments.
- This study opens up avenues for future debate as this definition is the first and will most probably be updated in the future as the importance of the concept is recognized more widely.

INTRODUCTION

In emergency departments (EDs), handovers or handoffs are an integral daily activity for every healthcare provider. Handover is defined as the transfer of accountability and responsibility from one healthcare provider to the next.^{1,2} Handovers are important for continuity of patient care from emergency care practitioners (pre-hospital) to medical doctors and/or nurses in EDs (in-hospital).¹ Emergency care practitioners often only have one opportunity to transfer information to healthcare professionals, and information should be transferred optimally.³ Much research has focussed on improving handover practices, but little attention has been given to the involvement of patients and/or significant others in the process.⁴ Recently, much effort has been directed at moving towards person-centred care delivery in healthcare, nursing, and EDs.⁵ Person-centred handover practices that include patients and/or significant others may promote the delivery of person-centred care.⁶ Person-centred handover involves the handover of patient information between healthcare professionals together with the patient whilst performing the handover according to a set structure focussing on relevant clinical information and patient safety concerns^{7,8}. Furthermore, person-centred handover involves more than just the transfer of information, it should be a process where both parts gain new insights⁹. Person-centred handover practices have been shown to gradually increase patient and staff satisfaction, enhanced quality care and patient safety⁸. Although person-centred handover practices are advocated for and preferred by patients, in many instances this does not happen^{10,11}. Person-centred handover in nursing is novel, and most nurses were not trained or adequately trained to perform this during their education. Nurses also struggle to share information whilst inviting patients to partake on the handover⁹. In the ED the handover between emergency care practitioners and healthcare professionals in EDs should involve respect for everyone and the patient to enhance patient safety¹² and move towards person-centred handover practices. At the time no literature could be found on the performing of person-centred handover practices amongst doctors or emergency care practitioners. Here, we report on a Delphi study that aimed to define and identify the attributes of 'Person-centred

handover practices' in EDs. An accepted definition for person-centred handover practices may advance such handover practices leading to the delivery of person-centred care in EDs.

BACKGROUND

Emergency departments are busy, somewhat chaotic environments where many events occur simultaneously and often against the clock.¹³ In EDs, clinical skills and saving lives are often emphasised, while handovers are often neglected.¹⁴ In EDs, handovers between emergency care practitioners and healthcare professionals differs from handovers done in other healthcare environments.¹⁵ Handovers involve different healthcare professionals, patients, and/or significant others sharing verbal, non-verbal, and written information.^{16,17} Structured guides have been suggested for sharing information on patients' complaints, previous treatment, and condition,^{2,18} but structured handover is not a one size fits all as it does not consider the context of the patient and the ED.^{19,20}

Person-centred care involves placing patients at the centre of care delivery. Although person-centred care has been adopted in various healthcare settings, it has not been widely integrated in EDs.^{21,22} Person-centred care encompasses communication, involving patients and families in information sharing and decision making, and ensuring continuity and transition of care.²¹ This approach informs patients, reduces emotional distress and uncertainty, and encourages their active involvement in their own care as experts, fostering collaboration between patients and providers.²¹ Despite the benefits, there is no accepted definition or implementation framework for person-centred care in EDs.²¹ Walsh et al²¹ proposed that operationalising person-centred care in EDs would lead to person-centred practices in the ED. As handover practices are an integral element of care in EDs, patients should be included in the handover process,²³ as they are the only constant during handovers and are vital for ensuring continuity of care.²⁴ To initiate the advancement of person-centred practices in EDs, we conducted a concept analysis to develop a preliminary definition for person-centred handover practices in EDs. Here, we expanded on the concept analysis by engaging with experts to reach consensus on the definition and identify attributes of person-centred handover practices in EDs.

THE STUDY

Ethical approval

Ethical approval for the Delphi study was obtained from the University of Pretoria's ethics committee. Each participant received a participant information leaflet and signed an informed consent form before data were collected.

METHODS

The Delphi survey was conducted in three phases as suggested by Beiderbeck et al.²⁵ Firstly, we clarified the aim of the study, selected expert panel members, defined the criteria for consensus, and developed a questionnaire for round one. Secondly, participants completed the questionnaire. Thirdly, we analysed the responses from each round to determine agreement and conducted a content analysis.

Aim

To determine the level of agreement on the definition and attributes of person-centred handover practices in EDs. We presented a provisional definition of the concept and listed attributes that were constructed using Walker and Avant's²⁶ model for concept analysis in a previous study (still to be published). We conducted a concept analysis following the eight steps²⁷ which led to six constructed attributes which was subsequently used to develop the concept definition. These six attributes and the developed concept definition was used during this study to reach consensus on the definition and attributes of person-centred handover practices in EDs.

Design

A three-round online modified Delphi survey was conducted between 28 January 2023 and 16 May 2023. Delphi surveys are widely used to reach consensus²⁸ and provide insight on topics with limited information.²⁵ The number of rounds may vary from two to five,²⁸ and the list of items and participants may vary for each round. Subsequent rounds were designed based on responses from the previous round.²⁸

Participants

There is no fixed rule for how many experts should be included in panels but a minimum of between 10 to 18 experts has been suggested.²⁹ Beiderbeck et al²⁵ suggest that smaller groups of experts should be used to reach consensus on specialized topics, such as those in clinical fields, optimally between 15 and 20 experts. We invited 17 experts from 10 countries to participate. Experts were identified via a literature search, through research team members, networking, and through suggestions from invited experts. All invited experts had extensive knowledge on person-centred care, handover practices, or both, and met the following inclusion criteria: a clinician providing person-centred care and involved in handover practices (all participants had more than 10 years' experience in person-centred care and handover practices), authors on publications of person-centred care (all participants had at least two publications in the last five years), involved in academia (two participants had masters degrees, and the rest had doctoral degrees, with at least four years' and a maximum of 32

years' experience in academia and clinical settings as nurses and emergency care practitioners).

Data collection

During round one, the constructed concept definition and related attributes were distributed electronically to participants who were asked to respond within two weeks. We sent a reminder email to participants who had not responded one week before the deadline. The initial questionnaire included six attributes and the concept definition. Participants were asked to rate their agreement with each attribute and the concept definition on a 4-point Likert scale (1: strongly disagree to 4: strongly agree) and had the opportunity to provide additional written comments and the reason for their ranking. Responses were anonymised after each round before sending feedback to the group. After each round, the attributes and definition were adjusted based on participants' feedback and sent back to the participants for the next round. After the third round, a summary of the final attributes and definition were circulated to the participants for final review and agreement.

Data analysis

Data were analysed using percentage agreement for each question. Consensus was defined as 80% agreement, when 80% of participants indicated strong agreement (3 or higher on the Likert-scale). This was a more stringent level of agreement than the 75% suggested by Diamond et al.³⁰ Data from each round were analysed by three members in the research team, the attributes and definition adjusted, and returned to the participants for the next round, together with a report on the previous round's results and level of agreement. Comments were analysed through content analysis focusing on recurring patterns or themes.³¹ Content analysis was done to identify words, themes, or concepts in the data. One member of the research team analysed each comment and recurrent words identified. From there themes were created based on the combination of repetitive words identified. Data was then read again to confirm the developed themes. Final themes were then checked and correlated to confirm correctness by the other two members of the research team.

Rigour

Maintaining rigor in Delphi studies is critically important. Delphi studies require methodological accuracy to avoid pitfalls such as prolonged data collection, low response rates, subjective data analysis, and unsuitable statements. Our study had a brief timeline of 15 weeks, and experts were carefully selected according to specific criteria from different countries. Participants were regularly reminded to meet deadlines. To increase rigour, one team member analysed the data, and two members then checked the results. Electronic audit trails were

kept of all the data. Responses of each round were individually and anonymously shared via email with the panel of experts. Additionally, we conducted our study in line with the checklist for Conducting and REporting DElphi Studies (CREDES),²⁸ which improved the planning and design, execution, and reporting of the study (Guidelines for Conducting and REporting DElphi Studies (CREDES), (Refer to Supplementary File 1).

RESULTS

Participants

Of the 17 participants who were invited to participate; nine consented to participate. Nine participants completed round one (53%), eight completed round two (47%), and eight completed round three (47%). Participants from three countries responded and their experienced ranged from doctoral (n = 7) to masters (n = 2) degrees with between four- and 32-years' experience in academia and clinical settings. All participants were experts in the field of person-centred care and/ or handover practices. Seven participants worked permanently in academia with two participants working in clinical settings but involved in academic activities (Table 1).

Insert Table 1: Participant characteristics

Attributes of person-centred handover practice

Attributes are those aspects specific to the concept and sets it apart from other³². Experts evaluated six attributes of person-centred handover practices. In round one, agreement ranged from 56% to 89% on the various attributes (Table 2). Agreement increased in round two, ranging from 86 to 100% (Table 2). Despite strong agreement, participants made valuable comments, and the attributes were adjusted accordingly. In round three, participants reached final consensuses and no additional feedback was received.

Insert Table 2: Summary of agreement and refined attributes after each round

Attribute 1: Structure

Theme 1: Importance of structure

In round one, more than half of participants (56%) felt that handovers should be structured to some degree. Participants indicated that structure prevents information loss, *'it will minimize lost information that could be skipped if no structure is followed'* and *'...ensure nothing is missed'*. Conversely, participants indicated that following a set structure could also lead to information loss, *'... information not included in the structure (for example a mnemonic) may be omitted'*.

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Theme 2: Suitable to context

The idea of a structured approach was adapted in rounds two and three. Although structured handover practices were deemed important, they should be *'...suited to the context'*. Additionally, the context should also be tailored to the needs of the patient, *'specific structures do not cater for the patient-specific information that that may be more or less important between patients'* and *'that the structure take into account aspects of holistic care'*.

Participants agreed that handovers should be context specific as one structure may not apply to all handovers. Following a context specific approach has benefits, *'individualisation is needed to ensure all relevant information'*, *'enhances systematic and focused decision-making'* and *'although structure is important it alone cannot ensure that all info will always be transferred'*.

Attribute 2: Verbal and written information transfer

Theme 1: Concurrent processes

In round one, more than half of participants (56%) indicated that handover involves the simultaneous transfer of verbal and written information. Verbal and written information transfer *'should occur concurrently to ensure they are consistent with each other'*. Simultaneous transfer of verbal and written information prevents the loss of information, and there are more opportunities for asking clarifying questions. Participants *'strongly agree that effective communication practices should be used'*.

Theme 2: Verbal and written information should be complementary

According to participants in round one, verbal information is, *'a summary of the information'*, *'is quick'*, and *'provides opportunity to ask questions'*. Written information allows for, *'fine detail is not lost'*, *'comprehensive patient information'*, and *'verifies information'*. However, *'handover, both verbal and written should incorporate person-centred principles'*. Participants agreed that both verbal and written components are an important part of handovers, *'both important components of sharing information'*.

In rounds two and three, this attribute was adjusted to include non-verbal communication. Non-verbal communication should be included and recorded in handovers for additional benefits, *'effective communication practices should include verbal, written and visual communication'*, *'covering all 3 of those communication aspects is nb [important] when transferring information'* and *'to add 'non-verbal' is important as it encompasses all the for example seeing and smelling'*. Participants felt that including all forms of communication in handovers will ensure holistic information transfer, *'more holistic approach by sharing all 3*

methods of communication'.

Attribute 3: Interprofessional processes

Theme 1: Interdisciplinary communication and collaboration

In round one, participants indicated that interprofessional processes require communication and collaboration. During handover, different professionals meet and share information to ensure continuity of care. Participants agreed that *'information required for ongoing care'* and *'patient care in the ED involves interprofessional collaboration and care practices'*.

In rounds two and three, participants agreed that handover practices should be a person-centred interprofessional activity, *'interprofessional involvement is important'*, *'must work interprofessional to achieve person-centred care'* and *'promotes interprofessional team approach which currently isn't really being implemented'*. Furthermore, working interprofessionally requires that the right team be involved in the handover from the start, *'involving the right people from the start is in the best interests of the patient'*, *'interprofessional approach crucial to ensure nothing missed/overlooked'* and *'all involved should be on the same page and get 1st hand information if possible'*. Handing over to the right team will reduce handover repetitions, *'multiple handovers have been associated with information loss'*.

Theme 2: Interprofessional process requirements

This theme was similar for all three rounds. Participants agreed that the whole healthcare team should be present during handovers, *'it would be great if doctors and nurses could be present'*, *'often information given to the doctor and nurse is different...if they do not receive the handover together this information will be missing on the records of at least one of the practitioners'*, and *'the team specifically involves doctors and nurses—both parties should be included during handover practices'*. This interprofessional process can also be influenced by several factors, *'values, language, and hierarchy'* as well as *'interprofessional knowledge, interprofessional respect, and existing relationships and perceptions'*. These factors may influence the interprofessional process and affect handover practices.

Attribute 4: Inclusion of the patient and/or family

Theme 1: Patient inclusion is important.

In round one, participants felt that patients and/or families should be included in handovers, since *'being person-centred means both knowing and respecting the preferences of the patient and their companions about their involvement in handover practices'*, *'the patient...the best source of information'*, and *'patient and family must be included—nothing about me without me'*.

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In rounds two and three, participants agreed that patients and/or family may contribute to making decisions and delivering care, *'the patient being part of the conversation that informs care delivery'*, *'the patient however has the right to be involved in their care, 'if patient is not able to be part of decision-making process, the family/significant other should be involved from the beginning'*, and *'it is about the patient being part of the conversation that informs care delivery'*.

Participants agreed that patients and/or significant others play an important role in handovers. Patient participation promotes shared decision making. Patients and significant others can also provide valuable extra information, described as follows: *'shared-decision making'*, *'I have personally witnessed patients adding information to handovers that was not included, this highlights how important patient and [significant other] participation can be'*, and *'significant others play an vital role in supplementing information'*.

Theme 2: Considering patient preferences

Participants indicated that patients should be given an option to be included or not, *'respecting the preferences of the patient'* and *'the patient should have a choice whether to include the family or not—that is if they are able to'*. Giving patients an option to choose is inherent in person-centred care.

Attribute 5: Occurs at the bedside

Theme 1: Provides multiple opportunities

In round one, participants felt that handovers should occur at the bedside as there are multiple opportunities for information transfer. Healthcare professionals have to form first impressions, *'provides opportunity for visual check of the patient, environment, equipment, documents...is critical in an ED setting'*. Handovers at the bedside give healthcare professionals an opportunity to verify patient-specific information, *'gives opportunity to look at the patient and verify the information received with what is observed at that stage'* and *'... would ensure that the handover is related to a specific patient'*. Handovers at the bedside contribute to person-centred care, *'opportunity to include patient and family'* and *'give the patient the opportunity to hear what was handed over and add missing info'*.

Theme 2: Context specific

Participants felt that performing handovers at the bedside may also have some negative aspects and that the context of EDs should be considered, *'would depend on the context and layout of the ED. If it is not possible to do so without jeopardizing the patients privacy and*

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limiting the interruptions, another area can be considered and *'the bedside is sometimes the most noisy and busy area'*.

In rounds two and three, this attribute was adjusted to include a dedicated space. Participants agreed that handovers should be performed in a dedicated space. This space is often at the bedside, but the context of the unit should be considered. The space should allow for effective communication, *'this makes the dedicated space-the bedside'*, *'it has to occur at the bedside to include the patient'*, *'the context rather than the space is more important'* and *'dedicated area ensures that the right people accept the handover in an environment that is conducive to communication and effective handover'*.

Participants indicated that effective handover spaces should have minimal interruptions and distractions. This is not always easy in busy ED environments. Conducting handovers by the patient's bedside can facilitate patient and/or significant other participation, reduce interruptions from bedside activities, and promote confidentiality and person-centred care, *'around the patient's bedside encourages patient and significant others' participation'* and *'must have time and space to do an effective handover'*.

Attribute 6: No interruptions

Theme 1: Handover practices without interruptions

In round one, participants indicated that handovers should ideally be performed without interruptions, *'...without interruptions is ideal and beneficial as there is no diversion of attention to other issues or aspects. The practitioner can focus solely on the information being provided to them'*. Handovers are vital for transferring care and ensuring continuity, *'the handover should be seen as an almost sacred time and if all involved treat it with the respect and importance it deserves, it is the golden opportunity to hand over all important information. Once again this culture must be nurtured from both professions involved in this process side'*.

Theme 2: Consequences of interruptions

According to participants, interrupted handovers have multiple disadvantages, *'the consequences of interruptions can be significant for both deliverer and receiver of handover'*, *'interruptions may lead to information being missed'*. Healthcare practitioners should guard against interruptions.

Theme 3: Interruptions are unavoidable

Participants indicated that although interruptions should be avoided; interruptions are sometimes unavoidable and even necessary, *'the immediate or urgent care needs of the*

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patient may (and should) take precedence over the transfer of care’ and ‘someone has essential information that needs to be shared’.

In rounds two and three, participants indicated that a person-centred handover culture will foster person-centred handover practices. Consequently, healthcare professionals will provide high-quality person-centred care and person-centred continuity of care, *‘contribute to the development of person-centred care handover practices’, ‘person-centred handover is an critical component of person-centred continuity of care. When we keep the patient the centre of all we do, especially when handing over, we are able to transcend hierarchies, inter-professional issues and systematic barriers to effective patient care’.*

Participants suggested that there should be one dedicated person to oversee handovers. This person might receive the handover from emergency care practitioners whilst other healthcare practitioners continue with patient care delivery, *‘someone should be allocated to do the handover as a priority while other healthcare professionals continue care’.*

Concept definition

Table 3 provides a summary of the concept definition development over the three rounds.

Insert Table 3: Summary of agreement and adjusted definition after each round

Round one

In round one, 89% of participants agreed with the proposed concept definition.

Participants stated that not all of the attributes were included in the definition, *‘work on the flow of the definition’, ‘this is quite long, and I wonder if it could be more succinct’* and *‘the definition would benefit from stronger wording related to patient-centeredness’.*

Round two

In round two, 86% of participants agreed with the adjusted definition. Although consensus was reached, participants made valuable suggestions to improve the definition.

Some participants (50%) indicated that all the important points were included in the definition, *‘I think this captures the most important points succinctly’.* The rest of the participants felt that some clarification was needed on the ‘dedicated space’ attribute and to include the component of visual communication, *‘the concept dedicated space must be clarified’* and *‘you have also omitted visual communication’.*

Round three

In round three, all participants (100%) agreed with the adjusted definition. There were no additional comments and the adjusted definition was not changed, '*agreed, well-constructed and inclusive of attributes*'.

DISCUSSION

The study aimed to create a shared understanding of the concept of person-centred handover practices. Different definitions exist for handover, but the most accepted definition is the transfer of responsibility and accountability of care from one healthcare practitioner to the next.¹⁵ Person-centred care has also been described in different ways, with all definitions placing the patient at the centre of their care.²² Here, we conducted a Delphi study to develop an accepted definition of person-centred handover practices as follows:

Person-centred handover practices is a context specific approach involving the interprofessional sharing of verbal, non-verbal, and written information that occurs in an dedicated space at the patient's bedside with minimal interruptions and facilitate patients and/or their significant others' active engagement.

In EDs, handover practises are a high-risk activity requiring a meticulous approach to preventing patient harm.^{17,18,33,34} The need for person-centred care delivery in EDs has also been cited many times.^{22,35} Implementing person-centred handover practices are one way of initiating person-centred care in EDs.

Participants discussed various attributes of person-centred handover practices EDs. The first attribute dealt with implementing a structured, context specific approach. Within the context of EDs, handovers should focus on patient needs to support the transfer of relevant information. During handovers, emergency care practitioners are responsible for informing healthcare professionals regarding prehospital problems and treatments, so that healthcare professionals can plan further treatment and ensure continuity of care. Many studies suggest that all relevant information such as problems, procedures, treatments, and vital signs^{17,36} be transferred using a specific structure. Different strategies, such as mnemonics, have been implemented in EDs to ensure structured transfer of information.³⁷ Participants highlighted that handovers are not a case of one size fits all, and most mnemonics are not suitable for handovers in EDs.^{19,38} In our definition, information should be shared in a manner that focuses on the needs of patients to support the transfer of relevant information.

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The second attribute focusses on sharing verbal, non-verbal, and written information during handover. During handovers, information should first be shared verbally followed by a written document. Talking ensures that first-hand, contextual information is received from emergency care practitioners. The information is then written down to record facts and ensure comprehensiveness. Healthcare practitioners can refer to written documents once emergency care practitioners have left. Written records prevent information loss¹⁷ and can be used as a reference. Non-verbal information is also important as it ensures a more holistic approach when sharing all three types of communication¹⁶. Information about what emergency care professionals saw, smelt, experienced, and sensed about the patient and their environment is important for holistic patient care.

The third attribute identified person-centred interprofessional activities as an important attribute of person-centred handover. Handovers are an interprofessional activity, transferring accountability and responsibility, underpinned by person-centred principles that will ultimately affect patient care.³ Ideally, the healthcare team responsible for patient care should be involved in handovers from the beginning to reduce the need for repeated handovers and reduce the risk of information loss. Handovers are an interprofessional process involving at least two different professional groups.³³ When these professional groups with their own organizational cultures meet, cultures have to merge to ensure the transfer of responsibility and accountability.³⁴ Interprofessional collaboration is vital for achieving person-centred care.

The fourth attribute of person-centred handover practices includes the active involvement of patients and their significant others. Handover practises should be flexible and encourage participation of patients and significant others and provide an opportunity for shared decision making. Handovers that include patients and their significant others allows them to participate in their own care, state their complaints to guide care planning, and be part of decision-making.⁶ Patients are the only constants during handovers and are vital for ensuring continuity of care.²⁴

The fifth attribute of person-centred handover practices involves having a dedicated space for handovers. Handovers should occur in a dedicated space preferably around the patient's bedside with minimal interruptions. The space should allow for effective communication whilst ensuring patient confidentiality. Handovers in EDs are different from handovers in other environments.¹⁵ Emergency departments are complex environments and reliable communication is vital,⁶ but EDs are characterized by constant interruptions (multi-tasking, workload) and distractions (alarms, noise, and overcrowding).¹⁵ Handovers often take place while multiple healthcare professionals interact with the patient at the same time.¹⁵ Constant

interruptions during handovers may cause information loss and negatively impact patient care. Handovers that occur around the patient's bedside may lead to fewer interruptions, reduce noise levels, and provide an opportunity for healthcare professionals to listen attentively.^{13,39} This will also give the patient an opportunity to participate in their own care.²³

The sixth attribute states that handovers should be person-centred. Participants suggested that a dedicated healthcare professional should actively participate and facilitate the handover process to nurture a person-centred handover approach. One person should be in charge of providing the handover, and one person should be responsible for receiving the handover.^{17,39} A dedicated healthcare professional should lead the handover process and listen attentively while other members of the healthcare team begin with treatment. This dedicated person should communicate with and include patients and/or significant others from the start.

LIMITATIONS AND STRENGTHS

Our panel comprised of experts in clinical and academic settings from different countries increasing the transferability of the attributes and definition into EDs globally. Our findings may be limited by small sample size.

CONCLUSIONS

Having a shared definition and clearly defined attributes for person-centred handover practices is an important step towards improving handover practices in EDs. This definition may serve as a base for improving person-centred care in EDs. In the future, this shared definition can be used to develop clinical practice guidelines for person-centred handover practices in EDs.

RELEVANCE TO CLINICAL PRACTICE

To date, this is the first shared definition for person-centred handover practices in EDs. Ideally, person-centred handovers will lead to person-centred care in EDs. Our findings have implications for education practice. The definition and related attributes can also be implemented in nursing, emergency care practitioner, and healthcare professionals' curricula. This definition can also serve as a platform for further conceptual studies.

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CHAPTER 5

PHASE 2: MINING THE LITERATURE

OBJECTIVE 3

To explore current literature on person centred handover practices in the ED to inform clinical practice guidelines

5.1 INTRODUCTION

Chapter 4 provided the final concept definition and related attributes for person-centred handover practices. This chapter discusses Phase 2, Objective 3 which was to explore current literature on person-centred handover practices in the emergency department (ED) to inform clinical practice guidelines.

The researcher conducted a scoping review using the JBI guidelines for scoping reviews (Peters, Marnie, Tricco et al, 2021). Chapter 2 discussed the research design and methodology in depth.

5.2 OUTCOME

This phase explored current literature on clinical practice guidelines for person-centred handover practices between emergency care practitioners and healthcare professionals.

A priori scoping review protocol was developed using the JBI steps (Peters, Godfrey, McInerney et al, 2022) on the scoping review protocol template provided by JBI (see Annexure B.5). Sections of the protocol as applicable to each part of the review protocol are illustrated below:

- A title, including the most important words associated with the review and that describe the P (**P**opulation), C (**C**oncept), C (**C**ontext) with the words “scoping review” and “protocol”.

Clinical Practice Guidelines for person-centred handover practices in the emergency department: A scoping review protocol

- A clearly defined objective, including what will be investigated or described.

The objective of this scoping review is to identify and present the available information regarding clinical practice guidelines on person-centred handover practices between emergency care practitioners and healthcare professionals in the ED. This can provide a comprehensive picture of person-centred handover practices amongst emergency care practitioners and healthcare professionals in the ED, how it is done and what it entails.

- A review question linked to the objective, use of the PCC framework which assisted in the development of the research question, and by answering the review question the objective of the study should be reached.

Review question

- What clinical practice guidelines are available on person-centred handover practices between emergency care practitioners and healthcare professionals in the ED?
- What content does the available clinical practice guidelines for handover practices include?

- An introduction. The rationale for the scoping review was discussed in the introduction and provided a clear explanation of the importance of the scoping review. The introduction is an important part of the protocol as it provides information on what is known, the problem leading to the review, why the review is needed, information on the specific inclusion criteria, an explanation why the research question and objective is what it is, and the justification for the use of a scoping review.

Introduction

Handover practices are integral in the process of providing safe, quality patient care and are defined as the “transfer of professional responsibility and accountability for some or all aspects of care for a patient or patient group to another person or professional group on a temporary or permanent basis”(1,2). Effective communication is not only essential for safe patient care, it also promotes participation and partnership between healthcare professionals and patients(3).

- Eligibility criteria (or inclusion criteria) are related to the objective and review question and are used to determine what should be included or excluded in the review. The study used the P (participants), C (concept), C (context) framework. Important characteristics of the participants were described with a justification for inclusion or exclusion.

Inclusion criteria

The Participants, Concept, and Context (PCC) framework will be used to determine studies eligible for inclusion in this review (11).

Participants

Eligible populations will include emergency care practitioners who transport patients from the pre-hospital environment to the ED and are involved in handover practices with healthcare professionals.

- The concept is the key issue of the review, and the context usually relates to the location or field of the concept and/or participants.

Concept

The concept of interest is clinical practice guidelines for person-centred handover practices between emergency care practitioners and healthcare professionals in the ED. All studies related to person-centred handovers in the ED will be included.

Context

The scoping review will consider studies that have been conducted in emergency departments, emergency rooms, or emergency centers. Studies conducted in any geographical area will be considered.

- Types of evidence sources are included in the eligibility criteria. Any literature (primary studies, systematic reviews, meta-analyses, letters to the editor, guidelines, websites, policy documents) can be included.

Types of Sources

The review will be limited to studies published in English. To take advantage of relevant available literature on the topic, the search will not be limited to a specific time frame. Both primary sources and evidence synthesis that have included the primary source will be included. However primary sources will be excluded if already incorporated into an included evidence synthesis unless the data they contain are not otherwise reported in the evidence synthesis (11).

- Methods. The methodology or framework which was used should be mentioned, e.g. JBI (Peters, Marnie, Tricco et al, 2021); Levac et al, (2010) and Arksey & O'Malley, (2005).

Methods

The proposed scoping review will be conducted in accordance with the JBI methodology for scoping reviews (12).

- The search strategy, the approach to search for and select potential evidence sources, a research librarian or information scientist is suggested for the development of the search strategy and during the research, and should be mentioned as such in the protocol. The search strategy involved a list of key terms and words based on the inclusion criteria.

Search strategy

The search strategy will aim to locate both published and unpublished studies. An initial limited search of PubMed was conducted to identify articles on the topic. The text words contained in the titles and abstracts of relevant articles, and the index terms used to describe the articles were used to develop a full search strategy. The initial search will be conducted using MEDLINE (PubMed) and CINAHL (EBSCO). A second more detailed search will be conducted using the identified search terms across

- Study/source of evidence selection. Selection of sources depended on whether they met the protocol inclusion criteria, and involved screening of evidence sources at

title/abstract level and then full text, information on how many members were part of the review team to do the screening and selection, and how the process will be cross-checked was included. Pilot testing of the screening process was discussed, and how disagreements would be dealt with. The Mendeley reference management software to upload all included citations was used. The reporting of excluded sources using the PRISMA, ScR to graphically depict the movement of sources throughout the process was included (see Chapter 5 - article). Data extraction should be explained in a detailed, clear and easy-to-understand way.

Study/Source of Evidence Selection

Following the search, all identified citations will be collated and uploaded into Mendeley reference management software 2022 (Mendeley Ltd., Elsevier, New York) and duplicates removed. Following a pilot test, the titles and abstracts will be screened by two independent reviewers for assessment against the inclusion criteria for the review. Potentially relevant sources will be retrieved in full, and their citation details imported into the JBI System for the Unified Management, Assessment and Review of Information (JBI SUMARI) (JBI, Adelaide, Australia) (13). The full text of the selected

Data were extracted in line with the review question and inclusion criteria. A draft table of the items was included in the protocol (see Annexure B.7). The draft data extraction tool was piloted on a subset of sources and mentioned in the protocol. The number of members involved in the data extraction was stated, together with cross-checking of data and how disagreements would be addressed.

Data Extraction

Data will be extracted from articles included in the scoping review by two independent reviewers using a data extraction tool developed by the reviewers (11). The data extracted will include specific details about the author, year, country, study aim/s, study design, setting, population and sample size, available clinical practice guidelines, clinical practice guideline content, gaps in the research, and key findings relevant to the review questions.

A draft data extraction tool was developed and is provided (see Appendix II). The draft data extraction

- Data analysis and presentation. Analysis of the data is usually descriptive, with basic frequency analysis and percentages. It was proposed that data be presented in table format with a narrative description. Because scoping reviews aim to identify existing knowledge, it is important to present conceptual categories such as intervention type, study population (sample size), duration of intervention, aims, methodology, key findings, and gaps in the research. These conceptual categories were included in the table (See Annexure B.7). Ideally, the protocol should be followed closely during the review. However, due to the iterative nature of scoping reviews, it is common for authors to deviate from the protocol, which will be mentioned in the review manuscript to ensure transparency of the scoping review should it occur (Peters et al, 2022:965).

Data Analysis and Presentation

The extracted data will be presented in tabular form with an accompanying narrative summary describing the results in detail (12). The results will be presented in relation to the objective and questions of the review. Both review questions will be tabulated in the same table with separate

At the time of the scoping review no clinical practice guidelines were found, but information on the current content and handover practices between emergency care practitioners and healthcare professionals in the ED was found.

The article was submitted to a peer review journal: *Journal of advanced Nursing* on December, 1 2023.

de Lange, S., Heyns, T. and Flimalter, C. 2023. Clinical Practice Guidelines for person-centred handover practices in the emergency department: A scoping review. *Journal of Advanced Nursing*.

See Annexure E.1 for evidence of submission for peer review. This chapter will be presented according to the headings of the authors guidelines as specified by the journal. View author guidelines here:

<https://onlinelibrary.wiley.com/page/journal/13652648/homepage/forauthors.html>

5.3 SUMMARY

This chapter discussed the available literature on person-centred handover practices in the ED. The information from the scoping review was used to develop preliminary clinical practice guidelines for person-centred handover practices in the ED (see Chapter 6).

ARTICLE

Title: Clinical Practice Guidelines for person-centred handover practices in the emergency department: A scoping review

Citation: de Lange, S., Heyns, T. and Filmlalter, C. 2023. Clinical Practice Guidelines for person-centred handover practices in the emergency department: A scoping review. *Journal of Advanced Nursing*.

Journal: Journal of Advanced Nursing.

Status: Submitted on December 1, 2023, for peer review. Corrections were submitted and awaiting feedback.

Clinical Practice Guidelines for person-centered handover practices in emergency departments: A scoping review

Aims: To review the available information on clinical practice guidelines for person-centered handover practices between emergency care practitioners and healthcare professionals in emergency departments. Currently, there is no gold standard for person-centered handover practices in emergency departments. Collating existing clinical practice guidelines may improve handover practices.

Design: Scoping review.

Data sources: The literature on clinical practice guidelines for person-centered handover practices was reviewed. Three electronic data bases were searched: MEDLINE (PubMed), CINAHL (EBSCO), and Scopus. Nineteen studies met the inclusion criteria.

Methods: The review was conducted according to the Johanna Briggs Institute methodology for scoping reviews. Results were reported using the Preferred Reporting Items for Systematic Reviews and Meta-Analysis extension for Scoping Reviews checklist.

Results: Various mnemonics exist for handover practices. Where mnemonics are not used, participants have identified important information that should be included during handover practices. We did not find any clinical practice guidelines or information on person-centered handover practices in any of the reviewed articles.

Conclusion: Currently, there is no gold standard for person-centered handover practices, which has led to various practices being implemented. Most articles expressed a need for standardized handover practices; however, not all aspects of handover practices can be standardized and should be kept patient and context specific.

Impact: Currently, there are no clinical practice guidelines for handover practices in emergency departments. Subsequently, there is a need for standardized, yet patient and context specific, handover practices. Knowledge of existing handover practices may guide the development of clinical practice guidelines for person-centered handover practices between emergency care practitioners and healthcare professionals in emergency departments. Such guidelines may improve current handover practices and lead to improved patient care.

Reporting Method: The study adhered to the relevant EQUATOR guidelines: Preferred Reporting Items for Systematic Reviews and Meta-Analysis extension for Scoping Reviews checklist.

Patient or Public contribution: No Patient or Public Contribution.

Keywords: clinical practice guidelines, person-centered, handover practices, emergency care practitioners, healthcare professionals, emergency department

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What does this paper contribute to the wider global clinical community?

- Current handover practices in emergency departments may be improved by creating awareness of current handover practices.
- We identify existing handover mnemonics or tools to guide handover practices.
- This review highlights the importance of adequate handover in continuity of patient care.
- Standardized, yet patient and context specific handover practices, are needed in emergency departments.

Trial and Protocol Registration: This scoping review protocol was registered on Figshare: [10.6084/m9.figshare.21731528](https://www.figshare.com/records/10.6084/m9.figshare.21731528)

1. INTRODUCTION

In clinical settings, transfer of care is often described as handover, hand off, or transition of care. The British Medical Association (2008) defines clinical handover as “*the transfer of professional responsibility and accountability for some or all aspects of care for a patient, or group of patients, to another person or professional group on a temporary or permanent basis*” (Friesen, White and Byers, no date). Handover occurs multiple times per day in all healthcare facilities and amongst various healthcare professionals (Cheetham *et al.*, 2023; Forde, Coffey & Hegarty 2020; Tortosa-Altied *et al.*, 2021). Regarded as a complex procedure, handover involves many different role players (professionals, patients, members of the public) and uses a variety of technologies and formats (Guasconi *et al.*, 2022).

In emergency departments (EDs), handovers differ from those in other healthcare settings due to the unique, somewhat chaotic, and complex environment of the ED (Cheetham *et al.*, 2023; Guasconi *et al.*, 2022; Tortosa-Altied *et al.*, 2021). Rapid decision making, rather than listening, is often prioritized in EDs (Cheetham *et al.*, 2023; Howell *et al.*, 2023; Tortosa-Altied *et al.*, 2021). Amongst the different types of handovers that occur in EDs, handovers from the pre-hospital environment (emergency care practitioners [ECPs]) to the in-hospital environment (healthcare professionals-doctors and nurses) are vitally important for continuity of care, patient safety, and quality care (Cheetham *et al.*, 2023; Cowan *et al.*, 2023; Howell *et al.*, 2023). Effective communication is crucial during handovers between ECPs and healthcare professionals in EDs. Currently, there are various handover tools/mnemonics/protocols/models that aim to facilitate communication and standardize handover practices between ECPs and healthcare professionals (Cheetham *et al.*, 2023; Guasconi *et al.*, 2022; Howell *et al.*, 2023), but the optimal method has not been identified. Consequently, many studies have suggested the need for improving handover practices (Cheetham *et al.*, 2023; Cowan *et al.*, 2023; Howell *et al.*, 2023; Guasconi *et al.*, 2022; Mastrogiovanni & Michelle Moccia, 2022;).

Standardized handover practices have been associated with improved staff satisfaction, comprehensive information transfer, shortened handovers (Guasconi *et al.*, 2022), retention of information (Mastrogiovanni & Michelle Moccia, 2022), fewer interruptions, increased confidence in handover delivery (Cowan *et al.*, 2023), and less room for mistakes (Clark, 2023). Ideally, standardized methods should be closely followed to prevent information loss (Guasconi *et al.*, 2022). Health professionals are not the only role players during handovers; patients are also involved. Patients are commonly involved in handovers during nursing staff shift changes (Ismuntania *et al.*, 2023; Poelen, van Kuppenveld & Persoon, 2023). Patient

involvement during handovers is important for delivering person-centered care and shared decision-making, which reduces anxiety, improves satisfaction, and increases participation in care (Ismuntania *et al.*, 2023; Kim, Kim & Lee, 2022; Street *et al.*, 2022;). Patients who are involved in their care also have the opportunity to clarify and correct inaccuracies (Ismuntania *et al.*, 2023). Despite these benefits, patients are rarely included in handovers (Street *et al.*, 2022). Person-centered handovers promote person-centered care, which involves eliciting information regarding patients' values and preferences to guide individualized care (Kim, Kim & Lee, 2022; Poelen, van Kuppenveld and Persoon, 2023). Person-centered care in EDs has gained traction with the move from being centered on the illness or provider to being individualized and based on partnerships between patients and healthcare professionals (Kim, Kim & Lee, 2022). Despite person-centered care gaining momentum in EDs, research on person-centered handover practices between ECPs and healthcare professionals in EDs is limited.

2. AIM

This review aimed to identify and present the available information on clinical practice guidelines for person-centered handover practices between ECPs and healthcare professionals in EDs.

3. METHODS

The review was conducted according to the Johanna Briggs Institute (JBI) methodology for scoping reviews (Peters *et al.*, 2021). The results were reported using the Preferred Reporting Items for Systematic Reviews and Meta-Analysis extension for Scoping Reviews checklist (PRISMA-ScR) (Tricco *et al.*, 2018).

3.1 Data sources and search strategy

As per the JBI approach, literature was searched in three-steps. The search strategy was designed and refined in collaboration with an information specialist. Step 1: an initial search using MEDLINE (PubMed) was conducted. For the full electronic search strategy conducted on MEDLINE (PubMed). (Table 1 – supplementary file – search strategy)

Step two involved searching the CINAHL (EBSCO) and Scopus databases. Although we planned to search Web of Science, we did not search Web of Science because most studies were duplicate studies found on both CINAHL (EBSCO) and Scopus. Step three involved searching for organizations that publish clinical practice guidelines, namely the National Institute of Health, American College of Physicians, the National Institute of Health and Care Excellence, the Registered Nurses' Association of Ontario, the Australian Medical Association,

and the British Medical Association. Lastly, the reference lists of included studies were searched for additional studies. Searches were conducted between January 29 and May 31, 2023 after the search strategy was pilot tested by the information specialist and one member of the scoping review team (SdL).

3.2 Inclusion and exclusion criteria

The participants, concept, and context framework was used to determine the inclusion criteria for the review (Peters *et al.*, 2021).

Participants

Emergency care practitioners transporting and handing patients over to healthcare professionals in EDs. Healthcare professionals including doctors and nurses working in EDs, who are involved in handovers with ECPs.

Concept

Clinical practice guidelines for person-centered handover practices between ECPs and healthcare professionals in EDs.

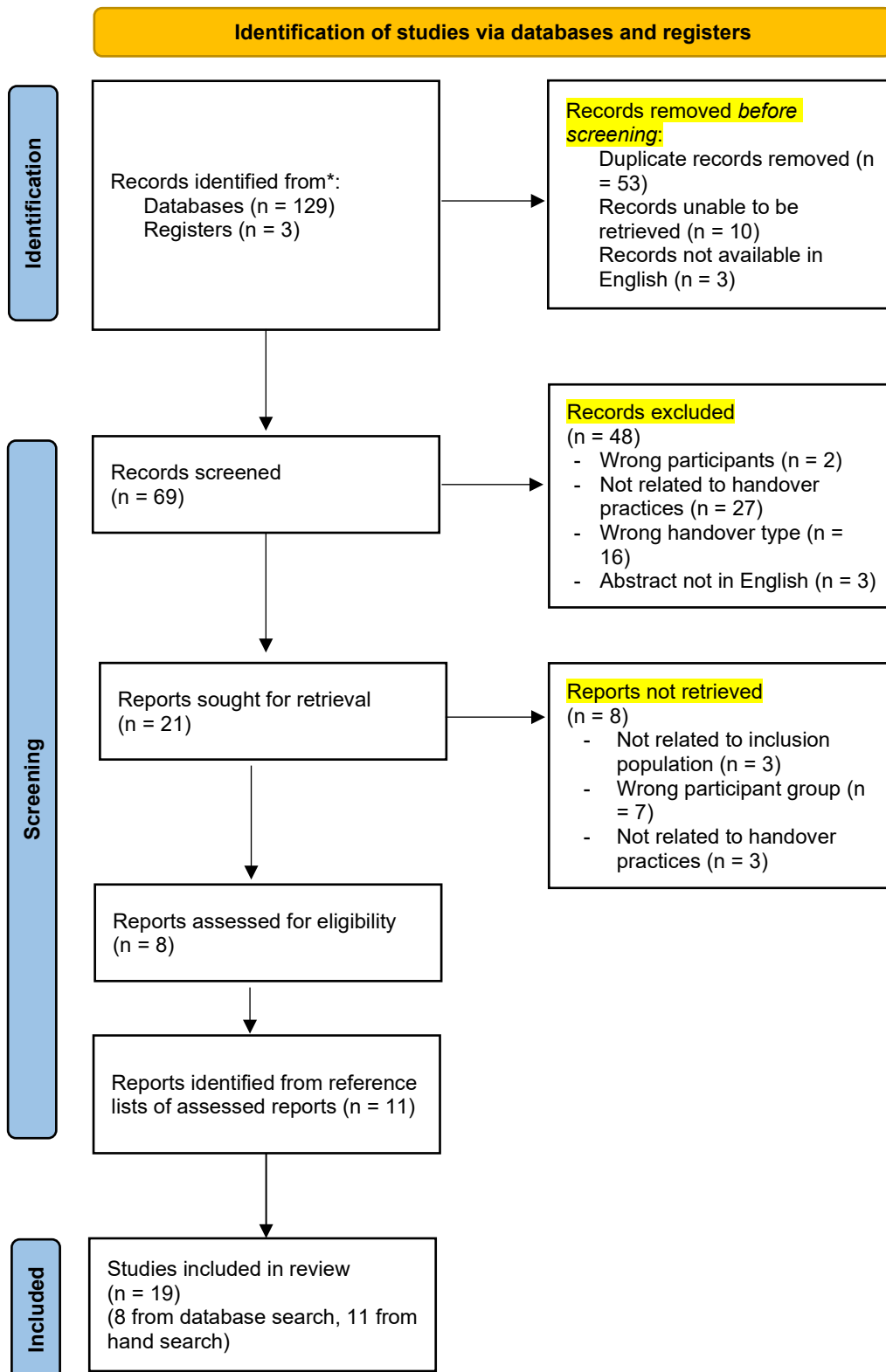
Context

Studies conducted in EDs, emergency rooms, or emergency centers in any geographical area.

Due to limited literature, we did not apply any language or time restrictions. The search included published and unpublished studies, opinion papers as well as primary sources, and evidence synthesis. All qualitative and quantitative research designs were included.

3.4 Search outcomes

The initial search yielded 129 records and three handover guidelines from organization sites, resulting in 132 records. No automation tools were used for the screening and selection process. After de-duplication, irretrievable and non-English record were removed. The abstracts of 69 records were screened. Forty-eight records did not meet the inclusion criteria and were excluded, resulting in 21 full-text reports being screened. Thereafter 13 reports were excluded as it did not pertain to inclusion participants (population), some was the wrong participant group, and articles not related to handover practices. From there, 11 reports were identified from reference lists of identified articles resulting in 19 studies being included in the final review (Figure 1). All reports were uploaded into Mendeley reference management software 2022 (Mendeley Ltd, Elsevier, New York). All full text citations were uploaded into Rayyan (2022) to collaboratively review the literature. The full text citations were assessed in detail against the inclusion criteria by two members of the scoping review team (SdL and TH), and a third reviewer (CF) resolved any disagreements.



Supplementary figure 1: PRISMA flow diagram-search and retrieval process

3.5 Data extraction and synthesis

A data extraction tool was developed, pilot tested, and used to extract data from the included studies (Table 2 – supplementary file – data extraction tool).

4. RESULTS

Most the reports originated from developed countries, of which 36% ($n = 7$) were done in Europe, Australia ($n = 6$), America ($n = 5$), and the Middle East ($n = 1$). (Figure 2 – supplementary file – number of studies per country).

Articles were published between 2001 and 2020. Most of the articles (47%) were published between 2011 and 2015 ($n = 9$), followed by 2016 to 2020 ($n = 4$), then 2006 to 2010 ($n = 3$), and the least reports were published between 2001 and 2005 ($n = 2$) at 10%. Evidently, the number of publications on handover practices between ECPs and healthcare providers in EDs has increased over the last 20 years. (Figure 3 – supplementary file – illustration of publications per year).

Forty two percent of reports were qualitative ($n = 8$), which included observational studies, focus group interviews, audits, and ethnographic studies. Fifteen percent of articles were quantitative ($n = 3$), 15% were mixed methods studies ($n = 3$), and 26% reviews (systematic and literature) ($n = 5$). All studies were conducted in EDs involving various participants; 5% included ED nurses only, 5% included only emergency care practitioners (ECPs), 5% included ECPs and ED nurses, 10% included ECPs and doctors, 52% included ED nurses, ECPs, and doctors, and 15% of articles were document audits. (Table 3 – supplementary file – included studies characteristics).

Four studies used standardized or structured handover tools. Two studies referred to guidelines, and two studies referred to mnemonics. The remaining 13 articles did not provide a specific term for handover practices. Ten studies provided a specific tool or mnemonic to be used when conducting a handover such as, MIST (Dawson, King & Grantham, 2013; Jensen, Lippert & Østergaard, 2013; Wood *et al.*, 2015), DE-MIST (Bost *et al.*, 2010; Ebben *et al.*, 2015), ISBAR (Dawson, King & Grantham, 2013; Di Delupis *et al.*, 2015; Dojmi Di Delupis *et al.*, 2014; Yegane *et al.*, 2017), IMIST-AMBO (Iedema *et al.*, 2012; Jensen, Lippert & Østergaard, 2013; Reay *et al.*, 2020), ICE/ ASHICE (Wood *et al.*, 2015), and BAUM (Jensen, Lippert & Østergaard, 2013). The remaining nine studies mentioned important details or information that should be included in handover practices (Table 4).

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Table 4: Summary of the reports included in this scoping review of clinical guidelines for handover practices in emergency departments (EDs) (n = 19).

Author	Title	Aim/s of the study	Study design	Population and sample size (n)	Available clinical practice guidelines (CPG)/ transition in care guidelines/ handover-model/ tool/ mnemonic in report	Key findings
Bost, Crilly, Patterson, & Chaboyer (2012)	Clinical handover of patients arriving by ambulance to a hospital emergency department: A qualitative study	(1) Explore clinical handover processes between ambulance and ED personnel (2) Identify factors that impact on the information transfer to ascertain strategies for improvement.	Focused ethnographic study	Emergency care practitioners (ECPs) (n = 79) Nurses (n = 65) Doctors (n = 19)	No CPG, transition in care, handover- tool/ model or mnemonic. Handover guideline was suggested.	Handover guideline: AMIST-Age, Mechanism of injury/ illness, Injury or illness, Signs and Treatment. Included information on place of retrieval, condition of patient on arrival of ambulance, age, signs and symptoms, observations performed, and treatment given by paramedics, past medical history if known, medications prescribed for previous medical conditions and social history if deemed relevant by paramedics. Transfer of responsibility should also occur. Standardizing the key principles of clinical handover can prevent the loss of vital information. These principles include nominating a leader at each handover, documentation of handover, and transferring information in a predetermined format. Two different handover processes were identified depending on the patient's acuity. Handover content differed and depended on experience and the preferred method of both the receiver and the giver of information.
Bost, Crilly, Wallis, Patterson &	Clinical handover of patients arriving by ambulance to the	To critically review research on clinical handover	Literature review	ECP to ED handover (n = 8 articles)	No CPG, transition in care, handover- tool/ model or mnemonic.	A detailed handover includes patient problems, incident, and patient assessment in verbal and written

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Chaboyer (2010)	emergency department – A literature review	between ambulance services and EDs			Handover structure was mentioned.	form. Known structures such as DeMIST are helpful. Information should include vital signs, past medical history, current medication, and pre-hospital treatment. Should be performed in two phases (a summary and then detail later). A standardized approach to handover should be followed. Discipline specific guidelines are needed.
Bruce, & Suserud (2005)	The handover process and triage of ambulance-borne patients: the experiences of emergency nurses.	To explore the experiences of emergency nurses receiving patients who were brought into hospital as emergencies accompanied by ambulance nurses through an analysis of the handover and triage process.	Qualitative descriptive approach	ED nurses (n = 6)	No CPG, transition in care, handover-tool/model/ mnemonic mentioned.	The ideal handover included information that was patient focused and clearly stated identifiable problems. Handover was a verbal report, clarifying the circumstances around what happened to the patient together with a descriptive picture of the patient's problems or needs. Information regarding the patient's overall care needs were deemed more important together information on the patient's life situation and potential problems. Commence with a brief handover to obtain an impression of the patient. Attentive listening during handover is important. Handovers comprise of verbal, written and physical handover involving ED nurses, ambulance nurses, and patients.
Carter, Davis, Evans & Cone (2009)	Information loss in emergency medical services handover of trauma patients	To determine the degree to which information presented in the EMS trauma patient handover is degraded.	Observation and document audit	Observed and audited handovers (n = 96)	No CPG, transition in care, handover-tool/model/ mnemonic mentioned	Knowledge regarding what happened to the patient before arriving at the ED is important. Handover information should include: pre-hospital hypotension, Glasgow Coma Scale, age, end-tidal CO ₂ , pulse, respiratory rate, saturation, blood loss in filed, death of occupant in same compartment, mechanism of

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						injury, intrusion, extrication time, estimated crash speed, anatomic location of the injury, pre-existing disease, prehospital intubation. From this list only 4.9 items were transmitted at every handover, with many not relevant to all patients.
Dawson, King, & Grantham (2013)	Improving the hospital clinical handover between paramedics and emergency department staff in the deteriorating patient.	To establish: (i) what aspects of the clinical handover between paramedics and ED staff impact on the effective transfer of a patient in a state of physiological deterioration (ii) how these aspects might be improved in the future.	Integrative literature review	ED doctors and nurses and paramedics (n = 17 papers)	No CPG, transition in care, handover- tool/ model. Handover mnemonics was mentioned.	A structured handover tool is needed. Mnemonic tools include ISBAR (Introduction, Situation, Background, Assessment and Recommendation) and MIST (Mechanism of Injury/Illness, Injuries, Signs, observations and monitoring, and Treatment given). Baseline observations, such as airway, breathing, circulation and level of consciousness, and changes in patient condition are required. Written (electronic or paper) should follow verbal handover.
Dojmi Di Delupis, Mancini, di Nota, & Pisanelli, (2015)	Pre-hospital/ emergency department handover in Italy	To measure communication during clinical handovers from prehospital to ED providers in a realistic setting with our communication evaluation tool.	Observational study	Observed handovers (n = 240)	No CPG, transition in care, handover- model/ mnemonic mentioned. Handover tool was mentioned.	Handover tool: ISBAR > 90% of handovers: the pre-hospital providers and nurses did not introduce themselves In 36% of handovers the patient was introduced by name. Other patient demographics were only reported in 10% of handovers. Reason for the emergency call was reported in 80% of handovers. In 26% of handovers changes in the patient's condition were reported. In 8.8% of handovers, allergies were reported and in 23% the medical history and home therapies were reported. Regarding patient assessment, the information was transmitted either completely, in part or not at all, in only 1% a

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						complete and systematic manner was used to transfer information completely. Vital signs were only reported in 66% of handovers. Recommendations (R) were not usually provided. No standardized tool existed which resulted in incomplete, partial, or disordered information being transferred.
Dojmi Di Delupis, Pisanelli, Di Luccio, Kennedy, Tellini, Nenci, Guerrini, Pini, & Franco Gensini (2014)	Communication during handover in the pre-hospital/ hospital interface in Italy: from evaluation to implementation of multidisciplinary training through high-fidelity simulation	(1) Development of simulated handover scenarios to evaluate the communication between pre-hospital and hospital providers (2) identify critical information that should be routinely communicated during the handovers between the pre- hospital and the hospital providers; (3) evaluate and adapt existing tools for measuring communication between medical providers for use in the pre-hospital/ED interface (4) validate the adapted tool (5) develop training for pre-hospital providers in handover communication (6) evaluate communication pre and post-training.	Mixed methods. Multidisciplinary handover simulations and debriefings. Baseline nursing quantitative surveys to evaluate handover communication. Multidisciplinary focus group interviews. Handover tool validation.	<i>Simulation activity:</i> Simulation scenarios (n = 12): Pre-hospital providers and ED physicians (n = 35), ED nurses (n = 6), Rescuers (n = 12) and Actors (n = 6). <i>Quantitative survey:</i> Triage nurses (n = 23). <i>Focus group interviews:</i> Emergency physicians (n = 4), ED nurses (n = 4) Rescuers (n = 4). <i>Handover tool validation:</i>	No CPG, transition in care, handover-tool/model/ mnemonic mentioned.	The lack of a standardized handover communication process was a concern for authors. The ISBAR tool was implemented, and training provided. Standardized communication was suggested for handovers. Both verbal and written handovers should occur. Triage nurses suggested the following critical information: patient identification, chief complaints, clinical condition, and medications. Family contact information and pre-hospital vital signs were regarded as less important information to be received. Other information regarded as important to handover included: patient name, age, baseline condition, condition during transfer, primary survey, and patient allergies.

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				Handover practices (n = 12)		
Ebben, van Grunsvan, Moors, Aldenhoven, de Vaan, van Hout, van Achterberg, & Vloet (2015)	A tailored e-learning program to improve handover in the chain of emergency care: A pre-test post-test study	To evaluate the effectiveness of a learning program to improve ECPs adherence to handover guidelines during pre-hospital notification and handover in the chain of emergency medical service, emergency medical dispatch, and the ED.	Prospective pre-test post-test design	E-learning program: Emergency medical services (n = 73), Emergency medical dispatch (n = 15) Pre-test handover (n = 145) Post-test handovers (n = 167)	No CPG, transition in care, handover- tool/ mnemonic. Described the DeMIST model.	DeMIST (Demographics, Mechanism of injury or illness, Injuries (sustained or expected), Signs (including observations and monitoring), Treatment given). The pre-test post-test indicated no significant difference in adherence to the model. Post intervention handover receiving team composition changed. Handovers took place after patient transfer. Results indicate that the DeMIST model was not always deemed appropriate for handovers.
Goldberg, Porat, Strother, Lim, Wijeratne, Sanchez & Munjal (2017)	Quantitative analysis of the content of EMS handoff of critically ill and injured patients to the emergency department	A quantitative analysis of the information transferred from EMS providers to ED physicians during handoff of critically ill and injured patients.	Observational study	Observed handovers (n = 90)	No CPG, transition in care, handover-tool/model/ mnemonic mentioned	Less than half of the required information is transferred during handovers. The most transferred information includes the presenting problem, initial patient condition information, vital signs, past medical history, medications, chief concern, and overall assessment of pre-hospital providers. A summary of the patient situation and clinical impression is also deemed important, but only done 31% of the time. Standardization is used increasingly and improves patient handoff quality and could potentially improve patient outcomes.
Iedema, Ball, Daly, Young, Green, Middleton, Foster-Curry, Jones, Hoy,	Design and trial of a new ambulance-to-emergency department handover protocol: IMIST-AMBO	(1) Identify the existing structure of paramedic-to-emergency staff handovers by video analysis. (2) involve practitioners in reflecting on practice using	Video-reflexive ethnography with six phases: Focus groups and pre- and post-survey analysis	Pre-videod handovers (n = 73) post-videod handovers (n = 63)	No CPG, transition in care, handover-tool/model/ mnemonic mentioned. Handover protocol was mentioned.	A paramedic to ED staff protocol was developed from existing practices. Handover protocol: IMIST-AMBO Current practices indicated that 73 handovers were done in a tentative or tacit structure by paramedics.

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Comerford (2012)		footage (3) combine those reflections with formal analyses of these filmed handovers to design a handover protocol (4) trial-run the protocol (5) assess the protocol's enactment		pre-post survey triage nurses (n = 416)		Information included was patient identification, an outline of the medical complaint, the mechanisms of injury, details about the complaint or the relevant injuries and vital signs and GCS. Post implementation IMIST-AMBO appeared to provide paramedics with cues for components they regard as critical, while also matching informational expectations of ED clinicians. Mnemonic ensured more consistent information transfer, improved triage and care decisions.
Jenkin, Abelson-Mitchell, Cooper (2007)	Patient handover: Time for a change?	To identify the current process of information transfer between ambulance staff and ED staff during patient handover.	Quantitative questionnaire	ECPs (n = 42), Doctors (n = 17) ED nurses (n= 21)	No CPG, transition in care, handover-tool/ model, or mnemonic.	The reason for attendance, problems requiring immediate intervention and treatment provided, and any significant previous medical history is important. Electronic transfer of information to the ED may improve the delivery and efficiency of handovers. Legible written information with a verbal handover should occur. Patient's name, time of the event, time of medication administration, suspected injuries/ illness, and allergies are part of the handover.
Jensen, Lippert, & Østergaard (2013)	Handover of patients: a topical review of ambulance crew to emergency department handover	To identify important factors influencing ambulance to ED handover, and to suggest ways to optimize this process.	Literature review	Ambulance and ED personnel handovers (n = 18 papers)	No CPG, transition in care, handover- model/ mnemonic. Handover tool mentioned.	Verbal and written handover information should be transferred in a structured manner. Responsibility should also be transferred. Some studies indicated a need for national guidelines. Handovers should be a context specific. Three structured tools were identified: 1) BAUM 'Bestand' (inventory), 'Anamnese' (medical history), 'klinische Untersuchungsergebnisse' (clinical findings)

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						and 'Massnah- men' (actions). 2) MIST and 3) IMIST-AMBO. (identification, mechanism/medical impact, signs, vitals and Glasgow Coma Scale, treatment and trends/ response to treatment – allergies, medications, back- ground history and other (social) information).
Meisel, Shea, Peacock, Dickinson, Paciotti, Bhatia, Buharin & Cannuscio (2015)	Optimizing the patient handoff between EMS and the ED	To identify issues surrounding the EMS handoff process to describe how the EMS-to-ED handoff functions and how it can be improved.	Qualitative, focus groups	EMS providers (n = 48) Focus groups (n = 7)	No CPG, transition in care, handover- tool/model/ mnemonic mentioned	Handovers should be clear, effective, and delivered to the right ED staff. Changes in patient condition should be described in detail. Participants suggested a direct handover to the physician from EMS. Some but not all aspects of the handover should be standardized. Electronic records should be used for the written component of the handover.
Picinich, Madden, & Brendle (2019)	Activation to arrival: transition and handoff from emergency medical services to EDs	Not provided	Not provided	Not provided	No CPG, transition in care, handover- tool/ model or mnemonic.	An effective standardized handoff is needed. Handover information should include airway status and management, vital signs, neurologic exam, therapeutic interventions, mechanism of injury, time of symptom onset, medical history. Identification, chief complaint, status, assessment, interventions, and background and response to treatment. Should include a verbal and written component.

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Reay, Norris, Nowell, Hayden, Yokom, Lang, Lazarenko, Abraham (2020)	Transition in care from emergency services (EMS) providers to emergency department (ED) nurses: A systematic review	To examine: (1) factors that influence transitions in care from EMS providers to ED nurses (2) the effectiveness of interventional strategies to improve these transitions.	Mixed methods systematic review	Emergency care practitioners (ECPs), medical providers and ED nurses (n = 20 articles)	No CPG or handover-model/tool/mnemonic in report. Transition in care guideline was suggested.	Transition in care guidelines include: DeMIST (Demographics, Mechanism of injury or illness, Injuries (sustained or expected), Signs (including observations and monitoring), Treatment given) or IMIST-AMBO (Identification, Mechanism/ Medical complaint, Injuries/ Information related to the complaint, Signs, Treatment and Trends - Allergies, Medication, Background history, other information). Guideline should involve the patient and family. Pre-notification and a dedicated person to be allocated to the handover and performing triage. Use of digital images is useful to ED nurses. Using a standardized protocol resulted in conflicting findings. Standardized handoffs can improve patient safety and ensure the transfer of essential information transfer, but flexibility might be needed.
Thakore & Morrison (2001)	A survey of the perceived quality of patient handover by ambulance staff in the resuscitation room	To describe current perceptions of medical and ambulance staff.	Descriptive survey with questionnaires	Medical staff (n = 30) Ambulance staff (n = 67)	No CPG, transition in care, handover-tool/model/ mnemonic mentioned	A system including patient details, followed by a concise history of the events, general medical condition, salient physical, and vital signs should be developed. Medical staff (69%) felt the quality of handovers varied a great deal between ambulance crews. Information received included: history, vital signs. Handover training is needed.
Wood, Crouch, Rowland, & Pope (2015)	Clinical handovers between prehospital and hospital staff: literature review	Intended to inform the policy debate and future research about the quality and effectiveness of pre-hospital to hospital handover	Literature review	Verbal and written handovers in EDs (n = 21 papers)	No CPG, transition in care, handover- tool/ model. Handover mnemonics were mentioned.	Common mnemonics used in the pre-hospital settings for handovers are MIST and ICE/ASHICE (injury, condition, time to hospital, with Age, Sex and History). Unstructured

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						handovers caused miscommunication. Verbal handovers are preferred with written documentation. Mnemonics improved handover consistency. Many factors influence handovers making standardization difficult. The utility of mnemonics is still inconclusive.
Yegane, Shahrami, Hatamabadi, Hosseini-Zijoud, (2017)	Clinical information transfer between EMS staff and emergency medicine assistants during handover of trauma patients	Audit current clinical handover using the Identify, Situation, Background, Assessment, and Recommendation (ISBAR) tool. Survey the effect of training the ISBAR tool to staff.	Clinical audit study	Doctors and ECPs (n = 150 handovers)	No CPG, transition in care, handover model or mnemonic. Handover tool was mentioned.	Handover tool: ISBAR The delivery of patients and information to the ED is essential and should be done in a comprehensive and safe manner. Adapting to and using a standard tool can improve patient handover quality and reduce the number of errors. Marked increase in adherence to the tool observed after training. A standardized tool was available but not everyone was aware of it. Using a standardized tool can improve patient handover quality.
Yong, Dent, & Weiland (2008)	Handover from paramedics: Observations and emergency department clinician perceptions	To describe the types of information provided in handovers. To assess perceptions of handovers and handover information. To assess the consequences of poor handover and possible improvements to handovers.	Mixed methods Quantitative questionnaire-based survey Handover observation Post survey questionnaire	<i>Questionnaire:</i> n = 54 (n = 16 doctors, n = 24 nurses and n = 11 undisclosed). <i>Handover observation:</i> n = 311 handovers. <i>Post survey:</i> Nurses (n = 171) and doctors (n = 21)	No CPG, transition in care, handover-tool/model/ mnemonic mentioned	Handovers should be verbal and written. Doctors are not commonly present during handovers of low acuity patients. Handover should be provided to ED nurse and doctor. Patient handovers included information on the presenting problem, vital signs, past medical history, mental and pre-hospital treatment, physical examination, social history, and medications.

5. DISCUSSION

This scoping review aimed to identify and present available information on clinical practice guidelines for person-centered handover practices between ECPs and healthcare professionals in EDs. This information may be used to develop clinical practice guidelines for person-centered handover practices in EDs. Currently, person-centered handover practices in the ED lack standardization and there is no universally accepted framework for what they should encompass. Standardized patient and context specific person-centered handover practices have the potential to improve patient care and safety in ED settings.

We reviewed 19 articles that described various handover practices across the world. None of the articles described clinical practice guidelines for person-centered handover practices in EDs, although most studies confirmed that effective handover is essential for continuity of patient care and safety (Picinich, Madden & Brendle, 2019). Handovers should describe what happened to the patient before arriving in the ED (Carter *et al.*, 2009). Handovers should also be comprehensive, relevant, timely, and safe (Yegane *et al.*, 2017). Handovers depend on clear, concise, confident and respectful communication (Goldberg *et al.*, 2017; Picinich, Madden & Brendle, 2019).

Various mnemonics have been suggested to guide the content and flow of handovers. These mnemonics include MIST (mechanism, injury, signs, treatment) (Dawson, King & Grantham, 2013; Jensen, Lippert & Østergaard, 2013; Wood *et al.*, 2015), IMIST-AMBO (Identification, mechanism/medical impact, signs, vitals and Glasgow Coma Scale, treatment and trends/response to treatment – allergies, medications, back- ground history and other [social] information) (Iedema *et al.*, 2012; Jensen, Lippert & Østergaard, 2013; Reay *et al.*, 2020), and DeMIST (Demographics, Mechanism of injury/ illness, Injuries sustained/ suspected, Signs as recorded [observations], treatment administered) (Bost *et al.*, 2010; Ebben *et al.*, 2015). An study by Bost *et al.*, (2012) reported the use of the mnemonic AMIST (Age, Mechanism, Injury, Signs, Treatment) in resuscitation room handovers. The mnemonic ISBAR (Identify, Situation, Background, Assessment and Recommendation) has also been mentioned by Dawson, King & Grantham, 2013; Di Delupis *et al.*, 2015; Dojmi Di Delupis *et al.*, 2014; Yegane *et al.*, 2017, along with the BAUM mnemonic (“Bestand” [inventory], “Anamnese” [medical history], “klinische Untersuchungsergebnisse” [clinical findings] and “Massnahmen” [actions]) (Jensen, Lippert and Østergaard, 2013). In addition to these mnemonics, specific information deemed vital for handovers includes patient name, patient’s date of birth, clinical situation compared to the current situation, reason for emergency call, patient’s past history, home therapies, and a brief overview of the treatment given (Thakore and Morrison, 2001; Jenkin,

Abelson-Mitchell and Cooper, 2007; Yong, Dent and Weiland, 2008; Bost *et al.*, 2010, 2012; ledema *et al.*, 2012; Dawson, King and Grantham, 2013; Yegane *et al.*, 2017). Information on the place of retrieval, signs and symptoms, observations, treatment provided pre-hospital, and social history if applicable (Bost *et al.*, 2012), and problems requiring immediate attention (Jenkin, Abelson-Mitchell and Cooper, 2007) are also crucial. Recently, Picinich, Madden and Brendle, (2019) emphasized including information on airway status and management, vital signs, mechanism of injury, time of symptom onset, assessment, background, and response to treatment in handovers. Dawson, King and Grantham, (2013) described handovers according to the ABC's (baseline information on the airway, breathing and circulation, level of consciousness) while Dojmi Di Delupis *et al.*, (2014) added family contact information to their list. Evidently, much variation exists on what information should be included in handovers, which could explain differences in handover practices. Much of the additional information mentioned can be placed under the different headings of the various mnemonics. Finding the gold standard between the mnemonics and important information may improve handover practices.

Standardizing handover practices may have several benefits including improved communication and information transfer (Dojmi Di Delupis *et al.*, 2014; Goldberg *et al.*, 2017; Jensen, Lippert & Østergaard, 2013; Reay *et al.*, 2020). A greater volume of information can be transferred in a short period of time (ledema *et al.*, 2012; Jensen, Lippert & Østergaard, 2013; Wood *et al.*, 2015), which reduces handover duration, repetition, and uncertainties (ledema *et al.*, 2012; Jensen, Lippert & Østergaard, 2013). Standardized handovers have also been shown to reduce negative communication events (Jensen, Lippert & Østergaard, 2013). Additionally, standardized handover practices improve patient safety (Picinich, Madden & Brendle, 2019; Reay *et al.*, 2020), continuity of care (Picinich, Madden & Brendle, 2019), and may improve patient outcomes (Goldberg *et al.*, 2017).

One study suggested the development of national guidelines to direct handover practices involving a structured format (Jensen, Lippert & Østergaard, 2013). Almost all studies emphasized the need for both verbal and written components during handovers (Bruce & Suserud, 2005; Dojmi Di Delupis *et al.*, 2014; Jenkin, Abelson-Mitchell & Cooper, 2007; Jensen, Lippert & Østergaard, 2013; Picinich, Madden and Brendle, 2019; Wood *et al.*, 2015; Yong, Dent & Weiland, 2008). Verbal information handover clarifies the circumstances around what happened (Bruce & Suserud, 2005), while written information may include paper or electronic records (Dawson, King & Grantham, 2013; Jenkin, Abelson-Mitchell & Cooper, 2007; Meisel *et al.*, 2015; Picinich, Madden & Brendle, 2019) that supports the verbal

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information and serves as a record of pre-hospital care (Dawson, King & Grantham, 2013). This information should be physically transferred (Bruce & Suserud, (2005).

This review highlights that while standardization and guidelines are essential for directing handover practices, they should also be context and patient specific (Bost *et al.*, 2010; Ebben *et al.*, 2015; Jensen, Lippert & Østergaard, 2013; Meisel *et al.*, 2015; Reay *et al.*, 2020). Factors such as noise, chaos, lack of adequate space, staff shortages, workload, and interruptions may hamper the standardization of handover practices (Wood *et al.*, (2015).

In addition to information transfer, handovers also involve the transfer of responsibility (Bost *et al.*, 2012). We could not identify many articles that explicitly described the transfer of responsibility during handovers. Bost *et al.*, (2012) suggested that while the patient is still on the ambulance stretcher, the patient remains the responsibility of the ambulance personnel. Bruce & Suserud, (2005) suggested that symbolic handover occurs when the patient is transferred from the ambulance stretcher to the hospital stretcher or the words “the patient is now yours” are mentioned. Guidelines for handovers should explicitly include guidance on the transfer of responsibility. Since, handover practices involve the transfer of responsibility and care from one healthcare provider to the next, handover practices should also include ED physicians, ED nurses, ECPs, and patients (Bruce & Suserud, 2005; Meisel *et al.*, 2015; Yong, Dent & Weiland, 2008). Additionally, Reay *et al.*, (2020) and Bost *et al.*, (2012) suggested that a dedicated health care professional (handover leader) should be allocated to each handover. Including the patient’s significant other may also add valuable information (Bruce & Suserud, 2005).

6. LIMITATIONS

This review acknowledges potential limitations, including the possibility of missing relevant records and the exclusion of non-English publications. Despite these limitations, this review provides valuable insights into the current state of handover practices between ECPs and health care professionals in EDs.

7. CONCLUSION

This scoping review highlights the paucity of clinical practice guidelines for person-centered handover practices. Handover practices are critical for patient safety and favorable patient outcomes. Patient handovers should be conducted in a comprehensive, accurate, person-centered manner. Various mnemonics are available (used or unused) for handover practices, but a universal guideline is lacking. Future research should focus on guiding handover

practices towards patient and context specific person-centered practices, potentially improving continuity of care and person-centered care in the ED.

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CHAPTER 6

PHASE 3: GUIDELINE DEVELOPMENT

Objectives 4 and 5

To develop preliminary clinical practice guidelines for person centred handover practices

To reach consensus on clinical practice guidelines for person centred handover practices.

6.1 INTRODUCTION

Chapter 5 discussed the current available literature on person-centred handover practices in the emergency department (ED). This chapter discusses Phase 3, Objectives 4 and 5. Objective 4 was to develop preliminary clinical practice guidelines for person-centred handover practices and Objective 5 was to reach consensus on clinical practice guidelines for person-centred handover practices.

The SAGE Clinical Practice Guideline Development Framework (Dizon et al 2016:1-8) and the six domains of The Appraisal of Guideline Research and Evaluation (AGREE II) (Brouwers et al, 2013) were used to develop the clinical practice guideline. Chapter 2 described the methodology used in the study in detail.

6.2 OUTCOME

In this phase a draft clinical practice guideline for person-centred handover practices in the ED was initially developed. The guideline development group (PhD student, supervisor and co-supervisor) made six key recommendations and seven sub-recommendations together with considerations for implementation by end-users. The draft guidelines were sent to an external review panel for review, and feedback from the panel was incorporated to develop the final clinical practice guideline. Ten experts were included in the review, namely two from each area of expertise (see Annexure F.1). Refer to Annexure F.2 for a summary of the feedback provided by the external review panel.

Chapter 6: Phase 3: Guideline development

The final clinical practice guideline and an algorithm (see Annexure F.3) to assist with ease of implementation were developed.

The final clinical practice guideline title is: Clinical practice guidelines for person-centred handover practices between emergency care providers and healthcare professionals in the emergency department are attached below.

6.3 SUMMARY

This chapter described the final developed clinical practice guidelines for person-centred handover practices. Chapter 7 discusses the conclusions, contributions, implications, limitations and recommendations of the study.

*CLINICAL PRACTICE
GUIDELINES FOR PERSON-
CENTRED HANDOVER
PRACTICES BETWEEN
EMERGENCY CARE
PROVIDERS AND
HEALTHCARE
PROFESSIONALS IN THE
EMERGENCY DEPARTMENT*

SUMMARY

Handover practices between emergency care practitioners and healthcare professionals in the ED are a vital activity requiring sufficient information transfer. The transfer of responsibility and accountability for all aspects of patient care from one healthcare provider to the next should be performed in a succinct manner. With the various role players involved in handover practices, the inclusion of patients and/or their significant others is important to provide person-centred care.

This clinical practice guideline provides recommendations regarding the process and content to perform person-centred handover practices between emergency care practitioner (basic, intermediate, and advanced pre-hospital practitioners) and healthcare professionals (doctors and nurses).

The clinical practices guideline provides six key recommendations and seven sub-recommendations developed from best available evidence in the literature and expert input. Implementation considerations are provided together with an algorithm for ease of implementation.

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1. INTRODUCTION

Handover practices is an integral part of patient care delivery and continuity of care (Forde, Coffey & Hegarty, 2020; Tortosa-Alted *et al*, 2021; Cheetham *et al*, 2023). Handover involves many different role players (professionals, patients, members of the public) and can be complex, but has one main objective: the transfer of responsibility and care for a patient from healthcare professional to the next (Guasconi *et al*, 2022). The handover process also involves a range of communication technologies and formats (Guasconi *et al*, 2022).

The handover between the pre-hospital (emergency care practitioners – basic, intermediate and advanced categories) and the in-hospital (healthcare professionals: doctors and nurses) is an interprofessional process between two interprofessional groups and can be more complex due to the emergency department (ED) environment and activities (Tortosa-Alted *et al*, 2021; Guasconi *et al*, 2022; Cheetham *et al*, 2023). The ED environment can be complex and somewhat chaotic where the need for rapid decision making often takes priority (Tortosa-Alted *et al*, 2021; Cheetham *et al*, 2023; Howell *et al*, 2023). Handover practices in the ED differ with the use of various handover tools, mnemonics, protocols, and models all attempting to standardize handover practices (Guasconi *et al*, 2022; Cheetham *et al*, 2023; Howell *et al*, 2023). Standardized handover practices have been associated with benefits such as improved staff satisfaction, comprehensive information transfer, reduction in handover time (Guasconi *et al*, 2022), retention of information (Mastrogiovanni & Moccia, 2022), fewer interruptions, increased confidence in handover delivery (Cowan *et al.*, 2023) and it mitigates the potential for mistakes (Clark, 2023). However, it seems that the golden standard for these standardized handover practices have not been identified for EDs. Additionally available mnemonics, handover tools, etc are not optimally used and do not include the patient and/or significant other.

Acknowledging that handover practices involve various role players, considering the inclusion of patients is central. Person-centred care in the ED has been gaining momentum with the move from illness- or provider-centred to providing patient care that is individualised and based on the partnership between patient and healthcare professionals (Kim, Kim and Lee, 2022). The inclusion of patients in nursing shift-change bedside handovers have been documented for many years (Ismuntania *et al*, 2023; Poelen, van Kuppenveld and Persoon, 2023). Patient involvement in handover practices is important for care delivery, person-centred care, shared decision-making, it decreases patient anxiety, improves patient satisfaction and increases patient participation in their care (Kim, Kim and Lee, 2022; Street *et al.*, 2022; Ismuntania *et al*, 2023), as it provides patients with the opportunity to clarify and correct inaccuracies (Ismuntania *et al*, 2023). Yet, patients seem to be excluded from participating in

handover practices (Street et al, 2022). Eliciting information regarding the patient's values and preferences to guide individualised care promotes person-centred handover practices and can consequently lead to person-centred care (Kim, Kim and Lee, 2022; Poelen, van Kuppenveld and Persoon, 2023). In addition, the inclusion of the patient's family and/or significant others in decision making during the handover process can help them understand their family member's illness (Kydonaki, Kean and Tocher, 2020). Although researchers have acknowledged the importance of person-centred care in the ED (Walsh et al, 2022), research on person-centred handover practices between emergency care practitioners and healthcare professionals in the ED is limited.

At the time of conducting the study the researcher found little available literature on clinical practice guidelines for person-centred handover practices between emergency care practitioners and healthcare professionals in the ED. Clinical practice guidelines are systematically developed statements to assist practitioner and patient decisions about appropriate healthcare for specific clinical circumstances (Woolf et al, 2012). Clinical practice guidelines include recommendations intended to optimize patient care (Guerra-Farfan et al, 2022). The key benefit of clinical practice guidelines is to improve the quality of care rendered to patients through the promotion of interventions based on the best available evidence. Additionally, clinical practice guidelines can improve consistency of care delivery (Guerra-Farfan et al, 2022). Clinical practice guidelines are key to the implementation of evidence-based care and can improve handover practices and, in turn, person-centred care in the ED. Standardization of handover practices should be patient and context specific. However, complete standardization is difficult due to factors such as noise, staff workload, interruptions, staff availability, and lack of adequate space (Wood et al, 2015a). Additionally, handover practices are not only about the transfer of information, but responsibility and accountability too (Bost et al, 2012a). Standardized handover practices including patient and context-specific elements are required in the ED. Furthermore, decisive effort should be made by emergency care practitioners and healthcare professionals to move towards person centredness during handover which is currently absent from handover practices (Merten, van Galen and Wagner, 2017). For these reasons, the researchers decided to develop clinical practice guidelines for person-centred handover practices between emergency care practitioners and healthcare professionals in the ED. The clinical practice guideline will provide recommendations developed from the best available evidence to not only standardize handover practices' content (such as mnemonics) but ensure that patient and context-specific information is included guiding handover practices towards person-centredness. The clinical practice guideline will allow emergency care practitioners and healthcare professionals to approach

handover practices in an evidence-based form, which could potentially improve handover practices. For the development of this clinical practice guideline, the three bases of transparent evidence synthesis processes (Tier 1 to 3) of 'The South African Guideline Evaluation (SAGE) Clinical Practice Guideline Development Framework' (Dizon, Machingaidze & Grimmer, 2016) were used.

2. METHODOLOGY

The clinical practice guideline was developed as part of the researcher's doctoral degree. The team consisted of a Guideline Decision Group (GDG) of three members, namely the student/guideline developer (emergency nurse and academic), supervisor and co-supervisor (emergency nurses and academics).

To ensure methodological rigour, The Appraisal of Guideline Research and Evaluation (AGREE II) tool was used for the assessment of guidelines (Brouwers et al, 2013).

The six domains of the AGREE II were used as part of the guideline development process:

- Scope and purpose
- Stakeholder involvement
- Rigour of development
- Clarity of presentation
- Applicability
- Editorial independence

1. Domain 1: Scope and purpose

1. Overall objectives of the guideline

Patients are transported from the pre-hospital environment to the ED daily. During the last twenty years emergency medical services have developed significantly, increasing the likelihood of the first transition of care occurring at the ED (Meisel et al, 2015; Yegane et al, 2017). In South Africa, high-acuity patients are transported directly via ambulance to the ED by trained emergency care practitioners requiring handover which serves as the first intersection point for the continuity of patient care (Yegane et al, 2017; Ellis et al, 2018; Makkink et al, 2019). It is within this first intersection point that emergency care practitioners have an opportunity to do the handover in an 'as well as possible' manner in order to convey information regarding the patient's history, treatment received and current condition (Shah, Alinier and Pillay, 2016; Sanjuan-Quiles et al, 2018). Patients and/or significant others are

often excluded from handover practices which are not directed towards person-centred care communication and delivery (Department of Health, 2015; Clinical Excellence Commission, 2019).

At the time of conducting the study, there was a paucity of available literature on clinical practice guidelines for person-centred handover practices between emergency care practitioners and healthcare professionals in the ED. The development of a clinical practice guideline for person-centred handover practices can provide the golden standard for conducting handover practices in a person-centred manner. The clinical practice guideline provides emergency care practitioners and healthcare professionals with an evidence-based approach to handover practices.

The overall objective of this guideline was to provide the best available recommendations for person-centred handover practices between emergency care practitioners and health care professionals in the ED.

2. Health question

The following overall health question was developed for the guideline:

What is the best available evidence for person-centred handover practices between emergency care practitioners and healthcare professionals in the emergency department?

3. Population

The clinical practice guideline is developed for use by emergency care practitioners and healthcare professionals and makes recommendations for the process and content of person-centred handover practices between these two groups in the ED. Emergency care practitioners include all categories (basic, intermediate, and advanced practitioners) working in the pre-hospital environment as emergency setting and involved in handover practices. Healthcare professionals include doctors and nurses working in the hospital's ED and involved in handover practices from emergency care practitioners.

2. Domain 2: Stakeholder involvement

4. Guideline development group

The clinical practice guideline was developed as part of a doctoral study and compiled with the guidance of a guideline development group. The guideline decision group included the

student/guideline developer, supervisor, and co-supervisor. An external review panel (see Annexure A) was used to validate the clinical practice guideline recommendations in addition to the guideline development group expertise.

Name	Discipline/ content expertise	Institution	Geographical location	Role in the GDG
S de Lange (SdL)	Emergency Nurse and Academic	Stellenbosch University	South Africa	Guideline development, selecting, reviewing/ rating evidence
Professor T Heyns (TH)	Emergency Nurse and Academic	University of Pretoria	South Africa	Reviewing of developed draft guidelines, selecting, reviewing/ rating evidence
Dr C Filmlalter (CF)	Emergency Nurse and Academic	University of Pretoria	South Africa	Reviewing of developed draft guidelines, selecting, reviewing/ rating evidence

5. Target population views and preferences

Cognizance was taken of the importance of including the public and patients in the development of clinical practice guidelines and evidence-based practices. However, in this context, the inclusion of the public and patients was not relevant for the specific handover practices between emergency care practitioners and healthcare professionals.

The clinical practice guideline was developed as part of the doctoral study and for this study the views of the patient could not be sought and is acknowledge as a limitation to the guideline development process. Phases of the research project did not include patient involvement where time and resources limited their involvement. Furthermore, as this clinical practice guideline aims to address handover practices globally, obtaining the views of patients on an international level would have been difficult.

6. *Target users*

The clinical practice guideline for person-centred handover practices is relevant to and has been developed for emergency care practitioners and healthcare professionals in the ED. The clinical practice guideline can be used to guide the content and process of handover practices between emergency care practitioners and healthcare professionals in the ED thereby promoting more standardized and person-centred handover practices.

The clinical practice guideline might be beneficial to and can be used by managers responsible for the implementation of the guideline in different emergency departments by utilizing the implementation considerations.

The clinical practice guideline might also be beneficial to and can be used by education and training staff involved in training programmes for emergency care practitioners and healthcare professionals. Earlier research advocates for the training of staff in handover practices (Jenkin, Abelson-Mitchell & Cooper, 2007; Bost et al, 2012; Yegane et al, 2017). The inclusion of the clinical practice guideline in curricula could inform both emergency care practitioners and healthcare professionals on the best evidence-based recommendations from the start of their practice to assist in the implementation thereof.

As part of the external review process, experts in the field of guideline development, emergency care practitioners, healthcare professionals (doctors and nurses), academics and person-centred care experts were invited to comment on the draft guideline. Feedback was incorporated into the final recommendations.

3. **Domain 3: Rigour of development**

7. *Systematic search for evidence*

Phase 1 of the doctoral study consisted of a concept analysis of the concept “person-centred handover practices” and its related attributes with international consensus using a Delphi study. Findings from phase 1 contributed the primary data of the guideline recommendations and guided the formulation of the key recommendations. Phase 2 of the doctoral study involved a scoping review of the available evidence on clinical practice guidelines for person-centred handover practices in the ED and provided the secondary data and sub-recommendations. The Joanna Briggs Institute (JBI) methodology for scoping reviews (Peters et al, 2021) was used to guide the scoping review (see Annexures B and C).

8. The criteria for selecting evidence:

The AGREE II tool was used for the critical appraisal of the guidelines extracted. Inclusion and exclusion criteria were defined according to the target population and using the **P**articipants, **C**oncept and **C**ontext (PCC) framework (Peters et al, 2021). The PICO questions for the scoping review were:

- What clinical practice guidelines are available on person-centred handover practices between emergency care practitioners and healthcare professionals in the ED?
- What content do the available clinical practice guidelines for handover practices include?

Participants

Emergency care practitioners transporting patients to and involved in handover practices in the ED to healthcare professionals. Healthcare professionals including doctors and nurses working in the ED and involved in handover practices with emergency care practitioners.

Concept

The concept of interest was clinical practice guidelines for person-centred handover practices between emergency care practitioners and healthcare professionals in the ED.

Context

Studies conducted in the ED, emergency rooms or emergency centres in any geographical area were included in the review.

Evidence not available in the English language was excluded from the review.

10. The methods for formulating recommendations:

The South African Guideline Evaluation (SAGE) Clinical Practice Guideline Development Framework (Dizon, Machingaidze and Grimmer, 2016) described the steps in evidence synthesis processes in three layers and was used in this guideline in the development of the recommendations. The three layers are referred to as tiers: tier one - clinical contexts, tier two - supports end-products tailored specifically for different contexts, users, and purposes and tier three - the evidence-based summary recommendations (Dizon, Machingaidze and Grimmer, 2016).

- *Tier one (evidence):*

Evidence forms the foundation of all recommendations. It supports the credibility of recommendations and answers the health question posed. The evidence should be derived from transparent and complete literature reviews relevant to the guideline questions (Dizon, Machingaidze and Grimmer, 2016). The multiphase doctoral study was used to develop the recommendations. Phase 1 (Delphi) of the doctoral study generated the primary data. Information from the Delphi study provided expert opinions which were used in conjunction with the literature of the scoping review (Phase 2) to develop the recommendations. Phase 1 concluded six attributes for person-centred handover practices: 1) context-specific approach; 2) verbal, non-verbal and information sharing; 3) person-centred interprofessional activities; 4) inclusion of the patient and/or significant other; 5) dedicated space, and 6) person-centred handover approach. These attributes formulated the key recommendations for the clinical practice guideline (recommendations 1-6). The sequence of the recommendations was established in phase 1 of the doctoral study as recommendations related to handover practices (recommendations 1-2) and to person-centred handover practices (recommendations 3-6). Although the recommendations are numbered 1 to 6, no recommendation is seen as more important than the others and should be read and seen together when implementing the clinical practice guideline.

Phase 2 of the doctoral study a scoping review on available clinical practice guidelines for person-centred handover practices generated the secondary data used to develop sub-recommendations in the guideline. The best available evidence was used to formulate guideline recommendations and therefore required a robust search of the literature (Lim et al., 2008). The JBI methodology for scoping reviews guided the scoping review. The search was conducted through various databases and did not yield any results for clinical practice guidelines on person-centred handover practices. Additionally, Guideline Clearing Houses and Google Scholar were searched using the same search strategy which yielded one guideline on clinical handover matching the PICO question. Only guidelines which included person-centred handover practices and handover practices between emergency care practitioners and healthcare professionals in the ED were included. Only one clinical practice guideline was found. Following the analysis of the scoping review, the review question for the clinical practice guideline was formulated:

- *What is the best available evidence for person-centred handover practices between emergency care practitioners and healthcare professionals in the emergency department?*

The critical appraisal of the one extracted guideline was done by three independent reviewers (SdL, TH, CF). Following the critical appraisal process, the guideline obtained a score of >70% on the AGREE II tool and was selected for final inclusion. Sub-recommendations and their underlying evidence, and references supporting the key recommendations were extracted from the clinical practice guideline included in the scoping review. Systematic reviews, literature reviews, observational studies, document audits and quantitative questionnaires were amongst those included. The time frames of these studies were a limitation to the strength of the body of evidence, because very few recent studies were published. Additionally, no high-level studies, such as randomized control studies, and few systematic reviews could be found. Once search process was completed, the guideline development group scrutinized and extracted the recommendations. A total of 29 recommendations contained in the one clinical handover guideline were scrutinized word for word by the guideline development group for consistency and currency. Recommendations applicable to this clinical practice guideline was reduced from 29 to 4 and was included in the clinical practice guideline (see Figure 1).

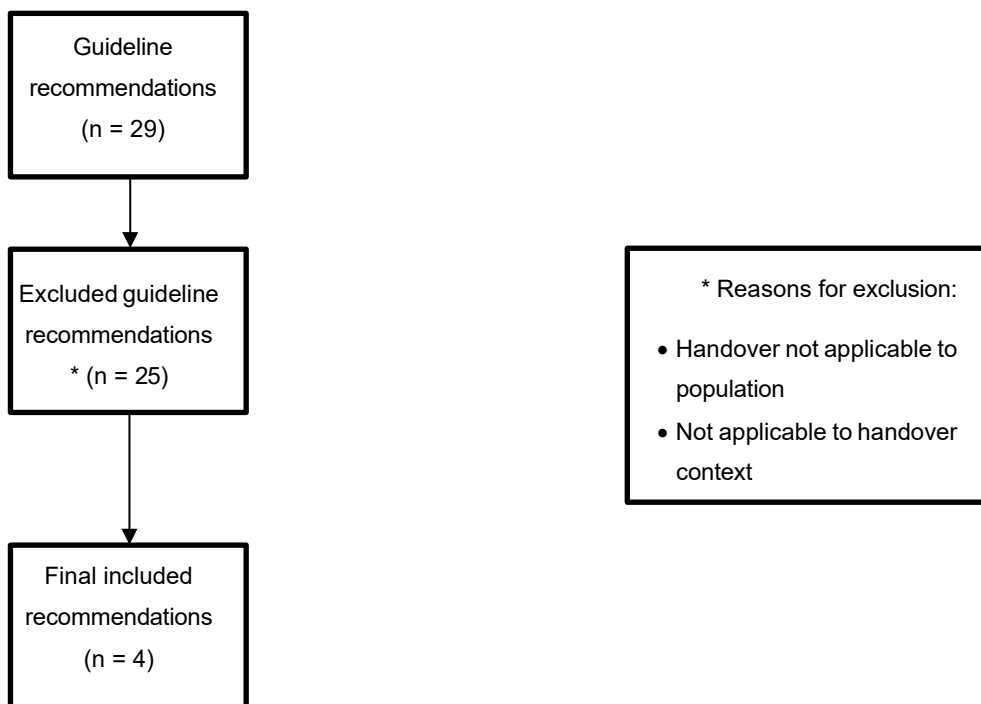


Figure 1: Flow chart for recommendation selection

Wording from the recommendations found in the included clinical handover guideline was adapted to fit the context of this clinical practice guideline following consensus between the members of the guideline development group.

Due to the limited available clinical practice guidelines, the guideline development group decided to formulate further key and sub-recommendations based on evidence from the

scoping review and information from the Delphi study which involved expert opinion in the guideline development process (primary and secondary data).

- *Tier 2 (expert input):*

In circumstances where there are evidence gaps (no research has been conducted, or the research is of questionable value), expert opinion is recognised as a credible evidence source. Evidence generated through robust qualitative studies such as Delphi studies provides credible ‘best available evidence’ statements in the absence of sound research evidence (Dizon, Machingaidze and Grimmer, 2016). Due to the limited available evidence on the topic as well as paucity in the literature from 2015, finding appropriate evidence to support recommendations for the clinical practice guideline was problematic. The guideline development group then opted to use experts’ opinion (primary data) to supplement the secondary data and formulate recommendations. Tier two required expert input to determine relevance of evidence in local context (Dizon, Machingaidze and Grimmer, 2016). For this clinical practice guideline, primary data guided the development of the other three recommendations (1, 2 and 4) and was supported by evidence from the secondary data.

- *Tier 3 (end-user guidance documents):*

Evidence in conjunction with expert input produced the final clinical practice guideline. Guidance can be presented in various forms to meet the needs of the end-user, such as short evidence summaries, management tools, algorithms, or protocols (Dizon, Machingaidze and Grimmer, 2016). The guideline development group evaluated the secondary data as suggested by The Philippine Academy of Rehabilitation Medicine (PARM) guide for summarizing the strength of evidence and guide for writing endorsements (Gonzalez-Suarez et al, 2012) and from there used the guide to formulate the wording of the recommendations in the clinical practice guideline (see Table 1).

Table 1: Philippine Academy of Rehabilitation Medicine (PARM) guide for summarizing the wording to be used

1. There is strong evidence	Consistent grades of high-quality evidence with uniform thought, and at least a moderate volume of references to support the recommendation(s)
2. There is evidence	<p>A mix of moderate- and high-quality evidence with uniform thought and at least a low volume of references</p> <p>OR</p> <p>A mix of high- and low-quality evidence with uniform thought and a high volume of references</p> <p>OR</p> <p>High-level evidence coupled with GPPs, and at least a moderate volume of references</p> <p>OR</p> <p>One level I paper with at least a moderate volume of references</p>
3. There is some evidence	<p>Single level II (A) paper</p> <p>OR</p> <p>Inconsistent grades of high and low evidence with uniform thought and a moderate volume of references</p> <p>OR</p> <p>Consistent grades of low-level evidence with uniform thought and at least a moderate volume of references</p>
4. There is conflicting evidence	A mix of levels of evidence with nonuniform thought, irrespective of the volume of evidence
5. There is insufficient evidence	Low or inconsistent levels of evidence with low volume references with or without good practice point
6. There is no evidence	Absence of evidence for any aspect of the patient journey

Spreadsheets of the evidence extracted from the secondary data were developed and according to the amount of evidence supporting a specific recommendation as well as primary data supporting the recommendation was then included in the clinical practice guideline. A rationale for each recommendation was provided. Where existing guidance was used to guide the recommendation, it was specified as such. Where empirical literature was used to inform a recommendation, it was prescribed as such. Key recommendations are numbered 1 to 6 and sub-recommendations 1.1 to 6.1 and are linked to the best available evidence and/or expert opinion. Table 2 lists the summary of the recommendations and sub-recommendations, and section 3 provides the full set of recommendations.

Clinical Practice Guidelines

Table 2: Summary of recommendations

Key recommendations	Sub-recommendations
1. Context-specific approach	Sub-recommendation 1.1: We recommend that handover practices between emergency care practitioners and healthcare professionals should be conducted using a context-specific approach to guide information being transferred.
2. Verbal, non-verbal and written information sharing	Sub-recommendation 2.1: We recommend that handover practices between emergency care practitioners and healthcare professionals should be done in a verbal, non-verbal and written format.
3. Person-centred interprofessional activities	<p>Sub-recommendation 3.1: We recommend that handover practices between emergency care practitioners and healthcare professionals involve the transfer of accountability and responsibility and should be underpinned by person-centred principles.</p> <p>Sub-recommendation 3.2: We recommend that ideally, the healthcare team that will be responsible for patient care be involved in the handover from the start.</p>
4. Inclusion of the patient and/or significant other	Sub-recommendation 4.1: We recommend that emergency care practitioners and healthcare professionals should aim to include the patient and/or significant other in handover practices.
5. Dedicated space	Sub-recommendation 5.1: We recommend that handover practices between emergency care practitioners and healthcare professionals should be conducted in a dedicated space. This space should have minimal distractions and interruptions.
6. Person-centred handover approach	Sub-recommendation 6.1: We recommend that handover practices between emergency care practitioners and healthcare professionals should follow a person-centred approach.

11. Health benefits, side-effects and risks in formulating the recommendations:

This clinical practice guideline does not include patient treatment guidelines and consequently did not have benefits, side-effects, and risks during the formulation of the recommendations to consider.

12. Link between the recommendations and the supporting evidence:

For each recommendation in the clinical practice guideline, a list of references has been provided. A discussion of the evidence is also included with the rationale for each recommendation with related recommendations. Guidelines for inclusion have been selected through the appraisal process using the AGREE II tool. Recommendations were developed based on the extraction of evidence from clinical guidelines, service standards and literature to support evidence-based recommendation formulations.

13. External expert review:

The draft clinical practice guideline was sent for external review. The purpose of the external review was to gather feedback on the draft guideline and assess applicability and feasibility. A minimum of 10 experts was included in the review: two from each area of expertise (see Annexure A). Experts included a guideline development expert, emergency care practitioners involved in handover practices in the ED, healthcare professionals (including emergency medicine doctors and nurses), and person-centred care experts. Experts were invited via purposive sampling based on publications in the field of person-centred care, handover practices and guideline development. Further snowball sampling was used through the referral of further experts by the initial experts. Each expert was provided with the draft guideline and the AGREE II tool for evaluation. Feedback and suggestions from the panel were incorporated into the final guideline.

14. Clinical practice guideline updating procedure:

It is recommended that the guideline be updated every three years or sooner should compelling evidence arise. However, for the purpose of the doctoral project and degree awarding, recommendations on the updating of the guidelines are not included in this guideline. Updating of the guideline will form part of post-doctoral work.

4. Domain 4: Clarity of presentation

15. Specific and unambiguous recommendations:

All recommendations were written in clear and unambiguous form. Recommendations were made specifically in relation to person-centred handover practices between emergency care practitioners and healthcare professionals in the ED. A summary of the recommendations was provided in Table 1.

16. Different management options provided:

For the purpose of this guideline, no treatment options were applicable.

17. Identification of recommendations:

Key recommendations and sub-recommendations are presented in the clinical practice guideline, from 1.1 to 1.6 in Boxes 1 to 6. The related references are presented in each box with the sub-recommendation related to the key recommendation. The rationale for each recommendation is found before each box.

5. Domain 5: Applicability

18. Facilitators and barriers to clinical practice guideline application:

Education and training on the clinical practice guidelines would facilitate the implementation of the guidelines. Further research on the evaluation of the effectiveness of the guideline post implementation as well as stakeholder feedback could identify further barriers and/or facilitators. Contextual factors specific to EDs could be barriers to the implementation and acceptance of the guideline by healthcare professionals in the ED and emergency care practitioners. The implementation of and associated education and training on the guideline will form part of post-doctoral work. Thereafter evaluation of the effectiveness of the guideline could be established.

19. Guideline implementation tools:

For ease of use and application, an algorithm (see Annexure D) was developed. Emergency care practitioners and healthcare professionals can utilize the algorithm as quick reference when conducting person-centred handover practices. This guideline together with the algorithm could be used by education institutions as part of the curricula for emergency care

practitioners and healthcare professionals. Managers of emergency care practitioners and healthcare professionals could use the algorithm to provide in-service training. Implementation tools would form part of the post-doctoral work on the implementation of the guideline.

20. Resource implications of applying the recommendations:

Potential costs for the clinical practice guideline implementation were considered by the guideline development group but can only be established by doing a feasibility study as part of post-doctoral work. Potential costs could include education and training of target users on the guideline, updating of the guideline, implementation costs, and development of materials for education, training and implementation.

21. Monitoring and/or auditing:

As part of the doctoral study, monitoring and/or auditing did not form part of this guideline development process. However, implementation of the guideline should be monitored and audited. A process could be established as part of postdoctoral work.

6. Domain 6: Editorial independence

22. Funding:

This research formed part of a doctoral study assisted by a university bursary and self-funding. No funding body funded the development of the clinical practice guideline.

23. Conflict of interest:

There was no conflict of interest declared by the guideline development group or expert panel.

3. GUIDELINE RECOMMENDATIONS

A rationale for each recommendation is provided. Where existing guidance was used to guide the recommendation, it is specified as such. Where empirical literature was used to inform a recommendation, it is presented as such.

Key recommendations are numbered 1 to 6 and sub-recommendations 1.1 to 1.6 and are linked to the best available evidence and/or expert opinion. A summary of the sub-recommendations is grouped under each key recommendation identified in Table 1.

Recommendation 1: Context-specific approach

What is the best available evidence on the context-specific approach to use during handover practices to support information transfer?

Sub-recommendation 1.1: We recommend that handover practices between emergency care practitioners and healthcare professionals should be conducted using a context-specific approach to guide information being transferred.

Rationale for recommendation:

Handover practices should be done in a meticulous way to ensure information transfer (Reay et al, 2020). Handover practices from emergency care practitioners to healthcare professionals in the ED have inherent risks, placing continuity of care and patient safety at risk (Yeganeet *al.*, 2017; Picinich, Madden and Brendle, 2019). Various mnemonics are available to guide handover practices, yet a variety of practices exist. Although some studies suggest the need for standardization to improve handover practices, others point out that handover practices cannot always follow a specific standardized approach (Jensen, Lippert and Østergaard, 2013; Meisel et al, 2015; Wood et al, 2015; Reay et al, 2020). A Delphi study involving experts in person-centred care and handover practices reiterated the need for a context-specific approach when conducting handover practices (de Lange et al, 2023 – under review). In addition, following a specific structured format is not always possible as patient acuity differs, the handover of medical vs trauma patients is sometimes approached differently, and patients' needs are different (Bost et al, 2010; Jensen, Lippert and Østergaard, 2013; Ebben et al, 2015; Wood et al, 2015).

Following a context-specific approach will support the transfer of relevant information related specifically to the patient and his/her needs. Structured handover practices can prevent vital information from being lost (Bost et al, 2012). The structure of communication during handover practices can be altered according to situational or contextual factors. Furthermore, a context specific approach to handover practices will ensure that patient specific information transfer will lead to person-centred handover practices.

Box 1: Recommendations for context specific approach

Sub-recommendation 1.1: We recommend that handover practices between emergency care practitioners and healthcare professionals should be conducted using a context-specific approach to guide information being transferred.

References: Bost et al, 2010; Ebben et al, 2015; Wood et al, 2015; Jensen et al, 2013; Meisel et al, 2015.

Recommendation 2: Verbal, non-verbal, and written information sharing

What is the best available evidence on the sharing of verbal, non-verbal and written information during person-centred handover practices?

Sub-recommendation 2.1: We recommend that handover practices between emergency care practitioners and healthcare professionals should be done in a verbal, non-verbal and written format.

Rationale for recommendation:

Several authors and guideline recommend that handover practices should comprise of verbal face-to-face handover accompanied by written paper-based or electronic document (Jenkin, Abelson-Mitchell and Cooper, 2007; Bost et al, 2012; Dawson, King and Grantham, 2013; Department of Health, 2015; Picinich, Madden and Brendle, 2019). A key element in the transition of care between emergency care practitioners and healthcare professionals in the ED involves communication (Picinich, Madden and Brendle, 2019). The delivery of patients and information to the ED is essential and should be done in a safe and comprehensive manner (Yegane et al, 2017). Patient handover is safely performed when the transfer of clinical information is accurate, concise, complete, specific, relevant and timely (Yegane et al, 2017). Verbal handover from emergency care practitioners to healthcare professionals in the ED is important (Jenkin, Abelson-Mitchell and Cooper, 2007; Yong, Dent and Weiland, 2008; Dojmi Di Delupis et al, 2014; Wood et al, 2015b; Picinich, Madden and Brendle, 2019). Verbal handover clarifies the circumstances around what happened to the patient (Bruce and Suserud, 2005). It provides firsthand information received from emergency care practitioners. Verbal handovers provide for the opportunity to provide contextual information whereas written handover provides facts and ensures comprehensiveness (de Lange et al, 2023 – under review). And it affords healthcare professionals the opportunity to clarify information which might otherwise be lost (Reay et al, 2020).

Legible written information is required to support the verbal handover (Jenkin, Abelson-Mitchell and Cooper, 2007; Yong, Dent and Weiland, 2008; Dawson, King and Grantham, 2013; Jensen, Lippert & Østergaard, 2013; Dojmi Di Delupis et al, 2014; Picinich, Madden & Brendle, 2019). Written documentation can also be presented in the form of an electronic document (Dawson, King & Grantham, 2013; Meisel et al, 2015). A written document can be referred to once emergency care practitioners have left and prevents information loss (Dúason, Gunnarsson & Svavarsdóttir, 2021) and reinforces the verbal content received.

Non-verbal information ensures a more holistic approach when sharing all three techniques of communication (Crouch et al, 2021). Information about what emergency care practitioners saw, experienced, and sensed about the patient and his/her environment is important to move toward a holistic approach to patient care by health care professionals.

Box 2: Recommendations for verbal, non-verbal and written information sharing

Sub-recommendation 2.1: We recommend that handover practices between emergency care practitioners and healthcare professionals should be done in a verbal, non-verbal and written format.

References: Bost et al, 2012; Jenkin, et al, 2007; Picinich et al, 2019; Bost, et al, 2010; Wood et al, 2015; Dawson, et al, 2013; Jensen, et al, 2013; Delupis, et al, 2014; Bruce, 2005; Yong et al, 2008; Meisel et al, 2015

Recommendation 3: Person-centred interprofessional activities

What is the best available evidence for the handover process that involves the transferring of accountability and responsibility, underpinned by person-centred principles?

Sub-recommendation 3.1: We recommend that handover practices between emergency care practitioners and healthcare professionals involve the transfer of accountability and responsibility and should be underpinned by person-centred principles.

Sub-recommendation 3.2: We recommend that ideally the healthcare team that will be responsible for patient care be involved in the handover from the start.

Rationale for recommendation:

Ineffective communication is a major cause of adverse events in healthcare settings, with clinical handover communication being a major contributing factor (Chien et al, 2022). Handovers are “a dialogue between health professionals that also might foster empathy, equity and common ground” (Jensen, Lippert and Østergaard, 2013). The handover between emergency care practitioners and healthcare professionals is an interprofessional process involving at least two different professional groups (Dawson, King and Grantham, 2013; Ebben et al, 2015; Reay et al, 2020; Ehlers et al, 2021). This type of handover is the first physical transition phase that the patient will go through where responsibility and accountability is transferred from the emergency care practitioners to the healthcare professional in the ED (Jenkin, Abelson-Mitchell and Cooper, 2007; Bost et al, 2010; Ebben et al, 2015; Reay et al, 2020). When the handover process is compromised, vital information could be lost affecting patient safety (Reay et al, 2020). The continuity of care and transfer of care is one of the components of delivering person-centred care (Walsh et al, 2022).

Handover, as an interprofessional activity, brings about two different cultures that need to merge for the purpose of the handover practices. The merging of these two cultures can promote teamwork that will support communication between the two different professional cultures. When these two cultures merge to a collaborative team, patient safety and adverse patient outcomes can be reduced (Bost et al, 2010; Australian Commission on Safety and Quality in Health Care., 2011; Dawson, King and Grantham, 2013). Collaboration between these two professional groups can achieve person-centred care. Working in ways that support person-centred care places the patient at the centre of care delivery (McConnell, McCance and Melby, 2016). The person-centred practice framework comprises of four domains, of which the prerequisites is one. Developed interprofessional skills are one of the most important prerequisites to the implementation of person-centred care (McCance et al, 2021). Well-developed interprofessional skills will assist healthcare professionals to be present during the delivery of person-centred care. In addition, for shared decision making, as a component of person-centred care, the need for inter-disciplinary participation in healthcare is needed (McCance et al, 2021). An organizational commitment to collaborative, inclusive and participative ways of engaging within and between teams is essential for person-centred practice. Shared decision-making among team members is the foundation of interdisciplinary practice, and the essence of person-centred healthcare (McCance et al., 2021).

The handover process occurs over a spectrum of time, from arrival until the patient is transferred from the ambulance stretcher to the ED stretcher and healthcare professionals accept full responsibility for care (Bruce and Suserud, 2005; Bost et al, 2012; Ebben et al,

2015; Reay et al, 2020). It is then the healthcare professionals' duty to ensure that they have all the relevant information to continue with patient care (Yong, Dent and Weiland, 2008).

It has been found that repetition of handovers may result in information being lost or changed at each handover and it is therefore preferred to be done once with all relevant healthcare professionals present (Yong, Dent and Weiland, 2008; Bost et al, 2012; Dawson, King and Grantham, 2013; Meisel et al, 2015). Picinich, Madden and Brendle (2019) suggest that appropriate staff be available to receive the handover from emergency care practitioners to prevent repetition of the handover.

Box 3: Recommendations for person-centred interprofessional activities

Sub-recommendation 3.1: We recommend that handover practices between emergency care practitioners and healthcare professionals involve the transfer of accountability and responsibility and should be underpinned by person-centred principles.

References: Department of Health, Clinical handover, 2015; Bost et al, 2012; Ebben et al, 2015; Jensen et al, 2013; Bruce, 2005.

Box 3: Recommendations for person-centred interprofessional activities

Sub-recommendation 3.2: We recommend that ideally the healthcare team that will be responsible for patient care be involved in the handover from the start.

References: Meisel et al, 2015; Yong et al, 2008; Bruce, 2005; Australian Commission on Safety and Quality, accessed July 2023; Picinich et al, 2019).

Recommendation 4: Inclusion of the patient and/ or significant other

What is the best available evidence for the inclusion of the patient and/or significant other in person-centred handover practices?

Sub-recommendation 4.1: We recommend that emergency care practitioners and healthcare professionals should aim to include the patient and/or significant other in handover practices.

Rationale for recommendation:

Person-centred handover practice means to acknowledge the patient as the expert in the handover (Clinical Excellence Commission, 2019). The NSW Clinical handover guidelines (Clinical Excellence Commission, 2019) state that patients and/or their significant others are partners in care, and they should be supported to be involved in handover practices in line with the wishes of the patient. The Communication (Clinical Handover) in Acute and Children's Hospital Services (Department of Health, 2015) suggest the inclusion of patient and/or significant others in handover practices to ensure that the patient and/or significant other are provided with updated and relevant information in relation to the patient's condition. In addition, including patients and/or significant others in handover practices can ensure that a baseline of information about the patient's condition is established (Australian Commission on Safety and Quality in Health Care, 2011).

The South Australasia's Clinical handover guidelines (Government of South Australia, no date) also support the inclusion of patients and, where relevant, their significant other. Other studies also advocate for the inclusion of patient and/or significant others in handover practices (Bruce and Suserud, 2005; Reay et al, 2020). The inclusion of patients and/or significant others in the handover process facilitates person-centred care (White-Trevino and Dearmon, 2018), enables healthcare professionals to ask them questions for additional information (Reay et al, 2020), includes patients in shared decision-making, and provides patients with important insights into their conditions (Government of South Australia, no date) and significant others can provide valuable information on the circumstances leading to the event (Bruce and Suserud, 2005). The use of person-centred approaches in handover is advocated in order to move toward person-centredness as the core approach in ED handover practices (Abraham, Kannampallil and Patel, 2014). Patient inclusion in the handover starts from the beginning by introducing the patient to the healthcare professionals (Bruce and Suserud, 2005).

Box 4: Recommendations for the inclusion of the patient and/ or significant other

Sub-recommendation 4.1: We recommend that emergency care practitioners and healthcare professionals should aim to include the patient and/ or significant other in handover practices.

References: NSW Clinical handover guidelines (2019); Communication (Clinical Handover) in Acute and Children's Hospital Services (2015); Australian Commission on Safety and Quality, accessed July 2023; SA Department of Health Clinical Handover, 2013; Reay et al, 2020; Bruce, 2005.

Recommendation 5: Dedicated space

What is the best available evidence for conducting handover practices in a dedicated space around the patient's bedside to reduce interruptions, and ensure patient information confidentiality?

Sub-recommendation 5.1: We recommend that handover practices between emergency care practitioners and healthcare professionals should be conducted in a dedicated space. This space should have minimal distractions and interruptions. Each emergency department should determine how this can be best accommodated in the department.

Rationale for recommendation:

Handover practices in the ED are prone to interruptions caused by the busy, fast paced, and complex environment (Sanjuan-Quiles et al, 2018; White-Trevino and Dearmon, 2018; Picinich, Madden and Brendle, 2019). Interruptions can negatively affect handover practices. Interruptions place handover practices at risk of information loss that negatively impacts patient care delivery (Bost et al, 2010; Calleja, Aitken & Cooke, 2011; Dawson, King & Grantham, 2013; Wood et al, 2015; Picinich, Madden & Brendle, 2019). Furthermore, interruptions cause barriers to communication which prevent safe and effective handovers from occurring. Bost et al (2010), Dawson, King and Grantham (2013) and Picinich, Madden and Brendle (2019) suggest some elements of an ideal handover which involve the right environment, namely the environment should be quiet, ensure privacy of information and have minimal interruptions.

The Delphi study conducted in Phase 1 of this study also concluded that handover practices should be conducted in a dedicated space with minimal interruptions. The National Clinical Guideline for Communication (Clinical handover) in Acute and Children's Hospital Services (Department of Health, 2015) also recommends that handover should be conducted in an area with minimal distractions and interruptions whilst taking into consideration patient confidentiality. It should be noted, however, that use of a dedicated space does not necessarily ensure that handovers will be free from non-essential interruptions.

Box 5: Recommendations for a dedicated space

Sub-recommendation 5.1: We recommend that handover practices between emergency care practitioners and healthcare professionals should be conducted in a dedicated space. This space should have minimal distractions and interruptions.

References: Communication (Clinical Handover) in Acute and Children's Hospital Services (2015); Picinich et al, 2019.

Recommendation 6: Person-centred handover approach

What is the best available evidence for facilitating the handover process towards nurturing a person-centred approach?

Sub-recommendation 6.1: We recommend that handover practices between emergency care practitioners and healthcare professionals should follow a person-centred approach.

Rationale for recommendation:

The handover process should ultimately be a patient-focused process (Bruce & Suserud, 2005) and person-centred handover is a component of person-centred continuity of care. The allocation of a dedicated person in each team (healthcare professionals receiving handover) to be in charge of the handover. An dedicated person can listen attentively to the handover and communicate with the patient and/ or significant other thus facilitating person-centred handover practices (Bruce & Suserud, 2005; Yong, Dent & Weiland, 2008; Bost et al, 2012; Reay et al, 2020). The National Clinical Guideline on Communication (Clinical Handover) in Acute and Children's Hospital Services (Department of Health, 2015) recommends a lead healthcare professional to manage the handover process. Defining leadership responsibilities during inter-departmental clinical handover has been found to be successful in improving the process of clinical handover (Department of Health, 2015). Providing handover to one dedicated person would ensure that emergency care practitioners could give one clear and detailed handover of the patient (Bost et al, 2012). Moreover, the allocation of specific healthcare professionals to patients from the handover process can increase acceptance of accountability and responsibility for patient care during the transfer thereof (Chien et al, 2022). The acceptance of the responsibility and accountability could facilitate person-centred care.

Furthermore, a dedicated person can listen attentively to the handover practices leading to professional and respectful behaviour toward emergency care practitioners, and ensure effective handover (Wood et al, 2015c; Reay et al, 2020). The busy ED environment often results in the focus on medical interventions and demands in the ED and impacts on the staff's ability to provide person-centred care (McConnell, McCance & Melby, 2016). These demands and the busy environment could potentially draw the healthcare professional's attention away from the handover to focus on task delivery which affects handover communication and interprofessional behaviour which affects person-centred care delivery (de Lange, van Eeden & Heyns, 2018).

Box 6: Recommendations for person-centred handover approach

Sub-recommendation 6.1: We recommend that handover practices between emergency care practitioners and healthcare professionals should follow a person-centred approach.

References: Communication (Clinical Handover) in Acute and Children's Hospital Services, (2015); Bost, et al, 2012; Reay, et al, 2020; Wood, et al, 2015; Chien, et al, 2022.

4. IMPLEMENTATION CONSIDERATIONS

This clinical practice guideline provides recommendations for person-centred handover practices; however, context and local protocols should be taken into consideration during the implementation of the guideline. The guideline development group provides the following considerations for implementation:

Recommendation 1: Context-specific approach

The structure of communication during handovers should be altered based on situational and contextual factors. The following information is considered important to include in handover practices and should be adjusted accordingly.

Clinical Practice Guidelines

Components of the handover	Details of components of handover
Patient identification	<ul style="list-style-type: none"> • Patient name and surname • Age
Mechanism of injury/Medical complaint	<ul style="list-style-type: none"> • Reason for the call • Chief complaint • Time of event/symptom onset
Injuries/Information related to the complaint	<ul style="list-style-type: none"> • Suspected injuries/illness
Signs	<ul style="list-style-type: none"> • Pre-hospital assessment (ABCDE)
Treatment provided	<ul style="list-style-type: none"> • Interventions performed (e.g., intubation, intravenous therapy) • Response to interventions/treatment (medications) • Time of treatment administered
Trends	<ul style="list-style-type: none"> • Vital signs (Blood pressure, heart rate, respiratory rate, saturation, AVPU/ GCS) – on scene and on route • Any significant changes in patient condition
Allergies	
Medication	<ul style="list-style-type: none"> • Chronic • Medication taken for current problem
Medical history	
Other information	<ul style="list-style-type: none"> • Social history (if applicable) • Family contact information

Recommendation 2: Verbal, non-verbal and written information sharing

Handover practices between emergency care practitioners and healthcare professionals should occur face-to-face. Handovers should commence with a verbal account of what happened followed by a written document to supplement the verbal handover once the emergency care practitioners leave the ED. The written document can be paper-based or electronic depending on local practices.

Recommendation 3: Person-centred interprofessional activities

Clinical handover refers to the “transfer of professional responsibility and accountability for some or all aspects of care for a patient, or group of patients, to another person or professional group on a temporary or permanent basis” (Department of Health, 2015).

In high acuity patients, the team (doctor, nurse, etc) who will be responsible for continuing with

patient care should be present at the handover from the start to avoid/reduce repetition of handovers. Should the whole team not be available for the handover from the emergency care practitioners in lower acuity patients, the handover can be provided to one member.

It is important to identify the point at which responsibility is transferred from emergency care practitioners to healthcare professionals in the ED. The responsibility transfer point will be once the verbal handover has been completed and the patient is transferred from the ambulance stretcher to the ED stretcher (the physical transfer). This process could be followed up with the words: *“the patient is now yours”* from the emergency care practitioner to conclude the handover process. Unless emergency interventions need to be performed, the patient should only be transferred from the ambulance stretcher to the ED stretcher once the verbal handover is completed. This will prevent healthcare professionals from commencing patient care and not listening attentively to the handover.

Recommendation 4: Inclusion of the patient and/or significant other

If practical, patients should be included in the handover from the start. After obtaining the patient’s preference on the inclusion of their significant other, the significant other should also be included in the handover. Take into consideration the patient’s level of health literacy, language barriers and culture. Performing the handover as close as possible to the bedside would allow for patient and/or significant other participation. The patient is the only constant factor in the handover practice and can therefore be a valuable contributor in sharing information. To prevent interruptions during the handover, patients and/or significant others can be asked to remain silent during the handover from the emergency care practitioner and contribute to the handover once they are done. Where life-saving interventions need to be performed, significant others can be asked to contribute to the handover once the interventions have been completed.

Recommendation 5: Dedicated space

Each emergency department should determine how this can best be accommodated in the department. Each ED should identify the most appropriate area for handover practices to occur. For example, the patient’s bedside or as close as possible to the bedside to still include the patient and remain person-centred. Patient acuity should be considered as well when the dedicated space is decided on. For example, the handover of a critically ill or injured patient might be performed differently to a non-critically ill or injured patient.

Recommendation 6: Person-centred handover approach

To ensure the following of a person-centred approach when conducting handover practice, the use of person-centred language is needed. The Alzheimer Society's person-centred language guidelines (Alzheimer Society of Canada, 2017) suggest the use of certain terminology to be more person-centred, such as the term "person" instead of "patient". According to Hyams et al (2018), person-centred language is a language that puts patients first, it emphasizes the person first rather than the illness.

Patients should not be referred to by their medical diagnosis or as "patient", instead patients arriving at the ED should be introduced by their names to healthcare professionals and to be used throughout the handover.

On arrival at the ED emergency care practitioners should report to the nurses' station or the person in charge. A team of healthcare professionals should then be allocated to receive the handover from emergency care practitioners. In the healthcare team receiving the handover one dedicated person should be allocated to oversee the handover and receive the handover from emergency care practitioners. The dedicated person should listen attentively and initiate communication with the patient and/or significant other.

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ANNEURE A – EXPERT REVIEW PANEL

Name and title	Academic and professional qualifications	Roles and affiliation
Mr Abrie Senekal	Master's in Emergency Medical Care	Clinical facilitator- Department of Emergency Medical Care at the University of Johannesburg (South Africa)
Professor Brendan McCormack	D Phil	Person-centred research - University of Sydney, Australia.
Ms Leanne van Rooy	MCur (Emergency Nursing Clinical)	Trauma Programme Manager – South Africa
Professor Lisa Wolf	Associate Professor, Elaine Marieb CON, UMass Amherst; PhD Staff nurse, ED	Director, emergency nursing research–ENA (United States of America)
Professor Portia Jordan	PhD (Nursing)	Evidence-based practice; CPG development, adoption, adaption or recommendation extraction – South Africa
Dr Sa'ad Lahri	FCEM (SA)	Emergency physician, Academic – South Africa
Mr Yaaseen Hokee	BHS in Emergency Medical Care	Department of Emergency Medical Care - University of Johannesburg (South Africa)
Dr Yolande Magerman	PhD	Emergency Nursing and Critical Care Nursing
Ms Ilze van Eeden	Master's degree Clinical	Emergency Nursing and Critical Care Nursing – South Africa
Dr Neville Vlok	MPhil Emergency Medicine	Clinical Emergency Medicine, quality improvement projects related to handover practices – South Africa

ANNEXURE B – SEARCH AND RETRIEVAL PROCESS

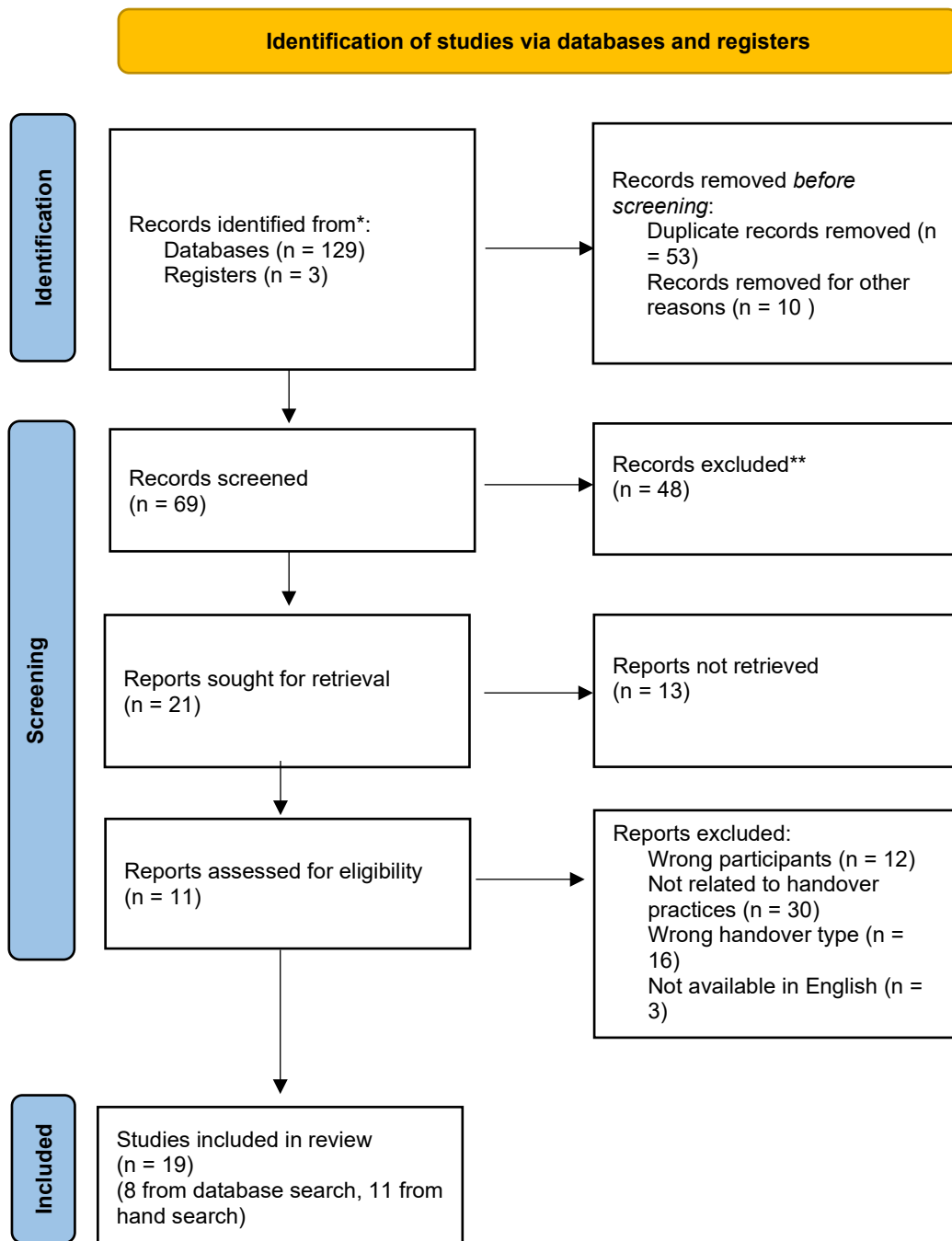
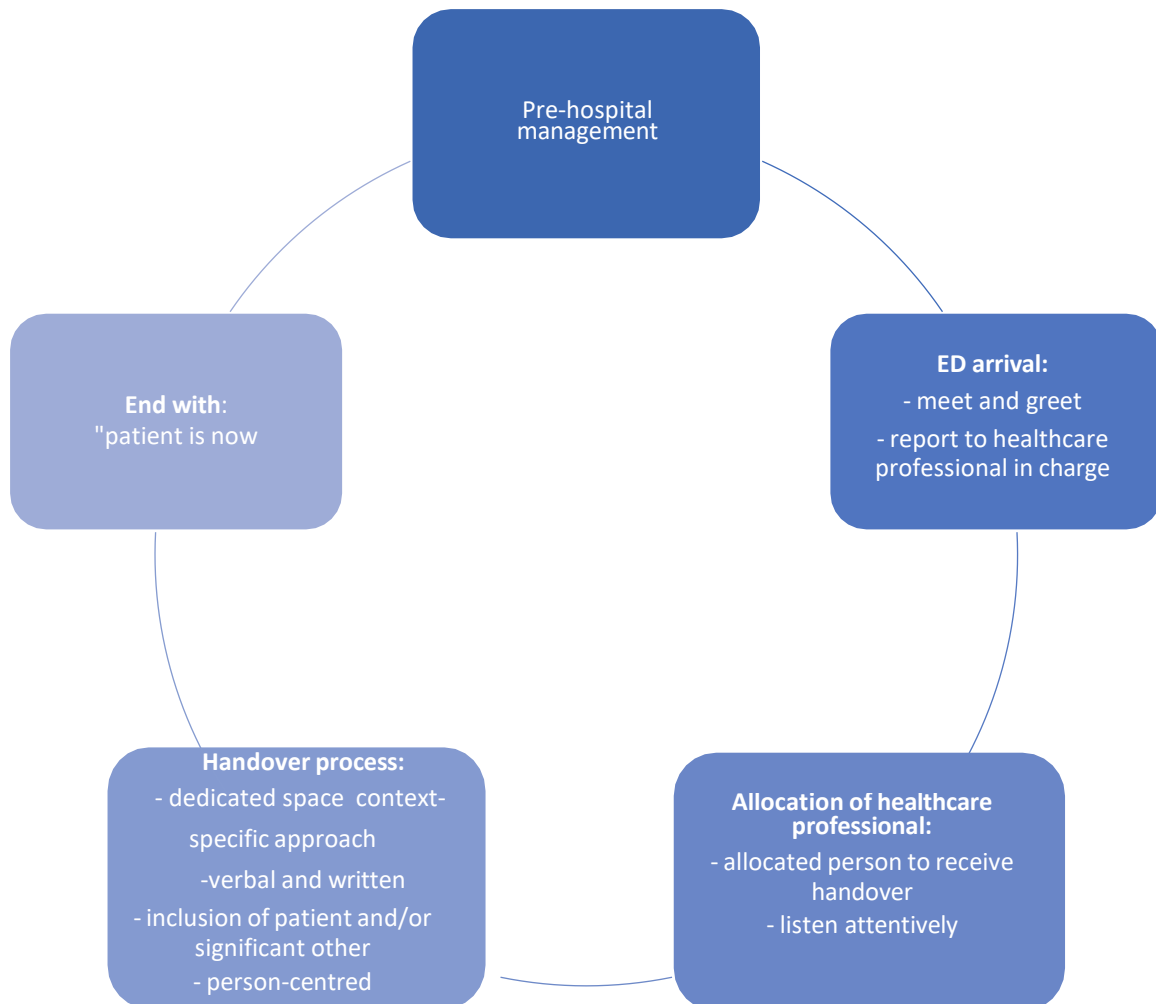


Figure 1: PRISMA flow diagram – search and retrieval process

ANNEXURE C – SEARCH STRATEGY

	Search	Number of results retrieved
#1	guideline – MeSH	172, 596
#2	patient-centered care – MeSH	23, 587
#3	patient handoff – MeSH	1, 532
#4	hospital emergency service – MeSH	95, 992
#5	“guideline”[Title/Abstract] OR “guideline”[Text Word] OR “clinical practice guideline”[Title/Abstract] OR “clinical practice guideline”[Text Word] OR “practice guidelines”[Title/Abstract] OR “practice guidelines”[Text Word]	249, 360
#6	“Patient-Centred Care” [Title/Abstract] OR “Patient-Centred Care” [Text Word] OR “patients” [Title/Abstract] OR “patients” [Text Word] OR “Person-centred care” [Title/Abstract] OR “Person-centred care” [Text Word]	760,568
#7	"Patient handoff"[Title/Abstract] OR "patient handoff"[Text Word] OR "Handover"[Title/Abstract] OR "Handover"[Text Word] OR "clinical handover"[Title/Abstract] OR "clinical handover"[Text Word] OR "emergency handover"[Title/Abstract] OR "emergency handover"[Text Word] OR "handoff"[Title/Abstract] OR "handoff"[Text Word] OR "care transfer"[Title/Abstract] OR "care transfer"[Text Word] OR "shift report"[Title/Abstract] OR "shift report"[Text Word]	3,898
#8	"Hospital Emergency Service"[Title/Abstract] OR "hospital Emergency Service"[Text Word] OR "Emergency Medical Services"[Title/Abstract] OR "Emergency Medical Services"[Text Word] OR ("emergency department"[Title/Abstract] OR "emergency department"[Text Word] OR "accident and emergency"[Title/Abstract] OR "accident and emergency"[Text Word])	155,816
#9	guideline[MeSH Terms]) OR ("practice guidelines"[Text Word] OR guideline*[Text Word] OR "clinical practice guidelines"[Text Word])) AND ((Patient-Centred Care[MeSH Terms]) OR ("Patient-Centred Care"[Text Word] OR patients[Text Word] OR "Person-centred care"[Text Word])) AND (patient handoff[MeSH Terms]) OR ("patient handoff"[Text Word] OR Handover[Text Word] OR "clinical handover"[Text Word] OR "emergency handover"[Text Word] OR handoff[Text Word] OR "care transfer"[Text Word] OR "shift report"[Text Word])) AND ((hospital Emergency Service[MeSH Terms]) OR ("hospital Emergency Service"[Text Word] OR "Emergency Medical Services"[Text Word] OR "emergency department"[Text Word] OR "accident and emergency"[Text Word])	30

ANNEXURE D – PERSON-CENTRED HANDOVER ALGORITHM



Context specific approach:

- Patient identification
- Mechanism/main complaint
- Injuries
- Signs
- Treatment provided
- Trends
- Allergies
- Medication
- Medical history

CHAPTER 7

CONCLUSIONS, CONTRIBUTIONS, IMPLICATIONS, LIMITATIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

Chapter 6 presented the final developed clinical practice guidelines on person-centred handover practices in the emergency department (ED) after consensus had been reached. This chapter briefly discusses the conclusions, contributions, implications, and limitations of the study and makes recommendations for practice, education and further research.

Handover practices are a global patient safety concern. Person-centred care is an emerging practice that is still lagging behind. To the researcher's knowledge, no concept definition for person-centred handover practices or clinical practice guidelines for person-centred handover practices between emergency care practitioners and healthcare professionals in the ED existed prior to this study. The study therefore aimed to establish the elements underpinning a person-centred approach to handover practices between emergency care practitioners and healthcare professionals in the ED.

7.2 AIM AND OBJECTIVES OF THE STUDY

The aim of the study was to establish the elements underpinning a person-centred approach to handover practices between emergency care practitioners and healthcare professionals in the ED.

In order to achieve the aim, the study was conducted in phases with the following objectives:

Phase 1: Concept analysis

Objective 1: Define the concept of person-centred handover in the ED.

Objective 2: Reach consensus on the definition of person-centred handover in the ED.

Phase 2: Mine the literature

Objective 3: Explore current literature on person-centred handover practices in the ED to inform clinical practice guidelines.

Phase 3: Guideline development

Objective 4: Develop preliminary clinical practice guidelines for person-centred handover practices.

Objective 5: Reach consensus on clinical practice guidelines for person-centred handover practices.

Accordingly, the study wished to answer the following question:

What do guidelines for a person-centred approach to handover practices between emergency care practitioners and healthcare professionals in the ED encompass?

This chapter discusses the conclusions of the phases and related objectives.

7.3 CONCLUSIONS

The conclusions, contributions and implications of the study are discussed in relation to the objectives and findings.

7.3.1 Phase 1: Concept analysis

Objective 1: To define the concept person centred handover in the ED.

The researcher used Walker and Avant's (2014) eight-step model for concept analysis. The researcher identified uses of the concept, defining attributes, a model case, borderline and contrary cases, antecedents and consequences, empirical referents, and developed the final concept definition. The use of the concept was identified for concept person-centred care and for handover practices. Person-centred care was identified as 'an approach to practise established through the formation and promotion of healthful relationships between all care providers patients and others significant to them in their lives. It is underpinned by the values of respect for people, individual right to self-determination, mutual respect, and understanding. It is enabled by cultures of empowerment that foster continuous approaches to practice development" (McCormack B, Dewing J, McCance T, 2011:1). Handover was defined as the transfer of accountability and responsibility for some or all aspects of care for a patient or group of patients from one healthcare professional to the next. The attributes of person-centred handover practices were identified as: structure, verbal and written information transfer, interprofessional process, inclusion of the patient and/or significant other, occurs at the bedside, without interruptions. A model case was defined as a situation in which person-centred handover practices included all seven defining attributes. In a borderline case only

some of the attributes were present and although the handover was done verbally, healthcare professionals listened and interprofessional communication occurred, and the patient and/or significant other participated in the handover, no written document was provided, the process was interrupted, and it did not occur at the bedside. In a contrary case, none of the defining attributes of person-centred handover practices is present. The following four antecedents were identified as having to be present to ensure person-centred handover practices: experienced staff, staff trained in person-centred care and handover practices, pre-notification of the emergency department, and assigned healthcare professional(s) to receive handover. Each of the identified antecedents is related to the defining attributes of person-centred handover practices. The consequences of person-centred handover practices in the ED were identified as: the inclusion of patients and/or significant others in the handover process resulting in them contributing to their care and being involved in decision making, which results in person-centred care delivery. In addition, following a structured approach to person-centred handover practices can lead to a unique patient-specific care delivery as a form of person-centred care delivery, since all required information regarding the patient will be transferred. The identified empirical referents would be identifiable in mutual trust and respect between emergency care practitioners and healthcare professionals during the interprofessional process. When uninterrupted structured verbal and written handover practices occur at the bedside with patient and/or significant other participation, it results in patient-focused care delivery.

The concept analysis produced the following theoretical definition of the concept person-centred handover:

Person-centred handover practices are those handovers being performed while including all identified defining attributes such as structure, verbal, and written information transfer, interprofessional process, inclusion of the patient and/or family, occurs at the bedside, without interruption.

Objective 2: To reach consensus on the definition of person-centred handover in the ED.

Based on the theoretical concept derived from Objective 1, a consensus design, using a modified online Delphi, was conducted to reach consensus on the concept and related attributes of person-centred handover. The Delphi study consisted of national and international experts in person-centred care and handover practices.

Consensus was reached after three rounds and the final concept definition and related attributes were constructed. The results yielded six attributes: context-specific approach;

verbal, non-verbal and written information sharing; person-centred interprofessional activities; inclusion of the patient and/or significant other; dedicated space, and person-centred handover approach.

The consensus definition of person-centred handover was:

Person-centred handover practices is a context-specific approach involving the interprofessional sharing of verbal, non-verbal, and written information that occurs in a dedicated space at the patient's bedside with minimal interruptions and facilitates patients' and/or their significant others' active engagement.

7.3.2 Phase 2: Mining the literature

Objective 3: To explore current literature on person-centred handover practices in the ED to inform clinical practice guidelines.

A scoping review, using the Johanna Briggs Institute (JBI) methodology (Peters, Marnie, Tricco et al, 2021), was done to reach objective 2 of the study. The results were reported using the Preferred Reporting Items for Systematic Reviews and Meta-Analysis extension for Scoping Reviews checklist (PRISMA-ScR) (Tricco, Lillie, Zarin et al, 2018). The scoping review focused on available literature on current person-centred handover practices in the ED. A total of 19 studies were included in the review, which mostly originated from developed countries (n=15), published between 2001 and 2020. Qualitative, quantitative, mixed methods and review articles were included.

Although at the time of conducting the scoping review no available information on current clinical practice guidelines could be found, information on the content and current handover practices was found and included. The scoping review concluded that some form of structured handover practice is needed; various mnemonics exist for handover practices, yet there are several variations in handover practices, and not only transfer of information occurs during handover, but also the transfer of responsibility and accountability.

While some studies suggested the need to test the effectiveness of the various mnemonics to find a golden standard, others suggested that handover practices cannot be rigid and should include patient and contextual factors or the development of guidelines to direct handover practices. Future research to establish the golden standard of person-centred handover

practices content and processes is still needed. The review also highlighted the need for more research on person-centred handover practices as a unit and not as separate entities. Information from the scoping review (and Phase 1) guided the formulation of the clinical practice guideline.

7.3.3 Phase 3: Guideline development

Objective 4: To develop preliminary clinical practice guidelines for person centred handover practices.

The guideline development group developed preliminary clinical practice guideline based on the findings of Phase 1 and Phase 2. The South African Guideline Evaluation (SAGE) Clinical Practice Guideline Development Framework (Dizon, Machingaidze & Gimmer, 2016) described the steps in evidence synthesis processes in three tiers used in the development of the recommendations. Tier one (body of evidence), tier two (expert input and consultation processes) and tier three (end-user guidance documents) (Dizon, Machingaidze & Gimmer 2016:442). The clinical practice guideline was developed by the three-member guideline development group (the researcher, supervisor and co-supervisor). To ensure methodological rigour the Appraisal of Guideline Research and Evaluation (AGREE II) tool was used for the assessment of guidelines (Brouwers et al., 2013).

Objective 5: To reach consensus on clinical practice guidelines for person centred handover practices.

An external review panel consisting of national (n=7) and international (n=3) members in handover practices, person-centred care and guideline development reviewed the preliminary guideline using the AGREE II tool and provided additional comments. The clinical practice guideline was then adjusted, and the final clinical practice guideline was developed together with an algorithm for ease of implementation.

The clinical practice guideline provides recommendations regarding the process and content to perform person-centred handover practices between emergency care providers (basic, intermediate, and advanced pre-hospital practitioners) and healthcare professionals (doctors and nurses). The clinical practice guideline provides six key recommendations and seven sub-recommendations developed from best available evidence in the literature and expert input. Implementation considerations are provided together with an algorithm for ease of implementation in practice. What made these recommendations different from current

handover practices was that they are person and context specific, not just structured and include the patient and/or significant other. Two elements that are missing in current handover practices.

7.4 CONTRIBUTIONS OF THIS STUDY

Prior research was integrated, and new conceptualizations were developed. At the time of conducting this study there was no documented definition for the concept person-centred handover in the ED. Using Walker and Avant's eight steps, a concept analysis was conducted, and consensus was reached by national and international experts on a definition for person-centred handover in the ED between emergency care practitioners and healthcare professionals (doctors and nurses). In practice, a definition can potentially improve person-centred handover practices when emergency care practitioners and healthcare professionals use the same terminology and have a shared understanding of the concept. The input of experts across the disciplines of person-centred care and handover practices created awareness of person-centred handover practices. The experts also acted as stakeholders and stakeholder involvement when creating and implementing new concepts has been found to increase the acceptance thereof by others involved in practice. Information provided by the experts also resulted in a more comprehensive concept definition and related attributes.

The scoping review revealed the different content available on handover practices which can inform and even change existing handover practices. Furthermore, the scoping review highlighted the variations in existing handover practices between emergency care practitioners and healthcare professionals in the ED and the need to standardize handover practices to ensure continuity of patient care. Information gathered from the scoping review as well as the concept analysis was then used to develop preliminary clinical practice guidelines for person-centred handover practices in the ED. The inclusion of the patient and/or significant other in handover practices could add valuable information as the patient and/or significant other is the only constant factor during the handover process.

The clinical practice guideline provides recommendations to guide the process and content of handover practices in the ED. These recommendations could provide the golden standard against which handover practices should be conducted between emergency care practitioners and healthcare professionals in the ED. Following a standardized structured approach to handover practices could improve handover quality, patient care, continuity of

care and patient outcomes.

The use of national and international experts in the field of person-centred care and handover practices together with the inclusion of emergency care practitioners and healthcare professionals working in the ED and involved in person-centred handover practices ensured that the concept definition of person-centred handover practices as well as the developed clinical practice guidelines could be used nationally and internationally.

7.5 LIMITATIONS

The researcher identified several limitations in the study. Concepts change and evolve and although a definition for the concept person-centred handover practices was constructed, it may change over time. Although the researcher tried to include all available literature over different databases at the time of conducting the literature review for the concept analysis and the scoping review, some sources might have been missed. In the scoping review, the timeframes of some of the studies was a limitation to the strength of the body of evidence since few recent studies were published. Moreover, no high-level studies, such as randomized control studies, and few systematic reviews were found.

Due to time and resource constraints, *de novo* (“from scratch”) clinical practice guidelines could be developed which would have allowed a more robust process. Due to the limited available evidence on the topic as well as a paucity in the literature from 2015 it was difficult to find appropriate evidence to support recommendations for the clinical practice guideline. The researcher hopes to address these limitations in post-doctoral work.

7.6 RECOMMENDATIONS

Based on the findings, the researcher makes the following recommendations for clinical practice, education and training, management and further research.

7.6.1 Recommendations for Clinical practice

Handover practices are essential for continuity in patient care, patient safety, and patient outcomes.

- Patient handover should be conducted in a comprehensive, accurate, person-centred manner.
- The clinical practice guidelines should be implemented in handover practices

between emergency care practitioners and healthcare professionals in order to potentially improve handover practices.

- Possible improvement in patient safety and continuity of care if all information is transferred using the clinical practice guidelines.

7.6.2 Recommendations for Education and training

Education and training are needed for both emergency care practitioners and healthcare professionals on handover practices and person-centred care.

- Training should be provided on the implementation of the clinical practice guideline for management and those involved in its implementation.
- In-service training should be provided in the clinical practice guidelines for emergency care practitioners and healthcare professionals to ensure its implementation.
- Inclusion of handover training in undergraduate and postgraduate training of emergency care practitioners and healthcare professionals.

7.6.3 Recommendations for Management

The support of management is needed to ensure the implementation of policies and procedures related to the conducting of person-centred handover practices in the ED.

- Policies and procedures based on the clinical practice guidelines regarding the conducting of person-centred handover practices in the ED should be developed.
- The implementation of clinical practice guidelines should be enforced and supported by management and policy makers.
- The evaluation of the implementation of clinical practice guidelines for person-centred handover practices in the ED.

7.6.4 Recommendations for Further Research

Further research should be conducted on the following topics:

- An examination of the practicability of the concept definition and related attributes in the light of emerging research on person-centred handover practices.
- The need for a revised concept definition of person-centred handover in the ED.
- The implementation of handover practices towards patient and context-specific person-centred practices to improve continuity of care and person-centred care in the ED.
- A systematic review of available clinical practice guidelines on handover practices.

- An evaluation of the implementation of the clinical practice guideline.
- Perceptions of emergency care practitioners and healthcare professionals in the ED of the clinical practice guideline.

7.7 CONCLUSION

This study aimed to develop clinical practice guidelines for person-centred handover practices between emergency care practitioners and healthcare professionals in the ED. The study defined person-centred handover, explored current available clinical practice guidelines on person-centred handover practices, and developed clinical practice guidelines for person-centred handover practices. The study was conducted in three phases. Phase one developed a concept definition for person-centred handover. Phase 2 conducted a scoping review for available literature on clinical practice guidelines for person-centred handover practices. Phase 3 involved the development of clinical practice guidelines for person-centred handover practices in the ED. The researcher concluded that standardized person-centred handover practices was needed in the ED and the developed clinical practice guideline could fill the gap in finding the golden standard for person-centred handover practices.

Handover practices are needed for continuity in patient care, safety, and outcomes. Handover involves not only the transfer of information, but of responsibility and accountability as well. Although research studies have indicated the need for structured handover practices, the golden standard had nevertheless still not been identified. The move towards delivering person-centred care has developed exponentially over the last decade and more recently in the ED, yet the implementation thereof is lacking. Placing the patient at the centre of his/her care delivery is important. The implementation of person-centred handover practices could be the first step in the implementation of person-centred care delivery. Clinical practice guidelines for person-centred handover practices can guide emergency care practitioners and healthcare professionals in the content and the implementation of person-centred handover practices.

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Annexure A 1.1

*Research Ethics approval
letter - 2023*



Institution: The Research Ethics Committee, Faculty Health Sciences, University of Pretoria complies with ICH-GCP guidelines and has US Federal wide Assurance.

- FWA 00002567, Approved dd 18 March 2022 and Expires 18 March 2027.
- IORG #: IORG0001762 OMB No. 0990-0278 Approved for use through August 31, 2023.

Faculty of Health Sciences Research Ethics Committee

17 May 2023

Approval Certificate Annual Renewal

Dear Mrs S de Lange,

Ethics Reference No.: 205/2022 – Line 1

Title: Development of clinical practice guidelines for person-centred handover practices in the emergency department

The **Annual Renewal** as supported by documents received between 2023-04-18 and 2023-05-17 for your research, was approved by the Faculty of Health Sciences Research Ethics Committee on 2023-05-17 as resolved by its quorate meeting.

Please note the following about your ethics approval:

- Renewal of ethics approval is valid for 1 year, subsequent annual renewal will become due on 2024-05-17.
- Please remember to use your protocol number (205/2022) on any documents or correspondence with the Research Ethics Committee regarding your research.
- Please note that the Research Ethics Committee may ask further questions, seek additional information, require further modification, monitor the conduct of your research, or suspend or withdraw ethics approval.

Ethics approval is subject to the following:

- The ethics approval is conditional on the research being conducted as stipulated by the details of all documents submitted to the Committee. In the event that a further need arises to change who the investigators are, the methods or any other aspect, such changes must be submitted as an Amendment for approval by the Committee.

We wish you the best with your research.

Yours sincerely



On behalf of the FHS REC, Dr R Sommers

MBChB, MMed (Int), MPharmMed, PhD

Deputy Chairperson of the Faculty of Health Sciences Research Ethics Committee, University of Pretoria

The Faculty of Health Sciences Research Ethics Committee complies with the SA National Act 61 of 2003 as it pertains to health research and the United States Code of Federal Regulations Title 45 and 46. This committee abides by the ethical norms and principles for research, established by the Declaration of Helsinki, the South African Medical Research Council Guidelines as well as the Guidelines for Ethical Research: Principles Structures and Processes, Second Edition 2015 (Department of Health)

Annexure A 1.2

Research Ethics approval letter - 2022



Institution: The Research Ethics Committee, Faculty Health Sciences, University of Pretoria complies with ICH-GCP guidelines and has US Federal wide Assurance.

- FWA 00002567, Approved dd 18 March 2022 and Expires 18 March 2027.
- IORG #: IORG0001762 OMB No. 0990-0278 Approved for use through August 31, 2023.

Faculty of Health Sciences Research Ethics Committee

1 June 2022

Approval Certificate New Application

Dear Mrs S de Lange

Ethics Reference No.: 205/2022

Title: Development of clinical practice guidelines for person-centred handover practices in the emergency department

The **New Application** as supported by documents received between 2022-04-29 and 2022-06-01 for your research, was approved by the Faculty of Health Sciences Research Ethics Committee on 2022-06-01 as resolved by its quorate meeting.

Please note the following about your ethics approval:

- Ethics Approval is valid for 1 year and needs to be renewed annually by 2023-06-01.
- Please remember to use your protocol number (205/2022) on any documents or correspondence with the Research Ethics Committee regarding your research.
- Please note that the Research Ethics Committee may ask further questions, seek additional information, require further modification, monitor the conduct of your research, or suspend or withdraw ethics approval.

Ethics approval is subject to the following:

- The ethics approval is conditional on the research being conducted as stipulated by the details of all documents submitted to the Committee. In the event that a further need arises to change who the investigators are, the methods or any other aspect, such changes must be submitted as an Amendment for approval by the Committee.

We wish you the best with your research.

Yours sincerely



On behalf of the FHS REC, Dr R Sommers

MBChB, MMed (Int), MPharmMed, PhD

Deputy Chairperson of the Faculty of Health Sciences Research Ethics Committee, University of Pretoria

The Faculty of Health Sciences Research Ethics Committee complies with the SA National Act 61 of 2003 as it pertains to health research and the United States Code of Federal Regulations Title 45 and 46. This committee abides by the ethical norms and principles for research, established by the Declaration of Helsinki, the South African Medical Research Council Guidelines as well as the Guidelines for Ethical Research: Principles Structures and Processes, Second Edition 2015 (Department of Health)

Annexure A 1.3

*Participant information
and informed consent
document - Delphi study*

**PARTICIPANT'S INFORMATION & INFORMED
CONSENT DOCUMENT**

STUDY TITLE: Development of clinical practice guidelines for person-centred handover practices in the emergency department.

Sponsor: n/a

Principal Investigators: Santel de Lange

Institution: University of Pretoria

DAYTIME AND AFTER-HOURS TELEPHONE NUMBER(S):

Daytime number/s: 0825237665

Afterhours number: 0825237665

DATE AND TIME OF FIRST INFORMED CONSENT DISCUSSION:

Date	Month	Year	Time	

Dear Prospective Participant

Dear Mr. / Mrs.

You are invited to volunteer for a research study. I am doing research for PhD Degree purposes at the University of Pretoria. The information in this document is to help you decide if you would like to participate. Before you agree to take part in this study you should fully understand what is involved. If you have any questions, which are not fully explained in this document, do not hesitate to ask the researcher.

1. THE NATURE AND PURPOSE OF THIS STUDY

The aim is to establish the elements underpinning a person-centred approach to handover practices to develop clinical practice guidelines for handover practices between emergency care practitioners and healthcare professionals in the emergency department (ED). By doing so we wish to learn more about the elements underpinning person centred handovers in the ED in order to develop clinical practical guidelines for this process and ensure continuity of care and improved patient outcomes.

2. EXPLANATION OF PROCEDURES AND WHAT WILL BE EXPECTED FROM PARTICIPANTS.

This study involves participating in an online Delphi with a panel of experts in various fields required to reach the study's aim. A concept analysis was done and preliminary definition of the concept '*person-centred handover practices*' in emergency departments was developed using Walker and Avant's steps. The next step is to invite experts to comment on and reach consensus on a definition for person-centred handover practices. All responses will be dealt with confidentially and will only be reviewed by the researcher and two supervisors. A maximum of three rounds will be conducted.

3. POSSIBLE RISKS AND DISCOMFORTS INVOLVED

There are no risks associated with the study. The only possible discomfort involved is your time spend on reviewing the definition of person-centred handover practices between emergency care practitioners and healthcare professionals in the ED and providing a response in each of the Delphi rounds.

4. POSSIBLE BENEFITS OF THIS STUDY

Although you may not benefit directly. The study results may help us to improve current handover practices in the ED by moving towards a more person centred handover practice between emergency care practitioners and healthcare professionals.

5. COMPENSATION

You will not be paid to take part in the study. There are no costs involved for you to be part of the study.

6. YOUR RIGHTS AS A RESEARCH PARTICIPANT

Your participation in this study is entirely voluntary and you can refuse to participate or stop at any time without stating any reason.

7. ETHICS APPROVAL

This Protocol was submitted to the Faculty of Health Sciences Research Ethics Committee, University of Pretoria, telephone numbers 012 356 3084 / 012 356 3085 and written approval has been granted by that committee (Ethics ref nr: 205/2022). The study has been structured in accordance with the Declaration of Helsinki (last update: October 2013). A copy of the Declaration may be obtained from the investigator should you wish to review it.

8. INFORMATION

If I have any questions concerning this study, I should contact:

Ms. S de Lange

Cell: 0825237665

E-mail: santeldl@sun.ac.za

9. CONFIDENTIALITY

All information obtained during this study will be regarded as confidential. Each participant that is taking part will be provided with an alphanumeric coded number e.g. A001. This will ensure confidentiality of information collected. Only the researcher will be able to identify you as participant. Results will be published or presented in such a fashion that participants remain unidentifiable.

10. CONSENT TO PARTICIPATE IN THIS STUDY

- I confirm that the person requesting my consent to take part in this study has told me about the nature and process, any risks or discomforts, and the benefits of the study.
- I have also received, read, and understood the above written information about the study.
- I have had adequate time to ask questions and I have no objections to participate in this study.
- I am aware that the information obtained in the study, including personal details, will be anonymously processed, and presented in the reporting of results.
- I understand that I will not be penalised in any way should I wish to discontinue with the study.
- I am participating willingly.
- I have received a signed copy of this informed consent agreement.

Participant's name (Please PRINT)

Date

Participant's signature

Date

Researcher's name (Please PRINT)

Date

Researcher's signature

Date

Annexure A 1.4

*Participant information
and informed consent
document - Clinical
practice guideline external
review panel*

**PARTICIPANT'S INFORMATION & INFORMED
CONSENT DOCUMENT**

STUDY TITLE: Development of clinical practice guidelines for person-centred handover practices in the emergency department.

Sponsor: n/a

Principal Investigators: Santel de Lange

Institution: University of Pretoria

DAYTIME AND AFTER-HOURS TELEPHONE NUMBER(S):

Daytime number/s: 0825237665

Afterhours number: 0825237665

DATE AND TIME OF FIRST INFORMED CONSENT DISCUSSION:

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Date Month Year Time

Dear Prospective Participant

Dear Mr. / Mrs.

You are invited to volunteer for a research study. I am doing research for PhD Degree purposes at the University of Pretoria. The information in this document is to help you decide if you would like to participate. Before you agree to take part in this study you should fully understand what is involved. If you have any questions, which are not fully explained in this document, do not hesitate to ask the researcher.

1. THE NATURE AND PURPOSE OF THIS STUDY

The aim is to establish the elements underpinning a person-centred approach to handover practices to develop clinical practice guidelines for handover practices between emergency care practitioners and healthcare professionals in the emergency department (ED). By doing so we wish to learn more about the elements underpinning person centred handovers in the ED in order to develop clinical practical guidelines for this process and ensure continuity of care and improved patient outcomes.

2. EXPLANATION OF PROCEDURES AND WHAT WILL BE EXPECTED FROM PARTICIPANTS.

This study involves participating as part of an expert panel to review draft clinical practice guidelines for person-centred handover practices in the ED. Draft guidelines was developed by an guideline development group (GDG). The next step is to invite experts to review and comment on the draft guidelines. All responses will be delt with confidentially and will only be reviewed by the researcher and two supervisors. The draft guidelines document and the AGREE II tool will be send to you for review and the comments will be used to develop the final clinical practice guidelines.

3. POSSIBLE RISKS AND DISCOMFORTS INVOLVED

There are no risks associated with the study. The only possible discomfort involved is your time spend on reviewing the draft guidelines for person-centred handover practices between emergency care practitioners and healthcare professionals in the ED and providing comments.

4. POSSIBLE BENEFITS OF THIS STUDY

Although you may not benefit directly. The study results may help us to improve current handover practices in the ED by moving towards a more person centred handover practice between emergency care practitioners and healthcare professionals.

5. COMPENSATION

You will not be paid to take part in the study. There are no costs involved for you to be part of the study.

6. YOUR RIGHTS AS A RESEARCH PARTICIPANT

Your participation in this study is entirely voluntary and you can refuse to participate or stop at any time without stating any reason.

7. ETHICS APPROVAL

This Protocol was submitted to the Faculty of Health Sciences Research Ethics Committee, University of Pretoria, telephone numbers 012 356 3084 / 012 356 3085 and written approval has been granted by that committee (Ethics ref nr: 205/2022). The study has been structured in accordance with the Declaration of Helsinki (last update: October 2013). A copy of the Declaration may be obtained from the investigator should you wish to review it.

8. INFORMATION

If I have any questions concerning this study, I should contact:

Ms. S de Lange

Cell: 0825237665

E-mail: santeldl@sun.ac.za

9. CONFIDENTIALITY

All information obtained during this study will be regarded as confidential. Each participant that is taking part will be provided with an alphanumeric coded number e.g. A001. This will ensure confidentiality of information collected. Only the researcher will be able to identify you as participant. Results will be published or presented in such a fashion that participants remain unidentifiable.

10. CONSENT TO PARTICIPATE IN THIS STUDY

- I confirm that the person requesting my consent to take part in this study has told me about the nature and process, any risks or discomforts, and the benefits of the study.
- I have also received, read, and understood the above written information about the study.
- I have had adequate time to ask questions and I have no objections to participate in this study.
- I am aware that the information obtained in the study, including personal details, will be anonymously processed, and presented in the reporting of results.
- I understand that I will not be penalised in any way should I wish to discontinue with the study.
- I am participating willingly.
- I have received a signed copy of this informed consent agreement.

Participant's name (Please PRINT)

Date

Participant's signature

Date

Researcher's name (Please PRINT)

Date

Researcher's signature

Date

Annexure B 1

Data extraction sheet - Concept analysis

Annexure B.1 Data extraction sheet - Concept Analysis - Literature search and review

Search date restrictions: Open
 Key terms used: person-centred, emergency department and handover practices

Author	Year	Title Screened	Abstract Screened	Full text screened	Person-centred care	Involve emergency care practitioners and healthcare professionals	Included (Y/N)	Reason for excluding	Reason for including	Duplicate records
Hallmark Health System	2013	Yes	Yes	Yes	Yes	No	Y		Person-centred handover practices in the ED	
Mitchell, Aine; Tahir, Qurr	2019	Yes	Yes	Yes	Yes	No	Y		Person-centred handover practices in the ED	
White-Trevino, Dearmon	2018	Yes	Yes	Yes	Yes	No	Y		Person-centred care	
Picinich C, Madden LK, Bre	2019	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
Bost N, Crilly J, Wallis M, P	2010	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
Ehlers P, Seidel M, Schach	2021	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
de Lange S, van Eeden I, H	2018	Yes	Yes	Yes	Yes	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover and person-centred care
J Scott, D Flynn, K Chan, M	2013	Yes	Yes	Yes	Yes	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover and person-centred care
Dúason S, Gunnarsson B, S	2021	Yes	Yes	Yes	Yes	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover and person-centred care
Kerr D, McKay K, Klim S, Ke	2014	Yes	Yes	Yes	Yes	No	Y		Person-centred care	
Troyer L, Brady W.	2020	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
Najafi Kalyani M, Fereidou	2017	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
Dojmi Di Delupis F, Mancir	2015	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
Reay G, Norris JM, Nowell	2020	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
Panchal AR, Gaither JB, Suij	2015	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
Meisel ZF, Shea JA, Peacoc	2015	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
Maddry JK, Simon EM, Ree	2021	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
O'Connor K, Golding M.	2020	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
Reay G, Norris JM, Alix Ha	2017	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
Dojmi Di Delupis F, Mancir	2020	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
Carr C, Hardy J, Scharf B, L	2020	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
Sujan MA, Chessum P, Rud	2015	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
Goldberg SA, Porat A, Stro	2017	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
Fitzpatrick D, Maxwell D, C	2018	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
Maddry JK, Arana AA, Clem	2021	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
Huth K, Stack AM, Chi G, S	2018	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
Sumner BD, Grimsley EA, C	2019	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
El-Masri S, Saddik B.	2012	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
Fahim Yegane SA, Shahrar	2017	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
Altuwajjri EA, Budgen D, M	2019	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
Dawson S, King L, Grantha	2013	Yes	Yes	Yes	Yes	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover and person-centred care
Sujan M, Spurgeon P, Inad	2014	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
Waldron R, Sixsmith DM.	2014	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
Downey LV, Zun L, Burke T	2013	Yes	Yes	Yes	Yes	No	Y		Person-centred care during the handover pro	cess
Cram N, McLeod S, Lewell	2017	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
Fitzpatrick D, McKenna M.	2018	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
Clarey A, Allen M, Brace-M	2014	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner to healthcare pr	professionals in the ED handover
R Iedema, C Ball, B Daly, J	2012	Yes	Yes	Yes	No	Yes	Y		ED handover from emergency care practition	ers to healthcare professionals
SM Jensen, A Lippert	2013	Yes	Yes	Yes	No	Yes	Y		ED handover from emergency care practition	ers to healthcare professionals
N Bost, J Crilly, E Patterson	2012	Yes	Yes	Yes	No	Yes	Y		ED handover from emergency care practition	ers to healthcare professionals
SL Murray, R Crouch, M Ai	2012	Yes	Yes	Yes	No	Yes	Y		ED handover from emergency care practition	ers to healthcare professionals
FD Di Delupis, N Mancini,	2015	Yes	Yes	Yes	No	Yes	Y		ED handover from emergency care practition	ers to healthcare professionals
S De Lange, I Van Eeden, T	2018	Yes	Yes	Yes	Yes	Yes	Y		ED handover from emergency care practition	ers to healthcare professionals
GT Hovenkamp, TJ Olgers	2018	Yes	Yes	Yes	No	Yes	Y		ED handover from emergency care practition	ers to healthcare professionals
F Dojmi Di Delupis, N Man	2014	Yes	Yes	Yes	No	Yes	Y		ED handover from emergency care practition	ers to healthcare professionals
J Scott, D Flynn, K Chan, M	2017	Yes	Yes	Yes	No	Yes	Y		Handover from pre-hospital to ED	
M Flink, SB Glas, F Airosa,	2015	Yes	No	Yes	Yes	No	N	Person-centred handovers from ED to primary care - not related to t		he ED handover
L Van Rooy	2017	Yes	Yes	Yes	Yes	No	N	Person-centred communication in the ED - not related to handover		
A Marshall, K Rawlings, S Z	2021	Yes	Yes	Yes	Yes	No	Y		Person-centred handover in the ED	
A Murphy, A Wakai, C Wal	2016	Yes	Yes	Yes	No	Yes	Y		Emergency care practitioner and healthcare	professional in the ED handover
A Sy, B Moglia, G Aragund	2021	Yes	Yes	Yes	No	Yes	N	Ambulance to ED handover protocol - not available in English		

I DeCelle	2020	Yes	Yes	Yes	Yes	No	N	Person-centred nursing handover in a hospital setting
M Stephens, R Brighton	2014	Yes	Yes	Yes	Yes	No	Y	Person-centred care and handover in the ED
F Airoso	2015	Yes	Yes	Yes	Yes	No	N	Person-centred care in the ED - not related to handover
A Johansson, E Mörberg	2019	Yes	Yes	Yes	Yes	No	N	Person-centred care in the ED - not related to handover

Total (N = 55)

Total records included in final review (N=49)

Total records excluded (N=6)

Annexure B 2

Concept analysis data sheet of data analysis

Annexure B.2: Concept analysis data sheet of data analysis

Concept Analysis - EMS to ED Handover

Authors	Year	Country	Setting	Defining Attributes	Border cases	Related cases	Contrary cases	Antecedents	Consequences	Empirical Referents	Person centred	Person centred Handover	Handover	Model Case	
Costa, A., Catania, G., et al	2010	Italy	Interviews with nurses	Busy environment? Medical diagnosis should be comprehensive and holistic, teamwork in								Family centred mentioned a lot	X	Not EMS to ED handover	
Bruce, K and Suser	2005	Sweden	ED (Qualitative desc)	Information exchange between professionals, done verbally, but must also be documented for quality assurance, should be holistic to meet individual patient needs, involves pre-notification which is brief and structured, handover is brief and lasts minutes, personnel listen attentively to handover, takes place				Experience (longer the better) for more knowledge on patient treatment. Pre-notification of staff arriving ensure that	Meet patients needs						Note: nurses on ambulances resp for handover to nurse in ED
Seidel, Matthias Schacher, Sylvia Pin, Martin Finimers, Rolf Kogej, Monika Staff, Ingo	2021	Germany	ED (Three hospitals with different emergency care levels) (Observational study using checklists)	what was done and plan further care, involves at least two professional groups - inter-professional process), Structured handovers through the use of ABCDE/ SAMPLER, higher patient acuity leads to a more detailed handover, the ED handover requires a specific mnemonic (current ones are not tailored for verbally, and must also be documented to provide a formal record, it is a inter-professional handover information is transferred to multi professional				pneumonic to conduct the handover from. No actions to be performed during handover. All team	Treatment depends on the handover. Patient outcomes depend on good handover. Improve patient safety and						Involved trauma and medical patients handover taking place in resus and normal treatment rooms, handover time = 1min11sec
Ferdousi, Zehla Sarvestani, Raheleh Sabat	2017	Iran	ED (two hospitals)	noisy, distracting environment), occurs between nurses and paramedics mostly, inter-professional transfer of information, requires effective communication, two different handovers for critical and non-critical patients, verbal handovers, effective				free from noise and distractions. Necessary communication. Experience in performing handovers (paramedics),	Safe and patient safety. Effective handover is						
Dawson, Sarah King, Lindy Grenham, Hugh	2010	Australia	ED (integrative literature)	disciplinary understanding, feedback, standardising some aspects of the handover, including technology. Generic protocols/ checklists should be followed. The use of a adapted MIST tool. Important to deliver				which guides the handover process. Shared respect between the two	will lead to less questions asked for clarification from ED staff, a shorter						
Flynn et al	2017	Included all countries	Systematic review (ECPs + HCP) incl. 36 studies	communication between ambulance crew and ED staff. There is exchange of verbal and/or written information about the patients diagnosis, treatment and care. Involves the transition of responsibility. This handover is the only opportunity to transfer				for handover to facilitate standardization. Evidence-based guidelines for the	Transition of patient responsibility occurs after handover.						
Ehben et al	2016	Nijmegen, Netherlands	EMS and ED	Includes information on the mechanism of injury, vital signs, provide digital photos. Structured approach such as ASCHICE is used. Involved the whole trauma team. Two-way communication between the EMS and hospital.				Handover protocols and training. Devise a communication pathway for vital information to rapidly be collected and transmitted from scene to the ED in a standardised format.	Facilitates the transition from prehospital care to ED resuscitation.						
Budd et al	2007	England and Wales	ED and EMS (questionnaires)	This type of handover as the first physician encounter to pre-hospital and hospital staff. Involves the transfer of information on the patient's clinical condition and professional responsibility and accountability from one HCP to another. Often occurs in a setting with high patient acuity and overcrowding. Includes detailed information and given by an experienced ambulance personnel member. Detailed information includes:				Lack of active listening and disinterest expressed by ED staff. Incomplete in verbal and written aspects and EMS personnel unable to answer	Detailed handover leads to enhanced patient care. Leads to the transfer of responsibility and accountability.						
Bost et al	2010	Majority Northern EU	Literature review on EMS and ED (Qualitative conventional content analysis)	ensure continuity of care, patient safety and teamwork. Important information can be transferred prior to arrival and in the resuscitation room. ED staff to listen attentively to EMS during the handover. One				knowledge of EMS and ED staff to take over patient's and perform handover. Not using a common	resources as to not cause a delay at the time of handover leading to tension amongst staff.						
Thakore, S and Morrison, W.	2001	Scotland	EMS staff (Descriptive survey)	Handover should be brief, but clear, effective and delivered to the right person (physician). Critical patients' handovers should be detailed. Most handovers involve the ED nurse and EMS staff. ED staff to display the same level of interest in all types of providers. It should only be done once from EMS to ED staff. No repetitions. ED personnel should be				Distracted, non listening ED staff involved in the handover. Communication and teamwork gaps. ED staff not paying attention to the handover, busy with	Standardizing and automating patient viewpoints and the development of policies. Appropriate mental model by transferring	desimination of information can lead to reduced morbidity and mortality due to					
Meisel, et al.	2016	Pennsylvania	EMS staff (Qualitative study, focus groups = 48 participants)	more structured. Responsibility is handed over after the patient is moved onto the bed, verbal handover completed and written documentation handed over. One person from each side should be the responsible person for providing and receiving the handover.				listening by ED staff. Repetitions of							
Patterson & Chaboyer	2010	Queensland	ED and EMS staff (79 EMS, 65 nurses, interviews done)	ensure all information is transferred. Accurate written information should be provided to ensure no information is lost or forgotten. ED staff receiving the				Quite environment. Attentive listening. Collaboration and team work.							
Dawson, Gunnarsson & Svaransdotir	2021	Iceland	Phenomenology. 23 participants with 17 interviews done	handover. Detailed information should be written down and correspond with verbal handover. ED staff to listen attentively as to not repeat information and loose information due to repetition. Only one handover to ED nurse and/ or physician present. Use of structured tools e.g. BAJAM, MIST, IMIST-AMBO, DeMIST, IMIST-AMBO mostly suggested.				attentive listening. Correct staff member to receive handover the first time.							
Talbot and Bleetman	2007	London	Literature review (EMS to ED handover since 1980), 18 papers incl	transfer and recall as well as establishing a shared understanding of the patients condition to ensure ongoing optimal care. Handover should be provided to the highest qualified person - dr., with handover one provided once and not multiple times to prevent				Quite environment. Correct staff available.	Continuity of patient care.						
Jensen, Lippert & Ostegaard	2013														
Makink, Stein & Brij	2021	South Africa	Pre-hospital personnel					Training in providing handovers and the use of mnemonics. Simulation training in handovers.							
Makink, Owen & Ste	2021	South Africa	EMS personnel	Use of pneumonics to guide a structured handover.				Attentive listening							

Concept Analysis - Person Centredness in the ED

Authors	Year	Country	Setting	Defining Attributes	Antecedents	Consequences	Empirical Referents	Border cases	Related cases	Contrary cases	Person centred	Person centred Handover	Handover
1 Bridges, Meyer & Det	2005	United Kingdom	A&E services (Literatu	satisfaction rates correlated with: having a relationship of trust between pt and ED staff.	Staff views on includin	Increased patient sat	Patient experiences.				PC care for older people in the ED		ED staff or y
2 Walker and Deacon	2016	United Kingdom	Acute care setting in a	PC care places pe and families at the heart of care decisions. Communicating frequently with families regarding	Communication inter	Enhance care experie	Families verbal expressions of gratitude, thank you cards (a th w			Nurse-centric interve	PC bereavement care in acute settings (A&E). PC care was evaluated		ED staff or y
3 Nicholas et al	2020	Canada	Two large Canadian t	dignity and respect (listening to families and incorporating their values, knowledge and beliefs in care), 2) participation (encouraging families to participate in care and decision-making), 3) collaboration (families included in care delivery, institutional policy and programme development), 4) information sharing (sharing of timely, complete and accurate information with families). Knowledge on the disease, pt relevant information, pt and family listened too personalized care is provided. Welcoming approach to the patient, the way a pt and family is addressed.	The inclusion of family perspectives, resour		Family satisfaction with regards to communication and interpersonal skills. Staff to staff co				PC and family-centred care in autism children		Use of PFC care to improve care delivery. Parents of children, physicians and nurses.
4 Almaze and de Beer	2017	South Africa	ED's of four hospitals	Staff being responsive to the needs, values and cultural needs of pts and family. Inclusion of family members in pt care, to provide	ED staff should be kn	Reduces family members stress and anxiety and enhances pt satisfaction. Increased staff				unemotional involvement in work and development of nurses and acynical attitude towards pa			EN and Rb in the ED
5 McConnell, McCance	2015	Various	Literature review	kndness, compassion and respect. Putting the pt at the centre of care delivery. Care that is relationship-focused, holistic and	Staff attributes include	Satisfaction with care delivery, involvement in care, feeling of well-being, creating a therap				Inadequate communication, poor standards and a culture that focusses on systems rather tha			No components of PC have emerged from empirical evidence, no papers id that discussed PC as a concept that relates to care delivery within the ED.
6 Dellenborg, Wikstrom	2019	Sweden	Medical IEC (ethnogra	seeing the person as a person with their own will, regardless of their physical or cognitive capacity.									Physicians and nurses
7 Kennedy	2017	Not provided	Not provided	making. Incorporating pt's values, belief and cultures into the treatment process. Communication	Continuous profession	Increased patient satisfaction and improve health outcomes, supports people to be partners in their care. Also influences the way nurses work and promotes the move away from outdated and pater							naliestic practices.
8 Brown, Mace, Dietrich	2008	Not provided	Literature review	family with dignity and respect. Communicating unbiased information. Pt and family to participate									
9 Cohen, Wilkin, Tanne	2013	Southeastern United	Large, inner-city publi	Providing care that is respectful, individualized to pt preferences, needs and values. Open-ended conversations should be held with patients, patient support to be									Nurses an EMS
10 Shankar, Bhatia, Sch	2014	UK, USA, Sweden, Ca	Systematic review, EC	a attitude in which patients have an active role in their own care. Respect for patient values.									
						Improve the pt's overall experience, enhance the effectiveness of care delivery, guide clinical decisions based on pt unique needs.							

Concept Analysis - PC Handover

	Author/s	Year	Country	Setting	Defining Attributes	Antecedants	Consequences	Empirical Referents	Border cases	Related cases	Contrary cases	Person centred	Person centred Handover	Handover
1	White-Trevino, Deam	2018	Alabama	ED	Handover performed at the bedside as this		Trusting and caring relationship beign formed which results in patients being satisfied with their care.						Bedside change of shift handover	
2	Bruce and Suserad	2005		ED	When the handover is performed in the patients presence. Patient is greeted by the staff and they introduce themselves.									
3	Kullberg, Sharp, Joha	2017	Karolinska University	Oncology department	Patient involvement and effective communi		Improved patient safety and nurse and patient satisfaction.							

ED nurses

Person centred ED Handover											
Most common attributes found in all articles:											
good communication	comprehensive	holistic	structured	verbal	culturally appropriate language						
information exchange	verbal	documented	holistic		brief	structured	involve attentive listeners	physical handover of pts with accompanying documents	occurs between ED nurse/ dr and ECP	patient focused process	unique type of h/o
involves relaying info on what was done to plan further care	process (involves at least two different professionals)	structured	ED tailored structure to be used	from ECP to team							
verbal	and documented	structured	specific location	interprofessional process							
vulnerable process	occurs between nurse and ECP	transfer of information	effective communication	verbal	specific location	structured	ideally from ECP to team	comprehensive	patient centred	documented	
ECP to dr	feedback from receiving personnel	structured	provide concise information								
two way communication process	involves ECP and ED staff	verbal	documented	involves the transfer of responsibility too	structured	one opportunity moment	feedback from receiving crew	happen prior to physical transfer of pt from one be to the next	from ECP to team		
two way communication process	from EMS to team	structured	contain pt info								
first physical interaction between ECP and HCP	transfer of info and resp	occurs in high acuity environment	detailed information	patient problem focussed	feedback from receiving personnel	verbal	written	requires attentive listening	structured	using a common language	interprofessional communication
quick	effective	attentive listening									
quick	effective	from ECP to dr	detailed information	most involve nurse and ECP	verbal	written	critical, brief window to transfer info				
clear	concise information	done once from ECP to team	listen attentively	verbal	structured	feedback from receiving personnel	documented	trusting relationship between the parties improve process			
structured	verbal	ECP to nurse/ dr	short		attentive listening	concise information	shared respect amongst staff				
structured	documented	listen attentively									
structured	documented										
verbal	documented	should be done only once	structured	common language	active listening	respect					
structured	shared understanding	from ECP to highest qualified person	done only once	without interruptions							
structured											

Model case:							
structured	verbal and documented	sharing information in a concise and structured manner	common language and shared understanding and respectful	interprofessional process - should occur between the ECP and the team receiving the patient	Done once without interruptions	in a specific location	first interaction with one opportunity to get it right

PC in the ED

patient satisfaction	involved in decision making	explanation of care	trust relationship between pt and HCP		
pt and family in the centre of care	frequent verbal communication	pt participation in decision making	common language used	acknowledging pt believes and values	
dignity and respect	participation	collaboration	information sharing	respect towards family and pt	
considering pt needs, values and believes	inclusion of family and pt	information sharing	inclusion in decision making		
kindness	compassion	respect	pt in the centre	care that is holistic	
each person is unique	include in decision making				
shared decision making	communication	considering values and believes			
treat with dignity and respect	communication	inclusion in care activities	collaboration	family presence	
individualised care to pt needs	holistic	respect	empathy		
inclusion of pts in care	respect	communication	support	pt and family involvement	

Model case:			
inclusion of patients and/or family	shared decision making	involves frequent verbal communication in a common language	treating patient and family with respect considering their values, beliefs and uniqueness

PC handover				
handover done at the pt bedside	pt involved in communication			
staff introduction	pt included			
pt involvement	communication	at the bedside	pt focussed	

Model Case:		
at the bedside	with the patient involved	patient focused

ED Handover									
Most common antecedents found in all articles:									
Pre-notification for correct staff to be available	experience	at the bedside - location	effective staff interaction	staff interest and interaction during handover	standardized documents				
specific developed pnemonic	attentive listening	whole team available	face-to-face communication	training on tool used	shared common language	handover training	financial and human resource support to implement training		
Quite environment	handover knowledge	common language	attentive listening	training on handover	practice of handover				
face-to-face communication	experience	attentive listening	mutual trust	quite environment	competent staff to receive handover	location	sharing a common language	handover training	structured documentation for written
checklists to guide structured handover	shared respect	handover training	training on standardized tools						
structured models	evidence based guidelines	handover training							
handover protocols	handover training	standardized format							
staff experience	handover training	attentive listening	common language	shared understanding	handover tools for structure	quite environment	documentation of handover		
infrastructure to reduce waiting times leading to staff conflict	adequate location	correct staff to receive handover	experience	trusting relationships	interprofessional collaboration				
handover training	feedback system	attentive listening	process to facilitate attentive listening						
policies for standardization	correct staff to receive handover	staff interest	handover training	shared understanding					
developed structure	use handover tools	interprofessional relationships	handover training	guidelines to guide process	correct staff to receive handover	teamwork	respect		
Quite environment	teamwork	attentive listening							
attentive listening	knowledge regarding tool used								
attentive listening	correct staff to receive handover								
Quite environment	correct staff to receive handover								
handover training	simulation training								

Model Case:

experience	handover training	mutual respect to facilitate interprofessional collaboration	receiving team to receive the handover	specific quite location to conduct the handover in	
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PC in the ED

staff buy in to provide PC care	replacing the focus to the pt	develop integrated care model to inc PC care			
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continous communication interventions	develop trusting relationships	education in PC	role modelling of PC care	personalizing the nurse-patient relationship	training on PC
training on PC	adequate staffing	personell awareness	PC awareness		
policies to guide PC care implementation	training on PC				

Model Case:	
Staff training on PC care	Staff awareness on PC care

Person centred handover in the ED

Most common consequences found in all articles:

ED Handover			
meet patient needs			
adequate planning of needs	improved patient outcomes	improved patient safety	
patient safety	ensure continuity of care	planning of further care	
optimum patient management			
short handover duration	less questions asked	better understanding	
transitioning of patient responsibility			
patient transition			
enhanced patient care	patient transition		
focused care implementation	reduce morbidity and mortality	continuation of care	patient safety
continuity of care			

Model Case:		
ensures continuity of patient care	improves patient outcomes and patient safety	facilitates care planning

PC in the ED					
increased patient satisfaction					
enhance care experiences					
increased patient satisfaction	reduced family stress and worry	improved patient outcomes	increased staff satisfaction	reduction in costs	
increased patient satisfaction	patient involvement	therapeutic care environment			
increased patient satisfaction	improved patient outcomes				
increased patient satisfaction					
increased patient experience	enhanced care delivery	unique needs guide patient care			

Model Case:		
patient and family involvement	enhanced care delivery and patient outcomes	delivery of unique patient care

PC handover				
patient satisfaction				
patient safety	patient satisfaction	staff satisfaction		

Model Case:
increased patient and staff satisfaction

Defining Attributes:			
Model case:			
inclusion of patients and/ or family	shared decision making	involves frequent verbal communication in a common language	treating patient and family with respect considering their values, beliefs and uniqueness

Model Case:		
at the bedside	with the patient involved	patient focused

Antecedants					
Model Case:					
experience	handover training	mutual respect to facilitate interprofessional collaboration	receiving team to receive the handover	specific quite location to conduct the handover in	

Model Case:	
Staff training on PC care	Staff awareness on PC care

Consequences		
Model Case:		
ensures continuity of patient care	improves patient outcomes and patient safety	facilitates care planning

Model Case:		
patient and family involvement	enhanced care delivery and patient outcomes	delivery of unique patient care

Model Case:
increased patient and staff satisfaction

Concept definition of Person centres handovers

Transfer of information verbally through interprofessional communication regarding patient problems and care delivered.

It occurs at the patient's bedside with patient and/ or family involvement

It requires mutual respect from both sides, experience and training to ensure quality and unique patient care and enhance patient outcomes

Annexure B 3

Delphi study - Participant demographic information

Delphi study - Participant demographic information

PARTICIPANT	COUNTRY	QUALIFICATION	EXPERIENCE
Participant 1	Australia	PhD	>30 years in academia and >20 years person-centred care and handover experience
Participant 2	UK	PhD	>20 years person-centred care experience and academia
Participant 3	South Africa	Master's degree	>20 years clinical experience including person-centred care and handover and >4 years academia
Participant 4	South Africa	Master's degree	>30 years clinical experience in person-centred care and handover
Participant 5	South Africa	PhD	>20 years clinical experience in handover practices and academia experience in person-centred handover
Participant 6	South Africa	PhD	>10 years clinical experience and >4 years person-centred care experience
Participant 7	UK	PhD	>10 years academic experience and person-centred care
Participant 8	South Africa	PhD	>20 years' experience in academia and >15 years in person-centred care
Participant 9	Australia	PhD	>10 years academic experience in person-centred care and handover and >20 years clinical experience

Annexure B 4

*Summary of each Delphi
round - Concept definition
and attributes*

Summary of each Delphi round – concept definition and attributes

Summary of the concept definition development over three rounds:

CONCEPT DEFINITION	ROUND 1 CONSENSUS AGREEMENT	ADJUSTED DEFINITION	ROUND 2 CONSENSUS AGREEMENT	ADJUSTED DEFINITION	ROUND 3 CONSENSUS AGREEMENT	FINAL CONCEPT DEFINITION
Person-centred handover practices are those handovers being performed while including all identified defining attributes such as structure, verbal, and written information transfer, interprofessional process, inclusion of the patient and/ or family, occurs at the bedside, without interruption.	89%	Person-centred handover practices are the interprofessional sharing of structured verbal and written information that happens in a dedicated space without interruptions allowing the patient and/or significant other to participate.	86%	Person-centred handover practices is a context specific approach involving the interprofessional sharing of verbal, non-verbal and written information that happens at the patient's bedside with minimal interruptions and facilitate patients and/or their significant others' active engagement.	100%	Person-centred handover practices is a context specific approach involving the interprofessional sharing of verbal, non-verbal and written information that happens at the patient's bedside with minimal interruptions and facilitate patients and/or their significant others' active engagement.

Summary of the consensus agreement and refined attributes after each round:

ATTRIBUTE	ROUND 1 – CONSENSUS AGREEMENT	REFINED ATTRIBUTE	ROUND 2 – CONSENSUS AGREEMENT	REFINED ATTRIBUTE	ROUND 3 – CONSENSUS AGREEMENT	FINAL ATTRIBUTES
Structure	89%	Structured approach	100%	Context specific approach	89%	Context specific approach
Verbal and written information transfer	55.6%	Verbal and written information sharing	100%	Verbal, non-verbal and written information sharing	100%	Verbal. Non-verbal and written information sharing
Interprofessional process	66.6%	Person-centred interprofessional activities	100%	Person-centred interprofessional activities	100%	Person-centred interprofessional activities
Inclusion of the patient and/ or family	89%	Inclusion of the patient and/ or significant other	88%	Inclusion of the patient and/ or significant other	100%	Inclusion of the patient and/ or significant other
Occurs at the bedside	77.8%	The dedicated space	88%	Dedicated space	100%	Dedicated space
Without interruptions	89%	Person-centred handover culture	100%	Person-centred handover culture	79%	Person-centred handover approach

Annexure B 5

Scoping review prior protocol

Scoping review priori protocol

Clinical Practice Guidelines for person-centred handover practices in the emergency department: A scoping review protocol

Abstract

Objective: The objective of this scoping review is to identify and present the available information on clinical practice guidelines for person-centred handover practices between emergency care practitioners and healthcare professionals in the emergency department.

Introduction: Handover practices are high-risk activities for patient safety with national and international literature advocating for the standardization of this practice. The call for person-centred care in emergency departments is on the rise. Person-centred handover practices may enhance safe patient care. The implementation of person-centred handover practice guidelines can potentially direct handover practices.

Inclusion criteria: Handover practices between emergency care practitioners and healthcare professionals in emergency departments that relate to clinical practice guidelines for person-centred and/or handover practices.

Methods: Online databases including MEDLINE, CINAHL, Web of Science, and Scopus will be searched with no restrictions. The JBI methodology for scoping reviews guides this review. The pre-determined inclusion and exclusion criteria were applied. Data were extracted from clinical practice guidelines for person-centred and/or handover practices using the JBI software and then analyzed and presented in a tabular form related to the review objective and questions.

Review registration number: Figshare: [10.6084/m9.figshare.21731528](https://figshare.com/figures/data/21731528)

Keywords: clinical practice guidelines; emergency department; handover; person-centred

Abstract word count: 177 words

Total manuscript word count: 1859 words

Introduction

Handover practices are integral in the process of providing safe, quality patient care and are defined as the “transfer of professional responsibility and accountability for some or all aspects of care for a patient or patient group to another person or professional group on a temporary or permanent basis”(1,2). Effective communication is not only essential for safe patient care, it also promotes participation and partnership between healthcare professionals and patients(3).

To ensure continuity of care,, good communication between healthcare professionals at all levels is essential (2). The pre-hospital environment and the hospital/ emergency department (ED) are linked during handovers from emergency care practitioners and healthcare professionals (nurses and

doctors). Handover practices between these two types of professionals play a key role in patient safety and the continuity of care (4). Patient safety and continuity of care depends on the comprehensiveness and completeness of the shared information (5).

The handover between emergency care practitioners and healthcare professionals occurs in a complex and busy environment, with an emphasis on biomedical tasks, critical thinking, and quick interventions. However emergency care practitioners have only one opportunity to transfer patient information to healthcare professionals (2).

Owing to the nature and complexity of the handover process, it has been recognized internationally as a high-risk activity for patient safety, with many appeals to improve (5). The standardization of handover practices to improve them through more consistent information transfer has been called for (1). However, despite this call, no literature has been published on efforts to standardize handover practices, and standardization may not always be possible because of different specialities and contextual needs (2). Dúason, Gunnarsson and Svavarsdóttir, suggested the use of guidelines to ensure more structured communication during handover practices (7). Clinical practice guidelines are defined as “statements that include recommendations intended to optimize patient care that are informed by a systematic review of evidence and an assessment of the risks and benefits of alternative care options”(8). It is an important component of healthcare and can be used to optimize patient care (8). Therefore, the development of clinical practice guidelines for handover practices in the ED has the potential to improve communication, ensure continued care, and improve patient care.

In addition to standardized handover practices, a shift towards person-centred approaches to patient care was also suggested to improve handover communication (9). Person-centred care is a method of forming trusting relationships between patients and healthcare professionals. It is defined as “a holistic approach to providing care that includes patient involvement, communication, access to services, well-trained staff and an environment that meets patients’ psychological, physical and cultural needs” (10). Various literature describes the ideal handover as one that is standardized, information transfer to the correct person, respectful professional behaviour, it occurs at the bedside in a quiet environment, organized in form, and it involves healthcare professionals, patients, and relatives (2). Although person-centred care is increasingly being practiced in many healthcare settings it is yet to be incorporated into ED and ED handover practices (10). In nursing a variety of handover models, designed to promote patient participation have been developed to improve person-centred handovers (3). However, these models are focused on the nurse to nurse shift handovers in general ward settings. Kullberg et al., suggested that person-centred handover practices is an example of handover model to promote active patient participation (3).

Although standardization through the use of checklists can reduce information loss and mistakes, the use of standardized handover practices is not the norm and the best standardized method has not been established (2). In addition, person-centred care delivery is centred around the specific needs of each individual patient and the use of a standardized checklist to perform handovers will not be directed to person-centred care delivery. Therefore the development of clinical practice guidelines aiming at three aspects: processes of the handover, inclusion of patients and/ or families and communication could lead to person-centred handover practices in the ED amongst emergency care practitioners and healthcare professionals.

A preliminary search of MEDLINE, the Cochrane Database of Systematic Reviews and JBI Evidence Synthesis was conducted and no current or underway systematic reviews or scoping reviews on the topic were identified.

The objective of this scoping review is to identify and present the available information regarding clinical practice guidelines on person-centred handover practices between emergency care practitioners and healthcare professionals in the ED. This can provide a comprehensive picture of person-centred handover practices amongst emergency care practitioners and healthcare professionals in the ED, how it is done and what it entails.

Review question

- What clinical practice guidelines are available on person-centred handover practices between emergency care practitioners and healthcare professionals in the ED?
- What content does the available clinical practice guidelines for handover practices include?

Inclusion criteria

The Participants, Concept, and Context (PCC) framework will be used to determine studies eligible for inclusion in this review (11).

Participants

Eligible populations will include emergency care practitioners who transport patients from the pre-hospital environment to the ED and are involved in handover practices with healthcare professionals. Healthcare professionals can be defined as doctors and nurses working in the ED and involved in the receiving of handover communication from the emergency care practitioners. These populations are included due to their involvement in the specific type of handover practices in the ED.

Concept

The concept of interest is clinical practice guidelines for person-centred handover practices between emergency care practitioners and healthcare professionals in the ED. All studies related to person-centred handovers in the ED will be included.

Person-centred refers to a holistic approach to providing care that includes patient involvement, communication, access to services, well-trained staff and an environment that meets patients' psychological, physical and cultural needs" (10).

Handover practices is understood as the "transfer of professional responsibility and accountability for some or all aspects of care for a patient or patient group to another person or professional group on a temporary or permanent basis" (1,2).

Context

The scoping review will consider studies that have been conducted in emergency departments, emergency rooms, or emergency centers. Studies conducted in any geographical area will be considered.

Types of Sources

The review will be limited to studies published in English. To take advantage of relevant available literature on the topic, the search will not be limited to a specific time frame. Both primary sources and evidence synthesis that have included the primary source will be included. However primary sources will be excluded if already incorporated into an included evidence synthesis unless the data they contain are not otherwise reported in the evidence synthesis (11).

This scoping review will consider both experimental and quasi-experimental study designs including randomized controlled trials, non-randomized controlled trials, before and after studies and interrupted time-series studies. In addition, analytical observational studies including prospective and retrospective cohort studies, case-control studies, and analytical cross-sectional studies will be considered for inclusion. This review will also consider descriptive observational study designs including case series, individual case reports and descriptive cross-sectional studies for inclusion.

Qualitative studies will also be considered that focus on qualitative data including, but not limited to, designs such as phenomenology, grounded theory, ethnography, qualitative description, action research and feminist research.

In addition, systematic reviews that meet the inclusion criteria will also be considered, depending on the research question.

Text and opinion papers will also be considered for inclusion in this scoping review.

Methods

The proposed scoping review will be conducted in accordance with the JBI methodology for scoping reviews (12).

Search strategy

The search strategy will aim to locate both published and unpublished studies. An initial limited search of PubMed was conducted to identify articles on the topic. The text words contained in the titles and abstracts of relevant articles, and the index terms used to describe the articles were used to develop a full search strategy. The initial search will be conducted using MEDLINE (PubMed) and CINAHL (EBSCO). A second more detailed search will be conducted using the identified search terms across MEDLINE (PubMed), CINAHL (EBSCO), Scopus and Web of Science. For the detailed search strategy used for MEDLINE (PubMed) see Appendix 1. Thirdly the reference list of all included sources of evidence will be screened for additional studies. Additionally, sources of unpublished studies/ grey literature to be searched include conference abstracts and proceedings. A search on ResearchGate and Google Scholar will be done to identify any additional literature that might not be available through

conventional databases. Finally, a search for organizations that publish clinical practice guidelines will be conducted, for example, the National Institutes of Health (NIH), American College of Physicians, Royal College of Nursing (RCN), and the Registered Nurses Association of Ontario (RNAO).

Due to the limited literature available on clinical practice guidelines for handover practices, no time limit will be applied to the search strategy.

Study/Source of Evidence Selection

Following the search, all identified citations will be collated and uploaded into Mendeley reference management software 2022 (Mendeley Ltd., Elsevier, New York) and duplicates removed. Following a pilot test, the titles and abstracts will be screened by two independent reviewers for assessment against the inclusion criteria for the review. Potentially relevant sources will be retrieved in full, and their citation details imported into the JBI System for the Unified Management, Assessment and Review of Information (JBI SUMARI) (JBI, Adelaide, Australia) (13). The full text of the selected citations will be assessed in detail against the inclusion criteria by two or more independent reviewers. Reasons for exclusion of sources of evidence at full text that do not meet the inclusion criteria will be recorded and reported in the scoping review. Any disagreements that arise between the reviewers at each stage of the selection process will be resolved through discussion or with an additional reviewer. The results of the search and the study inclusion process will be fully reported in the final scoping review and presented in a preferred reporting item for systematic reviews and meta-analyses extension for scoping review (PRISMA-ScR) flow diagram (14).

Data Extraction

Data will be extracted from articles included in the scoping review by two independent reviewers using a data extraction tool developed by the reviewers (11). The data extracted will include specific details about the author, year, country, study aim/s, study design, setting, population and sample size, available clinical practice guidelines, clinical practice guideline content, gaps in the research, and key findings relevant to the review questions.

A draft data extraction tool was developed and is provided (see Appendix II). The draft data extraction tool will be modified and revised as necessary during the process of extracting data from each included evidence source. Modifications will be detailed in the scoping review. Any disagreements that arise between the reviewers will be resolved through discussion or with an additional reviewer. If appropriate, authors of papers will be contacted to request missing or additional data, where required.

Data Analysis and Presentation

The extracted data will be presented in tabular form with an accompanying narrative summary describing the results in detail (12). The results will be presented in relation to the objective and questions of the review. Both review questions will be tabulated in the same table with separate columns for available clinical practice guidelines and clinical practice guideline content (see Appendix II).

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Appendix I: Search strategy

MEDLINE (PubMed)

Date searched: 2 November 2022

	Search	Number of results retrieved
#1	guideline – MeSH	172, 596
#2	patient-centered care – MeSH	23, 587
#3	patient handoff – MeSH	1, 532
#4	hospital emergency service – MeSH	95, 992
#5	“guideline”[Title/Abstract] OR “guideline”[Text Word] OR “clinical practice guideline”[Title/Abstract] OR “clinical practice guideline”[Text Word] OR “practice guidelines”[Title/Abstract] OR “practice guidelines”[Text Word]	249, 360
#6	“Patient-Centered Care”[Title/Abstract] OR “Patient-Centered Care”[Text Word] OR “patients”[Title/Abstract] OR “patients”[Text Word] OR “Person-centered care”[Title/Abstract] OR “Person-centered care”[Text Word]	760,568
#7	"patient handoff"[Title/Abstract] OR "patient handoff"[Text Word] OR "Handover"[Title/Abstract] OR "Handover"[Text Word] OR "clinical handover"[Title/Abstract] OR "clinical handover"[Text Word] OR "emergency handover"[Title/Abstract] OR "emergency handover"[Text Word] OR "handoff"[Title/Abstract] OR "handoff"[Text Word] OR "care transfer"[Title/Abstract] OR "care transfer"[Text Word] OR "shift report"[Title/Abstract] OR "shift report"[Text Word]	3,898
#8	"hospital Emergency Service"[Title/Abstract] OR "hospital Emergency Service"[Text Word] OR "Emergency Medical Services"[Title/Abstract] OR "Emergency Medical Services"[Text Word] OR ("emergency department"[Title/Abstract] OR "emergency department"[Text Word] OR "accident and emergency"[Title/Abstract] OR "accident and emergency"[Text Word])	155,816
#9	guideline[MeSH Terms] OR ("practice guidelines"[Text Word] OR guideline*[Text Word] OR "clinical practice guidelines"[Text Word])) AND ((Patient-Centered Care[MeSH Terms]) OR ("Patient-Centered Care"[Text Word] OR patients[Text Word] OR "Person-centred care"[Text Word])) AND ((patient handoff[MeSH Terms]) OR ("patient handoff"[Text Word] OR Handover[Text Word] OR "clinical handover"[Text Word] OR "emergency handover"[Text Word] OR handoff[Text Word] OR "care transfer"[Text Word] OR "shift report"[Text Word])) AND ((hospital Emergency Service[MeSH Terms]) OR ("hospital Emergency Service"[Text Word] OR "Emergency Medical Services"[Text Word] OR "emergency department"[Text Word] OR "accident and emergency"[Text Word])	33

Appendix II: Data extraction instrument

Author	Year	Country	Aim/s of the study	Study Design	Setting	Population and sample size	Available clinical practice guidelines	Content of clinical practice guidelines

Annexure B 6

Scoping review search strategy in MEDLINE (PubMed)

Scoping review search strategy in MEDLINE (PubMed)

	Search	Number of results retrieved
#1	guideline – MeSH	172,596
#2	patient-centered care – MeSH	23,587
#3	patient handoff – MeSH	1,532
#4	hospital emergency service – MeSH	95,992
#5	"guideline" [title/abstract] OR "guideline" [text word] OR "clinical practice guideline" [title/abstract] OR "clinical practice guideline" [text word] OR "practice guidelines" [title/abstract] OR "practice guidelines" [text word]	249,360
#6	"patient-centered care" [title/abstract] OR "patient-centered care" [text word] OR "patients" [title/abstract] OR "patients" [text word] OR "Person-centered care" [title/abstract] OR "Person-centered care" [text word]	760,568
#7	"patient handoff" [title/abstract] OR "patient handoff" [text word] OR "handover" [title/abstract] OR "handover" [text word] OR "clinical handover" [title/abstract] OR "clinical handover" [text word] OR "emergency handover" [title/abstract] OR "emergency handover" [text word] OR "handoff" [title/abstract] OR "handoff" [text word] OR "care transfer" [title/abstract] OR "care transfer" [text word] OR "shift report" [title/abstract] OR "shift report" [text word]	3,898
#8	"hospital emergency service" [title/abstract] OR "hospital emergency service" [text word] OR "emergency medical services" [title/abstract] OR "emergency medical services" [text word] OR "emergency department" [title/abstract] OR "emergency department" [text word] OR "accident and emergency" [title/abstract] OR "accident and emergency" [text word]	155,816
#9	("guideline" [MeSH Terms] OR ("practice guidelines" [text word] OR "guideline" [text word] OR "clinical practice guidelines" [text word])) AND ((patient-centered care [MeSH terms] OR ("patient-centered care" [text word] OR "patients" [text word] OR "person-centred care" [text word]))) AND ((("patient handoff" [MeSH Terms] OR ("patient handoff" [text word] OR handover [text word] OR "clinical handover" [text word] OR "emergency handover" [text word] OR handoff [text word] OR "care transfer" [text word] OR "shift report" [text word]))) AND ((hospital emergency service [MeSH Terms] OR ("hospital emergency service" [text word] OR "emergency medical services" [text word] OR "emergency department" [text word] OR "accident and emergency" [text word])))	30

Annexure B 7

Scoping review data extraction tool

Scoping review data extraction tool

Author	Year	Country	Aim/s of the study	Study Design	Setting	Population and sample size	Available clinical practice guidelines	Content of clinical practice guidelines	Key findings	Gaps in the research

Annexure B 8

Scoping review data analysis sheet

Scoping review data analysis sheet

Scoping review aerticle search

Date: 29 January 2023

Total: 30

Nr	Author	Title	Year	Included	Reason	Excluded	Reason
1	Picinich C, Madden LK, Brendle K.	Activation to Arrival: T	2019	Y			
2	Kerr D, McKay K, Klim	Attitudes of emergenc	2014	Y			
3	Wees I, Murtuza MI, M	Improving the care of	2022	Y			
4	Bost N, Crilly J, Wallis	Clinical handover of p	2010	Y			
5	Cortosa-Altred R, Marti	Handover of Critical P	2021	Y			
6	Calleja P, Aitken LM,	Information transfer fo	2011	Y			
7	Puzio TJ, Murphy PB,	Handover Practices in	2020	Y			
8	Reay G, Norris JM, No	Transition in Care from	2020	Y			
9	Kessler C, Shakeel F,	An algorithm for transi	2013	Y			
10	Fahim Yegane SA, Sh	Clinical Information Tr	2017	Y			
11	Özkan T, Lindner T, M	The conservative eme	2021			Y	Not in English
12	Cooper BH.	Exploring the factors t	2022			Y	Could not find article
13	Ye K, McD Taylor D, K	Handover in the emer	2007	Y			
14	Bost N, Crilly J, Patter	Clinical handover of p	2012	Y			
15	Lee DD, Hacker Tepe	Experiences of health	2022	Y			
16	Borns J, Ersch J, Dob	Video Recordings to A	2020	Y			
17	Yu A, Jordan SR, Gilm	"Our Hands Are Tied	2022	Y			
18	Eder PA, Reime B, W	Prehospital Telemedic	2018	Y			
19	Talbot R, Bleetman A.	Retention of informatio	2007	Y			
20	Limpahan LP, Baier R	Closing the loop: best	2013	Y			
21	Hsiao AL, Shiffman R	Dropping the baton du	2009	Y			
22	Rodriguez S, Aziz A, C	Enabling Healthcare I	2014			Y	Could not find book
23	Alimenti D, Buydos S,	Improving perceptions	2019	Y			
24	Kessler C, Scott NL, S	Interunit handoffs of p	2014	Y			
25	Jenkin A, Abelson-Mit	Patient handover: time	2007	Y			
26	Eckle VS, Lehmann S	Prehospital managem	2021	Y			

27	Huded CP, Johnson M	4-Step Protocol for Dis	2018	Y			
28	Lee JC, Horst M, Rog	Checklist-styled daily s	2014	Y			
29	Kumar A, Huded CP,	Implementation of a C	2020	Y			
30	Reid C, Moorthy C, Fo	Referral patterns: an a	2005	Y			

27

3 1 - Not in English

66 Total articles in review

Scoping review article search

Search Date: 29 January 2023 - 5 February 2023

Total: 64

Nr	Author	Title	Year	Included	Reason	Excluded	Reason
1	Obermaier, M., Wei	Sepsis in c	2022	Y			
2	Cooper, B.H.	Exploring t	2022			Y	Duplicate in PubMed
3	Yu, A., Jordan, S.R.	"Our Hand	2022			Y	Duplicate in PubMed
4	Patel, E., Solomon,	Implement	2022	Y			
5	Wees, I., Murtuza, M	Improving	2022			Y	Duplicate in PubMed
6	Lee, D.D., Hacker T	Experience	2022			Y	Duplicate in PubMed
7	Gräff, I., Pin, M., Eh	Recomme	2022	Y			
8	Maurer, A., Thaler,	The structu	2022	Y		N	Not in English
9	Zhang, W., Wong, L	MONitorin	2022	Y			
10	Tortosa-Altred, R., M	Handover	2021	Y			
11	Pun, J	Clinical ha	2021	Y			
12	Nikouline, A., Quirio	Errors in a	2021	Y			
13	Özkan, T., Lindner,	The conse	2021			Y	Duplicate in PubMed
14	Gu, X., Itoh, K.	Inter-shift f	2020	Y			
15	Kumar, A., Huded, G	Implement	2020			Y	Duplicate in PubMed
16	Pascual, J., Pozo-R	Proposal o	2020	Y			
17	Lee, M.K., Yih, Y., G	Quantifyin	2020	Y			
18	Borns, J., Ersch, J.,	Video Rec	2020			Y	Duplicate in PubMed
19	Mullins, P.M., Levy,	National tr	2020	Y			
20	Price, C.I., Shaw, L.	Effect of a	2020	Y			
21	Reay, G., Norris, J.	Transition	2020			Y	Duplicate in PubMed
22	Schieman, K., Cowl	Trauma Nu	2020	Y			
23	Cordasco, K.M., Sai	Implement	2020	Y			
24	Wooldridge, A.R., C	Work syste	2020	Y			
25	Picinich, C., Madder	Activation	2019			Y	Duplicate in PubMed
26	Borhan, N., Dharam	TAG, Your	2022	Y			
27	Pageau, P., Clousto	Emergenc	2019	Y			
28	Price, C.I., Shaw, L.	Paramedic	2019	Y			
29	Schacher, S., Glien,	Structured	2019			Y	Not in English
30	Alimenti, D., Buydos	Improving	2019			Y	Duplicate in PubMed
31	Huth, K., Stack, A.M	Developing	2018	y			

32	Huded, C.P., Johns	4-Step Pro	2018			Y	Duplicate in PubMed
33	O'Connell, K.J., Sha	Incident R	2018	y			
34	Leiphart, J., Ecklund	Who's my	2018			Y	Book chapter unrelated
35	Eder, P.A., Reime,	Prehospita	2018			Y	Duplicate in PubMed
36	Yegane, S.A.F., Sha	Clinical Inf	2017			Y	Duplicate in PubMed
37	Keijzers, G.	Critical thir	2017	y			
38	Blyth, C., Bost, N., S	Impact of a	2017 (201	y			
39	Avstreich, D.B., Weir	Prehospita	2017			y	
40	Losiouk, E., Quaglin	Ambulance	2016	y			
41	Ebben, R.H.A., van	A tailored	2015	y			
42	Kessler, C., Scott, N	Interunit ha	2014			Y	Duplicate in PubMed
43	Rodriguez, S., Aziz,	Enabling h	2014			Y	Duplicate in PubMed
44	Kerr, D., Mckay, K.,	Attitudes o	2014			Y	Duplicate in PubMed
45	Downey, L.V., Zun,	What cons	2013	y			
46	Limpahan, L.P., Bai	Closing the	2013			Y	Duplicate in PubMed
47	Lees, L.	A guide for	2013	y			
48	Kessler, C., Shakee	An algorith	2013			Y	Duplicate in PubMed
49	Gu, X., Andersen, H	A question	2012	y			
50	Bost, N., Crilly, J., P	Clinical ha	2012			Y	Duplicate in PubMed
51	Djogovic, D., Green,	Canadian	2012	y			
52	Hooker, R.S., Klock	Physician	2011	y			
53	Calleja, P., Aitken, L	Information	2011			Y	Duplicate in PubMed
54	Bost, N., Crilly, J., W	Clinical ha	2010			Y	Duplicate in PubMed
55	Edi-Osagie, E.	Acute gyna	2009			y	
56	McFetridge, B., Gille	An explorat	2007	y			
57	Ye, K., McD Taylor,	Handover t	2007			Y	Duplicate in PubMed
58	Gold, K.S.	Crossing t	2007	y			
59	Talbot, R., Bleetmar	Retention	2007			Y	Duplicate in PubMed
60	Jenkin, A., Abelson-	Patient ha	2007			Y	Duplicate in PubMed
61	Barishansky, R.M.,	Smooth ha	2007	y			
62	Kirby, D., Menon, D.	Acute hea	2005	y			
63	Stevenson, A., Fiddl	Emergenc	2005	y			
64	Gray, A., Bush, S.,	Secondary	2004	y			

36

24 Duplicates
 1 Not in English
 3 Book chapter
 28 Total excluded

Scoping review article search

Search Date: 5 February 2023

Total: 32

Nr	Author	Title	Year	Included	Reason	Excluded	Reason
1	Gu, Xiuzhu	Inter shift	2020			X	Duplicate in Scopus
2	Lee, D.D.	Experience	2022			X	Duplicate in Scopus and PubMed
3	Alimenti, D	Improving	2019			X	Duplicate in Scopus and PubMed
4	Paul T. En	Toward an	2021	Y			
5	Yu, Amy. e	“Our Hand	2022			X	Duplicate in PubMed
6	Fahim Yeg	Clinical Inf	2017			X	Duplicate in Scopus and PubMed
7	Kessler C,	Interunit ha	2014			X	Duplicate in Scopus and PubMed
8	Bost, Nero	Clinical ha	2012			X	Duplicate in Scopus and PubMed
9	Nikouline,	Errors in a	2021			X	Duplicate in Scopus
10	Samuel Mi	Crash testi	2019	Y			
11	Fahim Yeg	Clinical Inf	2017			X	Duplicate in Scopus and PubMed
12	Kerr D; M	Attitudes o	2014			X	Duplicate in Scopus and PubMed
13	Benson, C	Transport t	2019			X	Not found
14	Fahim Yeg	Clinical Inf	2017			X	Duplicate in Scopus and PubMed
15	Kessler C;	An algorith	2013			X	Duplicate in Scopus and PubMed
16	Calleja, Pa	Informatio	2011			X	Duplicate in Scopus and PubMed
17	O'Connell,	Incident R	2018			X	Duplicate in Scopus
18	Lee, Min K	Quantifyin	2020			X	Duplicate in Scopus
19		Clinical rou	2010			X	Not found
20	Bost N; Cr	Clinical ha	2010			X	Duplicate in Scopus and PubMed
21	O'Connell	Incident R	2018			X	Duplicate in Scopus
22	Tortosa-Al	Handover	2021			X	Duplicate in Scopus
23	Jenkin A; A	Patient ha	2007			X	Duplicate in Scopus and PubMed
24	Limpahan	Closing the	2013			X	Duplicate in Scopus and PubMed
25	Talbot R; E	Retention	2007			X	Duplicate in Scopus and PubMed
26	Sinha M; S	Need for s	2007	Y			
27	Ebben RH	A tailored	2015			X	Duplicate in Scopus
28	Huded, Ch	4-Step Pro	2018			X	Duplicate in PubMed
29	Wees I; M	Improving	2022			X	Duplicate in Scopus and PubMed

30	Reid C; M	Referral pa	2005			X	Duplicate in PubMed
31	Djogovic,	Canadian	2012			X	Duplicate in Scopus
32	Price, Chri	Paramedic	2019			X	Duplicate in Scopus
33	Kumar A;	Implement	2020			X	Duplicate in Scopus and PubMed
34	Borns J; E	Video Rec	2020			X	Duplicate in Scopus and PubMed
35	Madura, Ju	IMPROVIN	2020				

3

29 Duplicate publications

2 Not found

31 Total excluded

Guidelines retrieved

National Institute of Health (NIH)	No guidelines
American College of Physicians,	No guidelines
The National Institute of Health and Care Excellence (NICE)	No guidelines
RNAO	Care transition guidelines (not including handover type and population)
AMA (Australian Medical Association)	Guidelines on handover for physicians in hospital in general
GMC (British Medical Association)	Guidelines for doctors and hospital managers to standardize handovers in UK hospitals

Included articles reference lists

Nr	Author	Title	Year	Included	Reason	Excluded	Reason
1	Wood, Crouch	Clinical hando	2015	Y			
2	Campbell, Stirling, Cumming		2017			Y	Documentation completeness of transfers from residential care facilities to Eds
14	Dawson S, Ki	Improving the	2013	Y			
15	Jensen SM, L	Handover of p	2013	Y			
28	Dojmi Di Delu	Communicatio	2014	Y			
29	Kalyani MN, F	Perspectives	2017			Y	Exploring handover practices. No informat ion on guidelines.
32	Siemsen IM,	Factors that i	2012			Y	Explored the attitudes of healthcare professionals' on patient handover.
33	Sujan MA, Ch	Managing con	2015			Y	Processes related
34	Bruce K, Suse	The handover	2005	Y			
35	Suserud BO,	Ambulance nu	2003			Y	Examined the handover process. Not related to guidelines.
36	Sujan MA, Sp	The role of dy	2015			Y	Handover prosses information.
38	Cuk S, Wumn	Problems ass	2017			Y	Moving form paper to electronic records for handovers.
40	Yong, Dent ar	Handover fro	2008	Y			
2	Dojmi Di Delu	Pre-hospital/e	2015	Y			
	Evans, S.M.,	Assessing clin	2010			Y	Verbal vs written handover deficiencies.
	Owen, C., He	Lost in transla	2009			Y	Enablers and constraints to handovers in the ED between ECP and HCP.
	Thakore, S., N	A survey of th	2001	Y			
	Goldberg et al	Quantitative A	2016	Y			
	Cheung et al	Improving had	2010			Y	Wrong population group
	Meisel et al	Optimizing the	2015	Y			
	Ye, K., Taylor	Handover in t	2007			Y	Wrong handover type. ED doctor handover s.
	Carter, Davis,	Information lo	2009	Y			
	Iedema R, Ba	Design and tri	2012	Y			

Included in review:

Title: 23
 Abstract exclu 4
 Full text exclu 3

Rayyan Scoping review: PRISMA Chart

Review: 29 - May 2023

Round 1: Title and Abstract screening			
1st reviewer	Included:	18	Total articles: 70
	Excluded:	48	Duplicates: 4
	Maybe:	0	
2nd reviewer:	Included	18	
	Excluded:	48	
	Maybe:	0	
3rd reviewer:	Included:	18	
	Excluded:	48	
	Maybe:	0	

Annexure B 9

Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA- ScR) Checklist

Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Clinical Practice Guidelines for person-centred handover practices in the emergency department: A scoping review	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.	Page 1
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.	Page 2
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.	Page 3
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.	Abstract page
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.	Page 3
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.	Page 3
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	Page 3, 4
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	Page 5,6

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
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.	Page 6
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	Page 5
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).	n/a
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	Page 6
RESULTS			
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.	Page 5
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	Page 7
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	n/a
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.	Page 7-42
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	Page 7 - 42
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.	Page 40 -42
Limitations	20	Discuss the limitations of the scoping review process.	Page 42
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.	Page 40 - 42
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.	Title page

JBI = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.

* Where *sources of evidence* (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.

† A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote).

‡ The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JBI guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.

§ The process of systematically examining research evidence to assess its validity, results, and relevance before using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document).

From: Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews (PRISMA ScR): Checklist and Explanation. *Ann Intern Med.* 2018;169:467–473. [doi: 10.7326/M18-0850](https://doi.org/10.7326/M18-0850).

Annexure B 10

Summary of Clinical Practice Guideline feedback and domain scores

Summary of Clinical Practice Guideline feedback and domain scores

Domain 1: Scope and Purpose

Appraiser/ Item	Item 1	Item 2	Item 3	Total
Appraiser 1	7	7	7	21
Appraiser 2	4	4	2	10
Appraiser 3	7	7	7	21
Appraiser 4	6	6	6	18
Appraiser 5	5	5	6	16
Appraiser 6	6	6	6	18
Appraiser 7	7	7	7	21
Appraiser 8	5	6	5	16
Appraiser 9	7	7	6	20
Total	54	55	52	161
Score				82.7%
Comments	<p>7.The overall objectives of the guideline are clearly and specifically described in the provided content.</p> <p>8. Suggest that the overall objective be to provide best available recommendations for person-centered handover practices between emergency care practitioners and health care professionals in the ED.</p> <p>8.Explicitly state to guide the content and processes of handover, to standardized handover practices to be more person-centred.</p>	<p>2.1 Feel the question can be a bit more defined in terms of the specific population. As a ECP, I read it that the CPG will be only developed for use for a small population in the prehospital cohort.</p> <p>7. The health questions covered by the guideline are explicitly described in the provided content.</p> <p>8. Well-structured question.</p> <p>9. clearly stated</p>	<p>2.See the comments above. The population is not described adequately in terms of the prehospital cohort. Mentioning emergency care practitioners, it seems as if the focus is only on a small section of bachelor degreed prehospital clinicians. If you maybe define this population in more detail, this misconception will not be made.</p> <p>7. The population to whom the guideline is intended is clearly and specifically described in the provided content.</p> <p>8. See the suggestion made in the guideline by means of track changes.</p> <p>9. Explicitly state to guide the content and processes of handover, to standardized handover practices to be more person-centred.</p>	

Domain 2: Stakeholder involvement

Appraiser/ Item	Item 4	Item 5	Item 6	Total
Appraiser 1	6	6	7	19
Appraiser 2	5	3	4	12
Appraiser 3	7	7	7	21
Appraiser 4	4	5	7	16
Appraiser 5	5	4	6	15
Appraiser 6	6	6	5	17
Appraiser 7	7	5	7	19
Appraiser 8	5	4	7	16
Appraiser 9	6	5	7	18
Total	51	45	57	153
Score				77.7%
Comments	<p>2. Will you be involving groups in the health industry - private and public. I see here that you did define the different groups, i.e. BLS, ILS ect... I feel that this may also be necessary in the above section.</p> <p>4. You only state you and your supervisors as stakeholders - what about everyone else who was consulted?</p> <p>8. The CPG is developed for the purpose of the doctoral degree and the group included is thus suffice as described. The roles and expertise of the group members are described.</p> <p>9. The GDG did not include an emergency care practitioner but was included in the review group.</p>	<p>2. No mention are made of preferences or results from the other stakeholder's satisfaction, i.e. the practitioners doing handover or receiving handover. Mention is only made of patient satisfaction.</p> <p>a scoping review is good but a more comprehensive stakeholder analysis would strengthen this part.</p> <p>7. Could be improved with more explicit patient related experiences.</p> <p>8. No mention of the patients, public or community users include - see the comment in the guideline.</p> <p>9. A Scoping Review was conducted. Perhaps to have considered hearing the patients' voice as literature suggests patient involvement in handover practices.</p>	<p>2. see comments above.</p> <p>6. There is the real users and the optimal users, which will include the whole team involved. Although described, how it will work in reality is not clear as it is just a recommendation.</p> <p>8. Comprehensively described.</p> <p>9. Yes, clearly explained</p>	

Domain 3: Rigour of development

Appraiser/Item	Item 7	Item 8	Item 9	Item 10	Item 11	Item 12	Item 13	Item 14	Total
Appraiser 1	7	6	6	7	7	7	7	7	54
Appraiser 2	7	7	6	6	6	5	6	7	50
Appraiser 3	7	7	7	7	7	7	7	7	56
Appraiser 4	7	7	7	7	1	4	7	1	41
Appraiser 5	5	6	6	6	5	5	5	5	43
Appraiser 6	6	6	5	7	6	6	7	2	45
Appraiser 7	7	7	7	7	6	7	7	6	54
Appraiser 8	5	4	4	6	5	5	6	6	41
Appraiser 9	5	7	3	6	7	7	7	6	48
Total	56	57	51	59	50	53	59	47	432
Score									83.3%
Comments	<p>8. See the comments on the CPG - I suggest that these methods be included in the CPG or reference to an additional document made.</p> <p>9. The Delphi method and Scoping review mentioned, otherwise not very clear</p>	<p>8. The information must be included to ensure rigour and replicability of the search strategy.</p> <p>9. Yes, clearly indicated</p>	<p>4. the tiering of the evidence reviewed is a great approach.</p> <p>6. I am not so sure that the limitations were described in detail. Maybe I missed them.</p> <p>8. Suggest that you include it in the CPG or a additional reference document.</p> <p>9. Not clearly explained.</p>	<p>4. the approach is rigorous and comprehensive.</p> <p>8. The methods for formulating the recommendations are described in detail. However, it is suggested that the specifics related to using the PARM is included - see the comment on the CPG.</p> <p>9. Not clear if the extraction and synthesis process was done independently</p>	<p>4. not relevant.</p> <p>8. The non-applicability of this section explained.</p> <p>9. Explanation given why this is not relevant.</p>	<p>2. I do feel that there is evidence lacking on the recommendations to a dedicated space. All type of handovers may not be considered in this, i.e. green patient(p3) handover vs red patient (p1), will occur in different areas. This distinction I did not notice.</p> <p>4. in most cases this is the case, but I don't believe the evidence about person-centred care is explicit in recommendations 3 and 6.</p> <p>8. See the comments made in the CPG.</p> <p>9. Clearly stated.</p>	<p>6. Several rounds of review where done.</p> <p>8. The section is explained. However, it is suggested that the credentials and the inclusion of the 10 experts be done more explicitly - see the comment in the CPG.</p> <p>9. The guideline was submitted to a guideline review group.</p>	<p>4. limited by being a PhD project.</p> <p>6. Only a recommendation that it should be updated. How is not explained.</p> <p>8. The recommendation made for updating the guideline is realistic and relevant. As this is done for a qualification awarding degree purpose, I suggest that the updating of the guideline be considered for post-doctoral work.</p> <p>9. Stated every three years, no procedure provided.</p>	

Domain 4: Clarity of presentation

Appraiser/ Item	Item 15	Item 16	Item 17	Total
Appraiser 1	6	7	7	20
Appraiser 2	6	6	5	17
Appraiser 3	7	7	7	21
Appraiser 4	4	1	6	11
Appraiser 5	4	6	5	15
Appraiser 6	6	1	7	14
Appraiser 7	7	7	7	21
Appraiser 8	6	5	6	17
Appraiser 9	7	7	7	21
Total	53	47	57	157
Score				80.2%
Comments	<p>4.it is difficult to be unambiguous in recommendations associated with handover practice. So, I think they are as clear as they can be as they are targeted at two distinct professional groups.</p> <p>8. The recommendations are clear and specific.</p> <p>9. Clear</p>	<p>4. not relevant</p> <p>6. I am not sure that this question applies to this study.</p> <p>8. The non-applicability for this item mentioned.</p> <p>9. Mentioned that it is not applicable for the guideline.</p>	<p>8. The recommendations are presented in boxes. For the final guideline, using color might add to the visibility and user friendliness of the CPG.</p>	

Domain 5: Applicability

Appraiser/Item	Item 18	Item 19	Item 20	Item 21	Total
Appraiser 1	6	7	7	2	22
Appraiser 2	6	4	3	4	17
Appraiser 3	7	7	7	7	28
Appraiser 4	5	5	3	3	16
Appraiser 5	5	5	5	6	21
Appraiser 6	5	4	6	2	17
Appraiser 7	7	7	7	1	22
Appraiser 8	5	5	5	5	20
Appraiser 9	6	7	7	7	27
Total	52	51	50	37	190
Score					71.2%
Comments	<p>4. these tend to be integrated in the text - might be better to separate them out and name them as facilitators and barriers explicitly.</p> <p>6. Not in detail. More research needed to find more barriers is what the author suggests. Maybe give an example or 2 of a barrier.</p> <p>8. See the suggestions on the CPG for this section.</p> <p>9. Briefly described.</p>	<p>2. How will this tool be implemented in operational areas. Mention is made to educators and managers, but operational staff in both areas may be missed if only new graduates or trainees will be trained in the CPG.</p> <p>4. an algorithm will be provided and reference to education is made. I think the implementation process could be more clearly addressed.</p> <p>6. Not enough advice. The use of mnemonics is mentioned, but it is left to the ED to figure out how to do this.</p> <p>8. Additional information regarding the algorithm might be beneficial to add - see the comments in the CPG.</p> <p>9. Mentioned that the final guideline will have an algorithm for ease of application.</p>	<p>2. See above. Curriculum creep may be an unintended purpose of implementation.</p> <p>4. it is considered but needs further research to be properly addressed.</p> <p>8. Suggest that brief examples of the potential costs considered is included under this section.</p> <p>9. Was considered but can only be established with implementation.</p>	<p>2. Not clear.</p> <p>4. also an issue for implementation consideration.</p> <p>6. It is not included in this part of the research. Mentioned that it will be done in the post-doctoral and mentioned that it should be monitored. How is not clear.</p> <p>7. The guideline does mention implementation considerations, but it does not explicitly specify detailed monitoring and auditing criteria. The guideline provides recommendations and considerations for implementing person-centered handover practices but does not include specific metrics, indicators, or performance measures for monitoring and auditing the implementation of these recommendations.</p> <p>8. See suggestion on the CPG document.</p> <p>9. Mentioned that this did not form part of the guideline development process.</p>	

Domain 6: Editorial independence

Appraiser/ Item	Item 22	Item 23	Total
Appraiser 1	7	7	14
Appraiser 2	6	6	12
Appraiser 3	7	7	14
Appraiser 4	7	7	14
Appraiser 5	6	5	11
Appraiser 6	6	Not sure that I saw it. Can therefore not score it.	6
Appraiser 7	7	7	14
Appraiser 8	6	6	12
Appraiser 9	7	7	14
Total	59	52	111
Score			86.1%
Comments	8. Explicitly stated. 9. clearly stated	8. Indicated as per the scope of the guideline. 9. has been declared	

Overall Guideline Assessment

Appraiser	Score
Appraiser 1	6
Appraiser 2	5
Appraiser 3	7
Appraiser 4	5
Appraiser 5	6
Appraiser 6	6
Appraiser 7	6
Appraiser 8	5
Appraiser 9	Not provided

Guideline recommendation

Appraiser	Yes	Yes, with modifications	No
Appraiser 1	√		
Appraiser 2		√	
Appraiser 3	√		
Appraiser 4		√	
Appraiser 5	√		
Appraiser 6		√	
Appraiser 7		√	
Appraiser 8		√	
Appraiser 9	√		

Additional comments

Appraiser	Comment
Appraiser 1	Although alluded to in the introduction of your draft guideline, it might be useful to just define the term "emergency care practitioner" better to explicitly include all levels of pre-hospital/emergency care personnel. Emergency Care Practitioner in the everyday sense refers to a specific subset pre-hospital cadre (i.e. 4-year degree paramedics that register on the ECP Register). It might be confusing to people who have glanced over your introduction and might then regard this guideline as exclusionary and/or only focused on ECP's (i.e. a small subset of prehospital personnel).
Appraiser 2	The suggested guideline includes recommended information already mentioned in most literature and included in training at HEI in emergency care programmes. Mnemonics like AMPLE, DECAPBTLS and AIMED AT ITCH are commonly used. It is felt that one of the big barriers for missing information during handovers are more linked to unprofessionalism and professions not understanding each other's working environments.
Appraiser 3	Very complete. Nothing to add.
Appraiser 4	Overall, I think you have done a great job in developing this work. My biggest concern pertains to the person-centred focus of the work as I struggle to see the explicit focus on person-centredness. The p-c literature used is limited and specific to ED contexts which we know is very under-developed. why not draw more heavily on person-centred literature more generally? Also, you do not define anywhere what you mean by person-centredness and person-centred handover. I would expect those to be clearly defined in the introduction and based on evidence. It is impossible to assess the person-centredness of these guidelines in terms of their person-centredness without a 'benchmark' of a clearly defined concept of person-centred handover. This issue follows through in the recommendations that are person-centred specific (R3 and R6) where little or no reference to person-centredness and p-c evidence is made. These are two significant issues for me that need to be addressed if these guidelines are to be accepted as truly person-centred in nature. Good luck with the final stages of the work and I look forward to seeing some great implementation studies emerging from it.
Appraiser 5	None.
Appraiser 6	I think that the guidelines are spot on. The only problem I can see is that they are not very specific when it comes to implementation, which will make it difficult to implement in practice as is. Maybe after these guidelines have been tested and audited, more specific guidelines will follow. I will keep my eyes open for that post-doctoral where this can happen.
Appraiser 7	It seems to me that the clinical practice guideline has provided a clear and transparent description of its methodology, criteria for evidence selection, the strength and limitations of the evidence, and the methods used for formulating recommendations. The guideline does mention implementation considerations, but it does not explicitly specify detailed monitoring and auditing criteria. The guideline provides recommendations and considerations for implementing person-centered handover practices but does not include specific metrics, indicators, or performance measures for monitoring and auditing the implementation of these recommendations. Consider the use of a memorable and concise acronym to help healthcare professionals easily recall and apply the key implementation considerations from the guideline. This can enhance the guideline's usability and promote consistent adherence to the recommendations. Summary or Key Points: Consider adding a summary section at the beginning of the document that highlights the key recommendations and implementation considerations. This can provide a quick overview for busy healthcare professionals. Visual Aids: Incorporate tables, flowcharts, or diagrams to visually represent complex information, such as the components of handover or the implementation process. Visual aids can enhance understanding.
Appraiser 8	It is suggested that the modifications as suggested be considered in the final guideline. The methodological rigor can be strengthened by adding the detail as requested. The overall guideline adheres to the aspects assessed.
Appraiser 9	None.

Annexure C 1

*Proof of article submission
to International Emergency
Nursing*

International Emergency Nursing

A concept analysis of person-centred handover practices: The meaning in emergency departments

--Manuscript Draft--

Manuscript Number:	
Article Type:	Original Research Paper
Keywords:	person-centred; handover; emergency medical services; healthcare professionals; emergency department
Corresponding Author:	Santel de Lange SOUTH AFRICA
First Author:	Santel de Lange
Order of Authors:	Santel de Lange Tanya Heyns Celia Filmlalter
Abstract:	<p>Background: Transfer of patients from the prehospital to the in-hospital environment is a frequent occurrence requiring a handover process. Habitually, emergency care practitioners and healthcare professionals focus on patient care activities, not prioritising person-centred handover practices and not initiating person-centred care. Aim: The aim of this concept analysis was to define the concept person centred handover practices.</p> <p>Methods: The eight steps for Walker and Avant's¹ method of concept analysis.</p> <p>Results: Thirty-one articles were included for final review including qualitative and quantitative studies, literature reviews and audits. This concept analysis guided the development of a concept definition of person-centred handover practices between emergency care practitioners and healthcare professionals in the emergency department as person-centred handover practices are those handovers being performed while including all identified defining attributes such as structure, verbal, and written information transfer, interprofessional process, inclusion of the patient and/ or family, occurs at the bedside, without interruption.</p> <p>Conclusions: Results suggested that person-centred handover practices involve verbal and non-verbal interprofessional communication within a specific location in the emergency department. It requires mutual respect from all professionals involved, experience and training, and the participation of the patient and / or family to improve patient outcomes and quality patient care.</p>
Suggested Reviewers:	<p>Andrew Makkink amakink@uj.ac.za</p> <p>Bernice Redley bernice.redley@deakin.edu.au</p>
Opposed Reviewers:	

1 **1. Introduction**

2 The emergency department (ED) is a complex and busy environment with multiple
3 activities occurring simultaneously to manage a vast variety of patient needs. Patients
4 arrive from the prehospital environment to the ED via their own transport or ambulance
5 with or without family members². Patients arriving via ambulance were assessed and
6 managed in the pre-hospital environment and will require the transfer of information
7 regarding their complaints and initiated treatment³. Handover practices ensures the
8 continuity of patient care.

9 **2. Background**

10 Handover practices in the ED occurs between emergency care practitioners and
11 healthcare professionals upon a patient's arrival in the unit. Information regarding the
12 patient's main complaint, condition of the patient on scene, the assessment data
13 collected, and interventions performed is included in the verbal and written information
14 being transferred⁸. Handover practices are a frequently performed and highly critical
15 task in clinical practise that protects continuity of care leading to improved patient
16 outcomes^{4,5}. Handover practices have been defined as the transfer of responsibility,
17 clinical information, and care of a patient from one professional to another⁶⁻⁸. Various
18 mnemonics on the components of a handover is available, such as MIST (**M**echanism,
19 **I**njuries, **S**igns, **T**reatment), DeMIST (**D**emographics, **M**echanism, **I**njuries, **S**igns,
20 **T**reatment) and SBAR (**S**ituation, **B**ackground, **A**ssessment, **R**ecommendation) to
21 assist professionals in the conducting of a handover across different categories of
22 healthcare providers⁹. Handover practices should occur at the patient's bedside where
23 the patient can be included and participate in decision making regarding their care and

24 be able to add information regarding their complaints which might have been omitted
25 by emergency care practitioners during handover¹⁰. The inclusion of patients and/ or
26 family in handover practices is seen as a form of person-centred care delivery.
27 Research on handover practices is increasing, yet information on the inclusion of the
28 patient and/or family to move towards person-centred care delivery remains limited.

29 Person-centred care has been gaining momentum in healthcare and involves placing
30 the patient at the centre of care delivery¹¹. Person-centred care includes listening to
31 patients and/ or families and incorporating their values, knowledge, and beliefs into
32 the care provided^{12,13}. Patients and/ or families can provide valuable information
33 regarding their health and illness. The patient is the only constant factor during
34 handover and, therefore, is a valuable addition in ensuring continuity of care¹⁴. Person-
35 centred care has been shown to increase patient satisfaction, improve quality of care,
36 and patient safety¹⁰. The environment in the emergency department influences the
37 ability of healthcare professionals to provide person-centred care, and deliberate
38 efforts must be made to move towards person-centred care delivery¹¹. Handover
39 practices provide an opportunity for the initiation of person-centred care in the
40 emergency department through the inclusion of patients and/ or families in the
41 process.

42 Despite the available literature on how handover practices should be conducted⁹ and
43 the importance of being person-centred in the ED¹⁵, there are limited
44 recommendations on how person-centred handover practices could be established
45 between emergency care practitioners and healthcare professionals in the ED.
46 Furthermore, there is also a pause in the literature as to what person-centred handover
47 practices mean. The development of a shared definition of the concept person-centred

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48 handover practices could be the first step in developing person-centred handover
49 practices in the ED and in return moving toward person-centred care delivery in the
50 ED.

51 **3. Methods**

52 **3.1 Purpose of the concept analysis**

53 This paper explores the concept of person-centred handover practices to clarify its
54 meaning and provide an operational definition that can be used in the emergency
55 environment.

56 **3.2 Design**

57 Walker and Avant's¹ eight-step model of concept analysis was used. These steps were
58 selected based on the usefulness of the Walker and Avant model in clarifying the
59 vague concepts customary used by nurses and other healthcare professionals. The
60 steps were used as follows: 1) select a concept, 2) determine the aim or purpose of
61 the analysis, 3) identify all uses of the concept, 4) determine the defining attributes, 5)
62 identify a model case, 6) describe the additional cases (related, contrary), 7) identify
63 antecedents and consequences, and 8) define empirical referents.

64 **3.2.1 Data Sources**

65 Multiple databases for all types of publications were searched, including CINAHL
66 (EBSCO), Google Scholar, MEDLINE (PubMed), and Wiley Online Library. The same
67 Boolean search of the keyword's person-centred, emergency department, and
68 handover practices was carried out between May 2021 and December 2021 on each
69 database. No online dictionary searches yielded any results for the concept. No

70 restrictions were applied to the literature search, however only articles published in
71 the English language were included. A further manual search of the reference lists of
72 selected articles for additional relevant sources was also performed (view Figure 1).

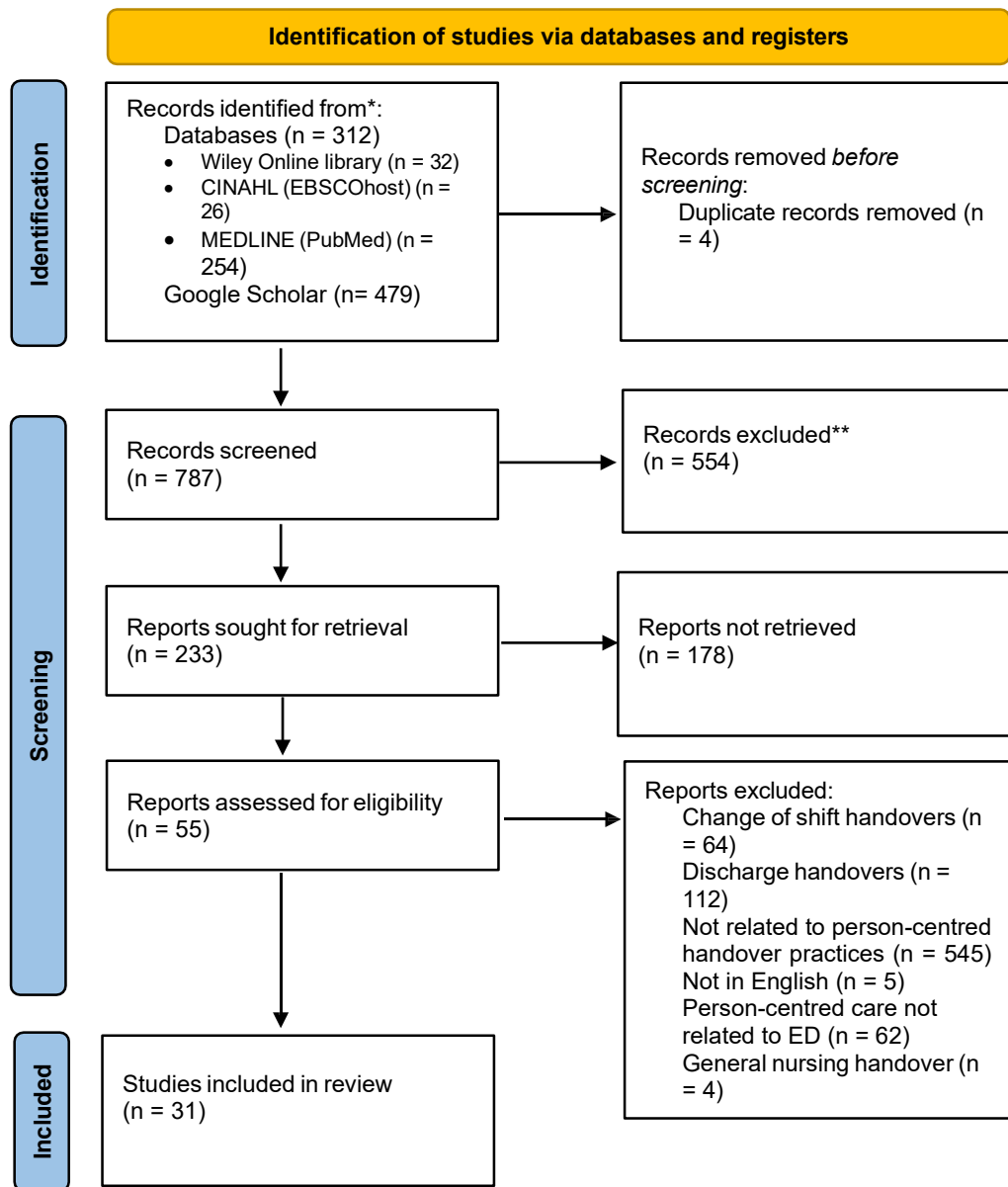


Figure 1: PRISMA flow diagram – search and retrieval process

Only publications on handover practices between emergency care practitioners and healthcare professionals and person-centred handover practices in nursing and emergency department were included. Duplicate publications and those on general handover practices were excluded.

113 **4. Data analysis**

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4 114 Using the Walker and Avant's¹ model of concept analysis, each step was separately
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6 115 analysed in the literature reviewed and discussed in the results section. The last 5
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9 116 steps were analysed by 1) identifying all uses of the concept, 2) determining the
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11 117 defining attributes, 3) identifying a model case, 3) describing the additional cases
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13 118 (related, contrary), 4) identifying the antecedents and consequences, and 5) defining
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15 119 the empirical referents. Lastly the final definition for the concept was developed based
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18 120 on the golden standard on what person-centred handover practices would look like in
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21 121 practice. Each article was read by the primary author SdL to identify the uses of the
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23 122 concept, to determine the defining attributes, to identify a model case, to describe the
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26 123 additional cases, identify the antecedents and consequences, and identify the
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28 124 empirical referents. Articles was then reviewed by TH and CF for verifying purposes
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31 125 and to complete the coding process. Initially each term was analysed individually on
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33 126 an excel spreadsheet. From there the themes were categorised into antecedents,
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35 127 consequences, attributes, and empirical referents.

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39 128 **5. Results**

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43 129 Applying Walker and Avant's¹ model of concept analysis uses of the concept, defining
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45 130 attributes, antecedents, consequences and empirical referents were distinguished
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48 131 leading to the final concept definition.

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51 132 **5.1 Use of the Concept**

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54 133 The concept of person-centred handover practices has not been cited in the existing
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56 134 literature. Most studies have focused on person-centred care and handover as
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135 separate entities, furthermore studies on specific handover practices between
 136 emergency care practitioners and healthcare professionals in the ED are limited.

137 5.2 Attributes

138 Attributes of person-centred handover practices were identified as: *structure*^{7,16}, *verbal*
 139 *and written information transfer*⁷, *interprofessional process*^{8,17}, *inclusion of the patient*
 140 *and/ or family*^{12,13}, *occurs at the bedside*¹⁰, *without interruptions*¹⁸. The results of the
 141 defining attributes for person-centred handover practices are displayed in Table 1.

142 Table 1: Summary of the attributes of 'person-centred handover practices' related to sources.

Defining	Sources
PERSON- CENTREDNESS	
Inclusion of the patient and/or family	Bruce, K & Suserud, B. 2005; Seidel et al., 2021; Kalyani et al., 2017; Dawson et al., 2013; Flynn et al., 2017; Bost et al., 2012; Makkink et al., 2019; Sujan et al., 2014; Sanjuan-Quiles et al., 2018; Dúason et al., 2021.
It occurs at the bedside.	
HANDOVER PRACTICES	
Structure	Reay et al., 2018; Nicholas et al., 2020; Almaze & de Beer, 2017; McConnell, McCance & Melby, 2016; Dellenborg, Wikström & Andersson Erichsen, 2019;
Transfer of verbal and written information	
Interprofessional Process	White-Trevino & Dearmon, 2018.
Without interruptions	

143 5.3 Antecedents and consequences

144 The following four antecedents were identified as having to be present to ensure
145 person-centred handover practices: experienced staff, staff trained in person-centred
146 care and handover practices, prenotification of the emergency department, and
147 assigned healthcare professional/s to receive handover. Each of the identified
148 antecedents is related to the defining attributes of person-centred handover practices.
149 The consequences of person-centred handover practices in the ED were identified as:
150 the inclusion of patients and/ or families in the handover process resulting in them
151 contributing to their care and being involved in decision making, which results in
152 person-centred care delivery. Additionally, following a structured approach to person-
153 centred handover practices can lead to a unique patient-specific care delivery, as a
154 form of person-centred care delivery, as all required information regarding the patient
155 will be transferred.

156 **5.4 Empirical referents**

157 Person-centred handover practices would be present if one is able to identify
158 components of mutual trust and respect between emergency care practitioners and
159 healthcare professionals during the interprofessional process. When uninterrupted
160 structured verbal and written handover practices occur at the bedside with patient and/
161 or family participation, it results in patient-focused care delivery.

162 **5.5 Concept definition**

163 Multiple definitions for the term person-centred care exist. However, no single agreed-
164 upon definition has been formalized. Variation in definitions highlights the need to
165 develop a shared definition of the concept to ensure person-centred care in the ED.
166 Handover can range from simple information transfer to including aspects of training,
167 socialisation, improving teamwork, and team cohesion⁵. To our knowledge, no

168 definition of person-centred handover practices has been documented in the existing
169 literature.

170 **6. Discussion**

171 The concept analysis was focused on two aspects: person-centred care and handover
172 practices in the ED between emergency care practitioners and healthcare
173 professionals. This concept analysis produced the following theoretical definition of
174 the concept person-centred handover practices: person-centred handover practices
175 are those handovers being performed while including all identified defining attributes
176 such as structure, verbal, and written information transfer, interprofessional process,
177 inclusion of the patient and/ or family, occurs at the bedside, without interruption.

178 Person-centred care has been defined as *'an approach to practise established through
179 the formation and promotion of therapeutic relationships between all care
180 providers...patients and others significant to them in their lives. It is underpinned by
181 the values of respect for people, individual right to self-determination, mutual respect,
182 and understanding. It is enabled by cultures of empowerment that foster continuous
183 approaches to practise development'*¹⁹. In a concept analysis by Morgan and Yoder²⁰,
184 person-centred care was defined as a holistic approach to providing respectful and
185 individualised care, offering the individual choice, and allowing negotiation. All existing
186 definitions are based on the individual, his preferences, a mutual trust relationship,
187 and shared decision making²¹⁻²³. Handover, also referred to as handoff, clinical
188 handover, patient handover, or patient handoff, is defined as the transfer of
189 accountability and responsibility for some or all aspects of care for a patient or a group
190 of patients from one healthcare professional to the next¹⁴.

191 Walker and Avant¹ define attributes as the characteristics most frequently associated
192 with the concept. The handover between emergency care practitioners and healthcare
193 professionals in the ED includes information transfer on identified problems and
194 treatment provided in the prehospital setting, which is required to plan the unique
195 treatment and care for the patient going forward. Following a specific structure will
196 ensure the transfer of all relevant information such as problems identified, procedures
197 performed, treatment administered, and vital signs^{7,16}. In addition, handover practices
198 should occur verbally followed by a written document. Written documents can be
199 referred to once emergency care practitioners have left and to prevent information
200 loss⁷. Conducting handovers verbally ensures that first-hand information is received
201 upon arrival from emergency care practitioners and requires attentive listening from
202 healthcare professionals to prevent information loss⁷. The handover process is an
203 interprofessional process involving at least two different professional groups⁸.
204 Different professionals and organisational cultures meet during handover and may not
205 share the same values, language, and hierarchies. A team of healthcare professionals
206 (doctors and nurses) who will be responsible for the patient's care should be involved
207 in the handover from the start, to decrease repetition of the handover and potential
208 information loss⁹. Additionally, interruptions place handover practices at risk of
209 information loss that negatively impacts patient care delivery. Therefore, handover
210 practices must occur at the patient's bedside to reduce interruptions, reduce noise
211 levels, and provide an opportunity for healthcare professionals to listen attentively^{17,24}.
212 Handover at the bedside gives the patient the opportunity to be part of their care
213 delivery, state their complaints to guide the planning of their care, and be part of
214 decision-making facilitating person-centred care¹⁰. Subsequently utilizing these
215 attributes constructed cases was developed to clearly explain the concept.

216 Constructed cases are cases that contain all, some or none of the defining attributes¹
217 and can help to understand the difference between person-centred handover practices
218 and other similar concepts and includes model, borderline and contrary cases.
219 The model case refers to the “real-life” or a perfect example of the use of the concept¹.
220 Emergency care practitioners respond to an emergency on scene, they gather
221 information regarding the patient’s needs and problems, initiate emergency treatment,
222 and transport the patient to the ED. On arrival in the ED, they greet the healthcare
223 professionals on duty, report to the nurse in charge, or the assigned team of healthcare
224 professionals and proceed to take the patient to an assigned bed. The emergency
225 care practitioner commences with a verbal handover of the patient in their care to the
226 healthcare professional/s in charge of taking over the patient’s care. Healthcare
227 professionals carefully listen to the handover of the emergency care practitioner at the
228 patient’s bedside. A healthcare professional exclusively listens to the handover, and
229 other healthcare professionals begin patient care. The information provided is focused
230 on the patient’s needs and problems identified as reported in the prehospital
231 environment and the information on the treatment provided by emergency care
232 practitioners. The patient and/ or family is greeted on arrival and is involved in the
233 handover process with healthcare professionals asking questions to clarify information
234 as needed. On completion of the verbal handover, a written document is provided.
235 This case is a model case of person-centred handover practices as it includes all
236 seven defining attributes. Obtaining all relevant information from emergency care
237 practitioners enables healthcare professionals to plan for continued and focused
238 patient care. The inclusion of the patient in the handover process and healthcare
239 professionals paying attention to the handover results in person-centred handover

1 240 practices which increases both patient and staff satisfaction, and it ensures continuity
2 241 of care and improves patient outcomes.
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6 242 A borderline case contains some but not all defining attributes of a concept¹.

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8 243 Emergency care practitioners transport a patient to the ED. Upon arrival, they greet
9 244 the healthcare professionals, and all proceed down the corridor. Emergency care

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12 245 practitioners start with the handover to the healthcare professionals while walking to
13 246 the allocated bed. Healthcare professionals are trying to listen to handover to the best

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16 247 of their ability while walking and being interrupted by noise and other staff and visitors
17 248 walking passes. In between, the patient and/ or family members also asked questions

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20 249 and participated in the handover. Once the patient is transferred to the emergency
21 250 department bed, emergency care practitioners leave and do not provide healthcare

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24 251 professionals with a written copy of the transfer. Although the handover was done
25 252 verbally, healthcare professionals listened and interprofessional communication

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28 253 occurred, and the patient and/ or family participated in the handover, no written
29 254 document was provided, there was interruption in the process, and it did not occur at

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32 255 the bedside. Therefor, this is a borderline case.
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42 256 Contrary cases are examples that clearly do not apply to the concept under
43 257 investigation¹. Emergency care practitioners arrive at the ED with a patient from the

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46 258 prehospital setting. They proceed directly to an unoccupied bed and transfer the
47 259 patient to the bed. They do not report to the nurse in charge, and this results in

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50 260 healthcare professionals not receiving a verbal handover and an interruption in the
51 261 continuity of care. There was no interprofessional communication. The patient is not

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54 262 greeted on arrival, the family is asked to go to reception and wait in the waiting room,
55 263 and the patient and/ or family is not included. This is an example of a contrary case as
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264 none of the defining attributes of person-centred handover practices is present. But in
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3 265 order for the concept to occur certain antecedents should be specified.
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6 266 Antecedents are those events or incidents that must be in place for the concept to
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8 267 occur¹. The first antecedent, experienced staff, relates to the defining attributes:
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10 268 structure and verbal and written information transfer. The literature indicates that
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12 269 experienced staff perform person-centred handovers that tend to result in more
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14 270 effective handover practices^{7,25}. Experience also results in a more detailed and
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16 271 structured verbal and written handover being performed. Furthermore, the knowledge
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18 272 and experience of healthcare professionals have an impact on the amount and quality
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20 273 of information received²⁶.
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27 274 The second antecedent – staff trained in person-centred care and handover practices
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29 275 – relates to the defining attributes: structure and inclusion of the patient and/ or family.
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31 276 Before emergency care practitioners and healthcare professionals can implement
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33 277 person-centred handover, they should receive the necessary training, role modelling,
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35 278 and peer support. Person-centred care can then be implemented in various ways,,
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38 279 such as including the patient and/ or family, and regular communication between
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40 280 healthcare professionals and the patient and / or family, which could lead to person-
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42 281 centred handover practices^{27,28}. Training in handover practices is needed to ensure
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44 282 that emergency care practitioners and healthcare professionals are aware of how to
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46 283 do it^{8,16}. Handover is a skill that requires both education and practise and can lead to
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48 284 improved patient outcomes and continuity of care¹⁷.
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55 285 The third antecedent, pre-notification of the ED - relates to the defining attributes:
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57 286 interprofessional process and occurring at the bedside. Pre-notification of the ED by
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59 287 emergency care practitioners offers healthcare professionals the opportunity to
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288 prepare for the arrival of the patient^{24,29}. Being prepared will ensure that both a bed
289 and the required staff are available, saving time, and ensuring that person-centred
290 handover practices are being performed.

291 The fourth antecedent - allocated healthcare professional/s to receive the handover
292 relates to the defining attributes: interprofessional process with and without
293 interruption. Multiple handovers lead to information loss and can be prevented by
294 ensuring that handover is done only once by the healthcare professional/s responsible
295 for patient care⁹. This contributes to the interprofessional communication process and
296 assists with decreasing interruptions during the handover. Additionally, receiving a
297 handover from a dedicated healthcare professional or team results in everyone
298 listening attentively to the handover, avoiding repetition and information loss.
299 Therefore, it should be standard practice that once emergency care practitioners arrive
300 in the ED that they report to the nurse in charge and are assigned to a bed and a team
301 (the healthcare professionals responsible for patient care). The handover will occur,
302 and the team receives the verbal handover once. Consequences are outcomes that
303 occur because of the concept¹. Person-centred handover practice lead to continuity
304 of patient care from the prehospital environment and improved patient outcomes
305 resulting in patient and staff satisfaction¹².

306 The use of the concept should ultimately be evaluated. Empirical referents identify the
307 occurrence of the concept¹. How one identifies or measures the defining attributes of
308 person-centred handover practices. According to McCance¹¹ person-centred care
309 involves placing the patient at the center of care delivery and including the patient and/
310 or family in their care or their loved one's care. It also involves the development of
311 healthful relationships amongst all parties involved³⁰. Some research is available on

1 312 the quality to evaluate the presence of person-centred care. However, most do not
2 313 involve the patient and the experience of the caregivers and are not applicable to the
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4 314 ED environment or to handover practices between emergency care practitioners and
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7 315 healthcare professionals. Therefore, more research is recommended to establish a list
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9 316 of these qualities as defining attributes which one can measure and include.

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13 317 **Implications for person-centred handover practices**

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17 318 **Implications for Practise**

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20 319 Handover practices are important to ensure continuity of patient care². Person-centred
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23 320 handover practices can advance person-centred care. Having an operational definition
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25 321 for person-centred handover practices will alert emergency care practitioners and
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28 322 healthcare professionals to what it is and how it is done. This could spill over into
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30 323 person-centred handover practices being performed leading to person-centred care
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33 324 delivery.

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36 325 **Implications for education and research**

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40 326 Education and training are important for person-centred handover practices to occur.
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42 327 If emergency care practitioners and healthcare professionals do not receive training
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45 328 on the provision of person-centred handover practices, it will not be implemented and
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47 329 will not be part of their daily practise. Therefore, the concept definition of person-
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50 330 centred handover practices can be used to educate nurses, doctors, and emergency
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52 331 care practitioners in the provision of person-centred handover practices in the ED.
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332 **7. Conclusions**

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4 333 Handover practices are used daily in various healthcare settings, and there are various
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6 334 definitions. The implementation of person-centred care in nursing and specifically the
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9 335 ED are steadily on the increase. It is essential for emergency care practitioners and
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11 336 healthcare professionals to understand the meaning of the concept and be able to
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1 337 differentiate it from other related concepts.

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A concept analysis of person-centred handover practices: The meaning in emergency departments

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Santel de Lange: Conceptualization, Methodology, Analysis, Investigation, Writing – Original Draft, visualization

Tanya Heyns: Validation, Writing – Review, Supervision

Celia Filmalter: Validation, Writing – Review & Editing

A concept analysis of person-centred handover practices: The meaning in emergency departments

Abstract

Background: Transfer of patients from the prehospital to the in-hospital environment is a frequent occurrence requiring a handover process. Habitually, emergency care practitioners and healthcare professionals focus on patient care activities, not prioritising person-centred handover practices and not initiating person-centred care.

Aim: The aim of this concept analysis was to define the concept person centred handover practices.

Methods: The eight steps for Walker and Avant's¹ method of concept analysis.

Results: Thirty-one articles were included for final review including qualitative and quantitative studies, literature reviews and audits. This concept analysis guided the development of an concept definition of person-centred handover practices between emergency care practitioners and healthcare professionals in the emergency department as *person-centred handover practices are those handovers being performed while including all identified defining attributes such as structure, verbal, and written information transfer, interprofessional process, inclusion of the patient and/ or family, occurs at the bedside, without interruption.*

Conclusions: Results suggested that person-centred handover practices involve verbal and non-verbal interprofessional communication within a specific location in the emergency department. It requires mutual respect from all professionals involved, experience and training, and the participation of the patient and / or family to improve patient outcomes and quality patient care.

Keywords: person-centred, handover, emergency medical services, healthcare professionals, emergency department

Highlights - A concept analysis of person-centred handover practices: The meaning in emergency departments

- A concept definition of the concept person-centred handover practices can lead to improved handover practices.
- No formal definition for person-centred handover practices in the ED existed prior to this concept analysis.
- Attributes of person-centred handover practices include verbal and written information transfer, interprofessional process, inclusion of the patient and/ or family, occurs at the bedside, without interruptions.
- Mutual respect should be present during handover practices to ensure information transfer.

Attention: Editorial board for the International Journal of Emergency Nursing

Re: Article submission

Title: A concept analysis of person-centred handover practices: The meaning in emergency departments.

Type: Research article (Concept Analysis)

Submission date: 29 July 2023

Thank you for taking the time to review the article submitted.

Background to the study:

Handover is part of all settings in the healthcare environment. It is an important and yet sometimes overlooked activity. In the emergency department the handover between the prehospital and in hospital is an important activity to ensure continuity in patient care. Emergency care practitioners transporting patients from the prehospital environment have only one opportunity to perform handovers correctly to prevent information loss.

Person-centred care in the emergency department has been gradually increasing in the past few years. Despite the increase in the need to provide person-centred care this is not the practice observed and literature suggests various ways in which this can be addressed.

Current handover practices in the emergency department are not directed towards person-centred practices and the first point to address this would be to define the concept: what is person-centred handover practice in the emergency department.

This paper has not been published previously and is not currently under consideration by another journal. All authors have approved of and have agreed to submit the manuscript to this journal.

Regards

Santel de Lange

Email: delangesantel@gmail.com

A concept analysis of person-centred handover practices: The meaning in emergency departments


Reporting guidelines:

This is a concept analysis and no reporting guidelines are applicable

Annexure D 1

*Proof of article submission
to Journal of Clinical
Nursing*



From: Kaviya Balasundaram onbehalf@manuscriptcentral.com 
Subject: Journal of Clinical Nursing - Decision on Manuscript JCN-2023-2471.R1
Date: 04 December 2023 at 12:53
To: delangesantel@gmail.com, tanya.heyns@up.ac.za, celia.filmalter@up.ac.za

04-Dec-2023

Dear Lange,

It is a pleasure to accept your manuscript entitled "Reaching consensus on the definition of person-centred handover practices in emergency departments: A modified online Delphi" in its current form for publication in the Journal of Clinical Nursing.

The manuscript files will now be checked to ensure that everything is ready for publication, and you may be contacted if final versions of files for publication are required. When you are contacted by our publication team, please respond promptly to avoid delays in publication of your paper.

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Thank you for your contribution, we look forward to your continued contributions to the Journal.

Yours sincerely,

Dr. Leslie Gelling
Editor

Journal of Clinical Nursing

Author(s) twitter handle:

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The *Journal of Clinical Nursing (JCN)* is an international, peer reviewed, scientific journal that seeks to promote the development and exchange of knowledge that is directly relevant to all spheres of nursing and midwifery practice. The primary aim is to promote a high standard of clinically related scholarship which supports the practice and discipline of nursing. *JCN* publishes high quality papers on issues related to all aspects of clinical nursing. Detailed information about the journal can be found at www.wileyonlinelibrary.com/journal/jocn.

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If you have a colleague who may wish to join our panel of reviewers, please feel free to forward this advertisement on.

Annexure E 1

*Proof of article submission
to Journal of Advanced
Nursing*

Clinical Practice Guidelines for person-centered handover practices in emergency departments: A scoping review

Journal:	<i>Journal of Advanced Nursing</i>
Manuscript ID	Draft
Manuscript Type:	Scoping Review
Keywords:	Accident and Emergency, Adult Nursing
Category:	Nursing

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5 **Clinical Practice Guidelines for person-centered handover practices in**
6 **emergency departments: A scoping review**
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10 **Aims:** To review the available information on clinical practice guidelines for person-centered
11 handover practices between emergency care practitioners and healthcare professionals in
12 emergency departments. Currently, there is no gold standard for person-centered handover
13 practices in emergency departments. Collating existing clinical practice guidelines may
14 improve handover practices.
15
16

17 **Design:** Scoping review.

18 **Data sources:** The literature on clinical practice guidelines for person-centered handover
19 practices was reviewed. Three electronic data bases were searched: MEDLINE (PubMed),
20 CINAHL (EBSCO), and Scopus. Nineteen studies met the inclusion criteria.
21
22

23 **Methods:** The review was conducted according to the Johanna Briggs Institute methodology
24 for scoping reviews. Results were reported using the Preferred Reporting Items for
25 Systematic Reviews and Meta-Analysis extension for Scoping Reviews checklist.
26
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28 **Results:** Various mnemonics exist for handover practices. Where mnemonics are not used,
29 participants have identified important information that should be included during handover
30 practices. We did not find any clinical practice guidelines or information on person-centered
31 handover practices in any of the reviewed articles.
32
33

34 **Conclusion:** Currently, there is no gold standard for person-centered handover practices,
35 which has led to various practices being implemented. Most articles expressed a need for
36 standardized handover practices; however, not all aspects of handover practices can be
37 standardized and should be kept patient and context specific.
38
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40 **Impact:** Currently, there are no clinical practice guidelines for handover practices in
41 emergency departments. Subsequently, there is a need for standardized, yet patient and
42 context specific, handover practices. Knowledge of existing handover practices may guide
43 the development of clinical practice guidelines for person-centered handover practices
44 between emergency care practitioners and healthcare professionals in emergency
45 departments. Such guidelines may improve current handover practices and lead to improved
46 patient care.
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52 **Reporting Method:** The study adhered to the relevant EQUATOR guidelines: Preferred
53 Reporting Items for Systematic Reviews and Meta-Analysis extension for Scoping Reviews
54 checklist.
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57 **Patient or Public contribution:** No Patient or Public Contribution.
58
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Keywords: clinical practice guidelines, person-centered, handover practices, emergency care practitioners, healthcare professionals, emergency department

What does this paper contribute to the wider global clinical community?

- Current handover practices in emergency departments may be improved by creating awareness of current handover practices.
- We identify existing handover mnemonics or tools to guide handover practices.
- This review highlights the importance of adequate handover in continuity of patient care.
- Standardized, yet patient and context specific handover practices, are needed in emergency departments.

Trial and Protocol Registration: This scoping review protocol was registered on Figshare:

[10.6084/m9.figshare.21731528](https://figshare.com/records/m9/10.6084/m9.figshare.21731528)

Review Copy

1. INTRODUCTION

In clinical settings, transfer of care is often described as handover, hand off, or transition of care. The British Medical Association (2008) defines clinical handover as “*the transfer of professional responsibility and accountability for some or all aspects of care for a patient, or group of patients, to another person or professional group on a temporary or permanent basis*” (Friesen, White and Byers, no date). Handover occurs multiple times per day in all healthcare facilities and amongst various healthcare professionals (Cheetham *et al.*, 2023; Forde, Coffey & Hegarty 2020; Tortosa-Altred *et al.*, 2021). Regarded as a complex procedure, handover involves many different role players (professionals, patients, members of the public) and uses a variety of technologies and formats (Guasconi *et al.*, 2022).

In emergency departments (EDs), handovers differ from those in other healthcare settings due to the unique, somewhat chaotic, and complex environment of the ED (Cheetham *et al.*, 2023; Guasconi *et al.*, 2022; Tortosa-Altred *et al.*, 2021). Rapid decision making, rather than listening, is often prioritized in EDs (Cheetham *et al.*, 2023; Howell *et al.*, 2023; Tortosa-Altred *et al.*, 2021). Amongst the different types of handovers that occur in EDs, handovers from the pre-hospital environment (emergency care practitioners [ECPs]) to the in-hospital environment (healthcare professionals-doctors and nurses) are vitally important for continuity of care, patient safety, and quality care (Cheetham *et al.*, 2023; Cowan *et al.*, 2023; Howell *et al.*, 2023). Effective communication is crucial during handovers between ECPs and healthcare professionals in EDs. Currently, there are various handover tools/mnemonics/protocols/models that aim to facilitate communication and standardize handover practices between ECPs and healthcare professionals (Cheetham *et al.*, 2023; Guasconi *et al.*, 2022; Howell *et al.*, 2023), but the optimal method has not been identified. Consequently, many studies have suggested the need for improving handover practices (Cheetham *et al.*, 2023; Cowan *et al.*, 2023; Howell *et al.*, 2023; Guasconi *et al.*, 2022; Mastrogiovanni & Michelle Moccia, 2022;).

Standardized handover practices have been associated with improved staff satisfaction, comprehensive information transfer, shortened handovers (Guasconi *et al.*, 2022), retention of information (Mastrogiovanni & Michelle Moccia, 2022), fewer interruptions, increased confidence in handover delivery (Cowan *et al.*, 2023), and less room for mistakes (Clark, 2023). Ideally, standardized methods should be closely followed to prevent information loss (Guasconi *et al.*, 2022). Health professionals are not the only role players during handovers; patients are also involved. Patients are commonly involved in handovers during nursing staff shift changes (Ismuntania *et al.*, 2023; Poelen, van Kuppenveld & Persoon, 2023). Patient

1
2
3 involvement during handovers is important for delivering person-centered care and shared
4 decision-making, which reduces anxiety, improves satisfaction, and increases participation in
5 care (Ismuntania *et al.*, 2023; Kim, Kim & Lee, 2022; Street *et al.*, 2022:). Patients who are
6 involved in their care also have the opportunity to clarify and correct inaccuracies
7 (Ismuntania *et al.*, 2023). Despite these benefits, patients are rarely included in handovers
8 (Street *et al.*, 2022). Person-centered handovers promote person-centered care, which
9 involves eliciting information regarding patients' values and preferences to guide
10 individualized care (Kim, Kim & Lee, 2022; Poelen, van Kuppenveld and Persoon, 2023).
11 Person-centered care in EDs has gained traction with the move from being centered on the
12 illness or provider to being individualized and based on partnerships between patients and
13 healthcare professionals (Kim, Kim & Lee, 2022). Despite person-centered care gaining
14 momentum in EDs, research on person-centered handover practices between ECPs and
15 healthcare professionals in EDs is limited.

23 24 25 2. AIM

26 This review aimed to identify and present the available information on clinical practice
27 guidelines for person-centered handover practices between ECPs and healthcare
28 professionals in EDs.
29

30 31 32 33 3. METHODS

34 The review was conducted according to the Johanna Briggs Institute (JBI) methodology for
35 scoping reviews (Peters *et al.*, 2021). The results were reported using the Preferred
36 Reporting Items for Systematic Reviews and Meta-Analysis extension for Scoping Reviews
37 checklist (PRISMA-ScR) (Tricco *et al.*, 2018).
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39 40 41 42 43 3.1 Data sources and search strategy

44 As per the JBI approach, literature was searched in three-steps. The search strategy was
45 designed and refined in collaboration with an information specialist. Step 1: an initial search
46 using MEDLINE (PubMed) was conducted. For the full electronic search strategy conducted
47 on MEDLINE (PubMed). (Table 1 – supplementary file – search strategy)
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49 Step two involved searching the CINAHL (EBSCO) and Scopus databases. Although we
50 planned to search Web of Science, we did not search Web of Science because most studies
51 were duplicate studies found on both CINAHL (EBSCO) and Scopus. Step three involved
52 searching for organizations that publish clinical practice guidelines, namely the National
53 Institute of Health, American College of Physicians, the National Institute of Health and Care
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3 Excellence, the Registered Nurses' Association of Ontario, the Australian Medical
4 Association, and the British Medical Association. Lastly, the reference lists of included
5 studies were searched for additional studies. Searches were conducted between January 29
6 and May 31, 2023 after the search strategy was pilot tested by the information specialist and
7 one member of the scoping review team (SdL).
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11 12 13 3.2 Inclusion and exclusion criteria

14 The participants, concept, and context framework was used to determine the inclusion
15 criteria for the review (Peters *et al.*, 2021).
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18 19 *Participants*

20 Emergency care practitioners transporting and handing patients over to healthcare
21 professionals in EDs. Healthcare professionals including doctors and nurses working in EDs,
22 who are involved in handovers with ECPs.
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25 26 27 *Concept*

28 Clinical practice guidelines for person-centered handover practices between ECPs and
29 healthcare professionals in EDs.
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32 33 34 *Context*

35 Studies conducted in EDs, emergency rooms, or emergency centers in any geographical
36 area.
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39 Due to limited literature, we did not apply any language or time restrictions. The search
40 included published and unpublished studies, opinion papers as well as primary sources, and
41 evidence synthesis. All qualitative and quantitative research designs were included.
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44 45 46 3.4 Search outcomes

47 The initial search yielded 129 records and three handover guidelines from organization sites,
48 resulting in 132 records. No automation tools were used for the screening and selection
49 process. After de-duplication, irretrievable and non-English record were removed. The
50 abstracts of 69 records were screened. Forty-eight records did not meet the inclusion criteria
51 and were excluded, resulting in 21 full-text reports being screened. Thereafter 13 reports
52 were excluded as it did not pertain to inclusion participants (population), some was the
53 wrong participant group, and articles not related to handover practices. From there, 11
54 reports were identified from reference lists of identified articles resulting in 19 studies being
55 included in the final review (Figure 1). All reports were uploaded into Mendeley reference
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3 management software 2022 (Mendeley Ltd, Elsevier, New York). All full text citations were
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5 uploaded into Rayyan (2022) to collaboratively review the literature. The full text citations
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7 were assessed in detail against the inclusion criteria by two members of the scoping review
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9 team (SdL and TH), and a third reviewer (CF) resolved any disagreements.
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Review Copy

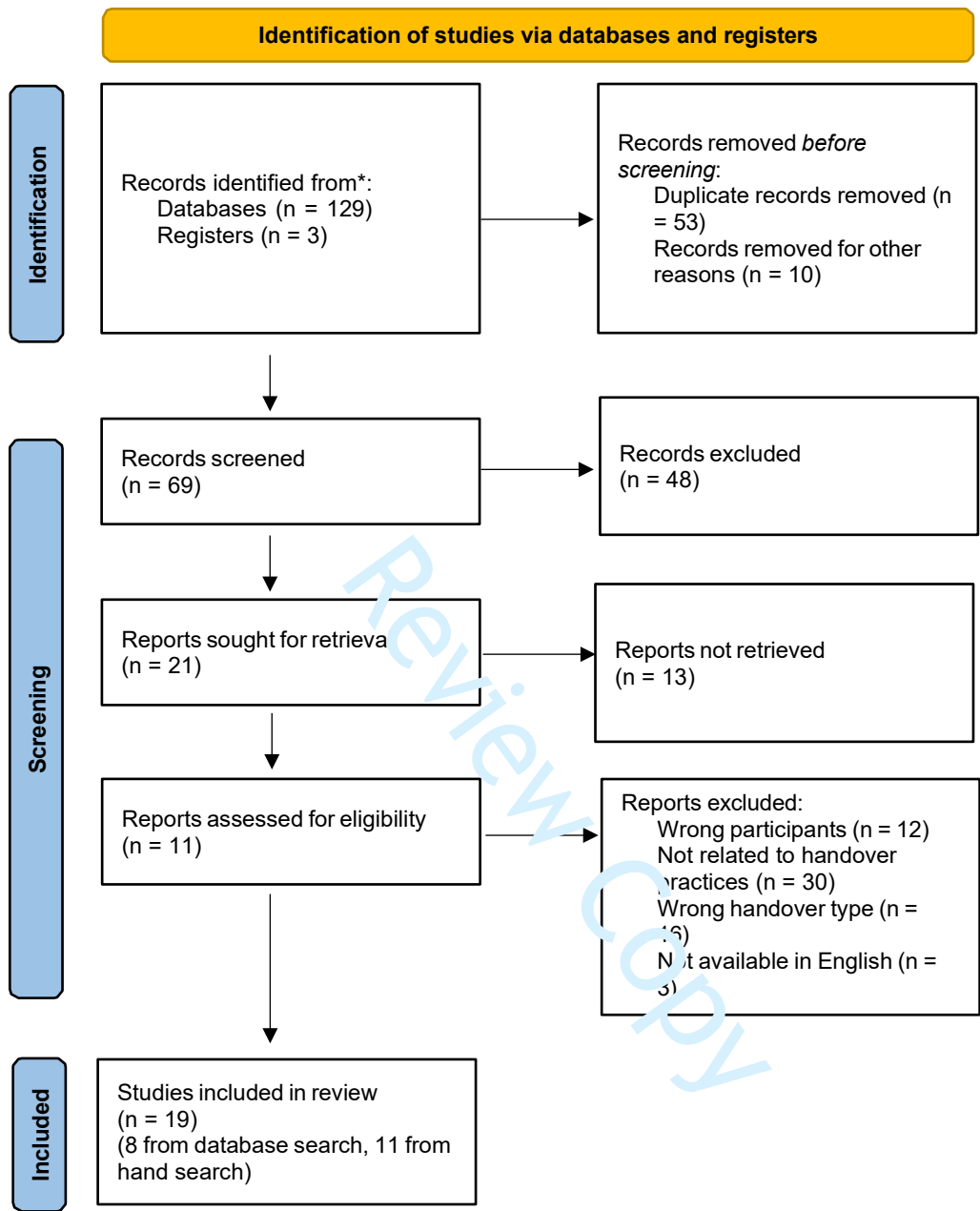


Figure 1: PRISMA flow diagram-search and retrieval process

3.5 Data extraction and synthesis

A data extraction tool was developed, pilot tested, and used to extract data from the included studies (Table 2 – supplementary file – data extraction tool).

4. RESULTS

Most the reports originated from developed countries, of which 36% ($n=7$) were done in Europe, Australia ($n=6$), America ($n=5$), and the Middle East ($n=1$). (Figure 2 – supplementary file – number of studies per country).

Articles were published between 2001 and 2020. Most of the articles (47%) were published between 2011 and 2015 ($n=9$), followed by 2016 to 2020 ($n=4$), then 2006 to 2010 ($n=3$), and the least reports were published between 2001 and 2005 ($n=2$) at 10%. Evidently, the number of publications on handover practices between ECPs and healthcare providers in EDs has increased over the last 20 years. (Figure 3 – supplementary file – illustration of publications per year).

Forty two percent of reports were qualitative ($n=8$), which included observational studies, focus group interviews, audits, and ethnographic studies. Fifteen percent of articles were quantitative ($n=3$), 15% were mixed methods studies ($n=3$), and 26% reviews (systematic and literature) ($n=5$). All studies were conducted in EDs involving various participants; 5% included ED nurses only, 5% included only emergency care practitioners (ECPs), 5% included ECPs and ED nurses, 10% included ECPs and doctors, 52% included ED nurses, ECPs, and doctors, and 15% of articles were document audits. (Table 3 – supplementary file – included studies characteristics).

Four studies used standardized or structured handover tools. Two studies referred to guidelines, and two studies referred to mnemonics. The remaining 13 articles did not provide a specific term for handover practices. Ten studies provided a specific tool or mnemonic to be used when conducting a handover such as, MIST (Dawson, King & Grantham, 2013; Jensen, Lippert & Østergaard, 2013; Wood *et al.*, 2015), DE-MIST (Bost *et al.*, 2010; Ebben *et al.*, 2015), ISBAR (Dawson, King & Grantham, 2013; Di Delupis *et al.*, 2015; Dojmi Di Delupis *et al.*, 2014; Yegane *et al.*, 2017), IMIST-AMBO (Iedema *et al.*, 2012; Jensen, Lippert & Østergaard, 2013; Reay *et al.*, 2020), ICE/ ASHICE (Wood *et al.*, 2015), and BAUM (Jensen, Lippert & Østergaard, 2013). The remaining nine studies mentioned important details or information that should be included in handover practices (Table 4).

Table 4: Summary of the reports included in this scoping review of clinical guidelines for handover practices in emergency departments (EDs) (n = 19).

Author	Title	Aim/s of the study	Study design	Population and sample size (n)	Available clinical practice guidelines (CPG)/ transition in care guidelines/ handover-model/ tool/ mnemonic in report	Key findings
Bost, Crilly, Patterson, & Chaboyer (2012)	Clinical handover of patients arriving by ambulance to a hospital emergency department: A qualitative study	(1) Explore clinical handover processes between ambulance and ED personnel (2) Identify factors that impact on the information transfer to ascertain strategies for improvement.	Focused ethnographic study	Emergency care practitioners (ECPs) (n = 79) Nurses (n = 65) Doctors (n = 19)	No CPG, transition in care, handover- tool/ model or mnemonic. Handover guideline was suggested.	Handover guideline: AMIST-Age, Mechanism of injury/ illness, Injury or illness, Signs and Treatment. Included information on place of retrieval, condition of patient on arrival of ambulance, age, signs and symptoms, observations performed, and treatment given by paramedics, past medical history if known, medications prescribed for previous medical conditions and social history if deemed relevant by paramedics. Transfer of responsibility should also occur. Standardizing the key principles of clinical handover can prevent the loss of vital information. These principles include nominating a leader at each handover, documentation of handover, and transferring information in a predetermined format. Two different handover processes were identified depending on the patient's acuity. Handover content differed and depended on experience and the preferred method of both the receiver and the giver of information.
Bost, Crilly, Wallis, Patterson &	Clinical handover of patients arriving by ambulance to the	To critically review research on clinical handover	Literature review	ECP to ED handover (n = 8 articles)	No CPG, transition in care, handover- tool/ model or mnemonic.	A detailed handover includes patient problems, incident, and patient assessment in verbal and written

Chaboyer (2010)	emergency department – A literature review	between ambulance services and EDs			Handover structure was mentioned.	form. Known structures such as DeMIST are helpful. Information should include vital signs, past medical history, current medication, and pre-hospital treatment. Should be performed in two phases (a summary and then detail later). A standardized approach to handover should be followed. Discipline specific guidelines are needed.
Bruce, & Suserud (2005)	The handover process and triage of ambulance-borne patients: the experiences of emergency nurses.	To explore the experiences of emergency nurses receiving patients who were brought into hospital as emergencies accompanied by ambulance nurses through an analysis of the handover and triage process.	Qualitative descriptive approach	ED nurses (n = 6)	No CPG, transition in care, handover-tool/model/ mnemonic mentioned.	The ideal handover included information that was patient focused and clearly stated identifiable problems. Handover was a verbal report, clarifying the circumstances around what happened to the patient together with a descriptive picture of the patient's problems or needs. Information regarding the patient's overall care needs were deemed more important together information on the patient's life situation and potential problems. Commence with a brief handover to obtain an impression of the patient. Attentive listening during handover is important. Handovers comprise of verbal, written and physical handover involving ED nurses, ambulance nurses, and patients.
Carter, Davis, Evans & Cone (2009)	Information loss in emergency medical services handover of trauma patients	To determine the degree to which information presented in the EMS trauma patient handover is degraded.	Observation and document audit	Observed and audited handovers (n = 96)	No CPG, transition in care, handover-tool/model/ mnemonic mentioned	Knowledge regarding what happened to the patient before arriving at the ED is important. Handover information should include: pre-hospital hypotension, Glasgow Coma Scale, age, end-tidal CO ₂ , pulse, respiratory rate, saturation, blood loss in filed, death of occupant in same compartment, mechanism of

						injury, intrusion, extrication time, estimated crash speed, anatomic location of the injury, pre-existing disease, prehospital intubation. From this list only 4.9 items were transmitted at every handover, with many not relevant to all patients.
Dawson, King, & Grantham (2013)	Improving the hospital clinical handover between paramedics and emergency department staff in the deteriorating patient.	To establish: (i) what aspects of the clinical handover between paramedics and ED staff impact on the effective transfer of a patient in a state of physiological deterioration (ii) how these aspects might be improved in the future.	Integrative literature review	ED doctors and nurses and paramedics (n = 17 papers)	No CPG, transition in care, handover- tool/ model. Handover mnemonics was mentioned.	A structured handover tool is needed. Mnemonic tools include ISBAR (Introduction, Situation, Background, Assessment and Recommendation) and MIST (Mechanism of Injury/Illness, Injuries, Signs, observations and monitoring, and Treatment given). Baseline observations, such as airway, breathing, circulation and level of consciousness, and changes in patient condition are required. Written (electronic or paper) should follow verbal handover.
Dojmi Di Delupis, Mancini, di Nota, & Pisanelli, (2015)	Pre-hospital/ emergency department handover in Italy	To measure communication during clinical handovers from prehospital to ED providers in a realistic setting with our communication evaluation tool.	Observational study	Observed handovers (n = 240)	No CPG, transition in care, handover- model/ mnemonic mentioned. Handover tool was mentioned.	Handover tool: ISBAR > 90% of handovers: the pre-hospital providers and nurses did not introduce themselves In 36% of handovers the patient was introduced by name. Other patient demographics were only reported in 10% of handovers. Reason for the emergency call was reported in 80% of handovers. In 26% of handovers changes in the patient's condition were reported. In 8.8% of handovers, allergies were reported and in 23% the medical history and home therapies were reported. Regarding patient assessment, the information was transmitted either completely, in part or not at all, in only 1% a

						complete and systematic manner was used to transfer information completely. Vital signs were only reported in 66% of handovers. Recommendations (R) were not usually provided. No standardized tool existed which resulted in incomplete, partial, or disordered information being transferred.
Dojmi Di Delupis, Pisanelli, Di Luccio, Kennedy, Tellini, Nenci, Guerrini, Pini, & Franco Gensini (2014)	Communication during handover in the pre-hospital/ hospital interface in Italy: from evaluation to implementation of multidisciplinary training through high-fidelity simulation	(1) Development of simulated handover scenarios to evaluate the communication between pre-hospital and hospital providers (2) identify critical information that should be routinely communicated during the handovers between the pre- hospital and the hospital providers; (3) evaluate and adapt existing tools for measuring communication between medical providers for use in the pre-hospital/ED interface (4) validate the adapted tool (5) develop training for pre-hospital providers in handover communication (6) evaluate communication pre and post-training.	Mixed methods. Multidisciplinary handover simulations and debriefings. Baseline nursing quantitative surveys to evaluate handover communication. Multidisciplinary focus group interviews. Handover tool validation.	<i>Simulation activity:</i> Simulation scenarios (n = 12): Pre-hospital providers and ED physicians (n = 35), ED nurses (n = 6), Rescuers (n = 12) and Actors (n = 6). <i>Quantitative survey:</i> Triage nurses (n = 23). <i>Focus group interviews:</i> Emergency physicians (n = 4), ED nurses (n = 4) Rescuers (n = 4). <i>Handover tool validation:</i>	No CPG, transition in care, handover-tool/model/ mnemonic mentioned.	The lack of a standardized handover communication process was a concern for authors. The ISBAR tool was implemented, and training provided. Standardized communication was suggested for handovers. Both verbal and written handovers should occur. Triage nurses suggested the following critical information: patient identification, chief complaints, clinical condition, and medications. Family contact information and pre-hospital vital signs were regarded as less important information to be received. Other information regarded as important to handover included: patient name, age, baseline condition, condition during transfer, primary survey, and patient allergies.

				Handover practices (n = 12)		
Ebben, van Grunsvan, Moors, Aldenhoven, de Vaan, van Hout, van Achterberg, & Vloet (2015)	A tailored e-learning program to improve handover in the chain of emergency care: A pre-test post-test study	To evaluate the effectiveness of a learning program to improve ECPs adherence to handover guidelines during pre-hospital notification and handover in the chain of emergency medical service, emergency medical dispatch, and the ED.	Prospective pre-test post-test design	E-learning program: Emergency medical services (n = 73), Emergency medical dispatch (n = 15) Pre-test handover (n = 145) Post-test handovers (n = 167)	No CPG, transition in care, handover- tool/ mnemonic. Described the DeMIST model.	DeMIST (Demographics, Mechanism of injury or illness, Injuries (sustained or expected), Signs (including observations and monitoring), Treatment given). The pre-test post-test indicated no significant difference in adherence to the model. Post intervention handover receiving team composition changed. Handovers took place after patient transfer. Results indicate that the DeMIST model was not always deemed appropriate for handovers.
Goldberg, Porat, Strother, Lim, Wijeratne, Sanchez & Munjal (2017)	Quantitative analysis of the content of EMS handoff of critically ill and injured patients to the emergency department	A quantitative analysis of the information transferred from EMS providers to ED physicians during handoff of critically ill and injured patients.	Observational study	Observed handovers (n = 90)	No CPG, transition in care, handover-tool/model/ mnemonic mentioned	Less than half of the required information is transferred during handovers. The most transferred information includes the presenting problem, initial patient condition information, vital signs, past medical history, medications, chief concern, and overall assessment of pre-hospital providers. A summary of the patient situation and clinical impression is also deemed important, but only done 31% of the time. Standardization is used increasingly and improves patient handoff quality and could potentially improve patient outcomes.
Iedema, Ball, Daly, Young, Green, Middleton, Foster-Curry, Jones, Hoy,	Design and trial of a new ambulance-to-emergency department handover protocol: IMIST-AMBO	(1) Identify the existing structure of paramedic-to-emergency staff handovers by video analysis. (2) involve practitioners in reflecting on practice using	Video-reflexive ethnography with six phases: Focus groups and pre- and post-survey analysis	Pre-videod handovers (n = 73) post-videod handovers (n = 63)	No CPG, transition in care, handover-tool/model/ mnemonic mentioned. Handover protocol was mentioned.	A paramedic to ED staff protocol was developed from existing practices. Handover protocol: IMIST-AMBO Current practices indicated that 73 handovers were done in a tentative or tacit structure by paramedics.

Comerford (2012)		footage (3) combine those reflections with formal analyses of these filmed handovers to design a handover protocol (4) trial-run the protocol (5) assess the protocol's enactment		pre-post survey triage nurses (n = 416)		Information included was patient identification, an outline of the medical complaint, the mechanisms of injury, details about the complaint or the relevant injuries and vital signs and GCS. Post implementation IMIST-AMBO appeared to provide paramedics with cues for components they regard as critical, while also matching informational expectations of ED clinicians. Mnemonic ensured more consistent information transfer, improved triage and care decisions.
Jenkin, Abelson-Mitchell, Cooper (2007)	Patient handover: Time for a change?	To identify the current process of information transfer between ambulance staff and ED staff during patient handover.	Quantitative questionnaire	ECPs (n = 42), Doctors (n = 17) ED nurses (n= 21)	No CPG, transition in care, handover-tool/ model, or mnemonic.	The reason for attendance, problems requiring immediate intervention and treatment provided, and any significant previous medical history is important. Electronic transfer of information to the ED may improve the delivery and efficiency of handovers. Legible written information with a verbal handover should occur. Patient's name, time of the event, time of medication administration, suspected injuries/ illness, and allergies are part of the handover.
Jensen, Lippert, & Østergaard (2013)	Handover of patients: a topical review of ambulance crew to emergency department handover	To identify important factors influencing ambulance to ED handover, and to suggest ways to optimize this process.	Literature review	Ambulance and ED personnel handovers (n = 18 papers)	No CPG, transition in care, handover- model/ mnemonic. Handover tool mentioned.	Verbal and written handover information should be transferred in a structured manner. Responsibility should also be transferred. Some studies indicated a need for national guidelines. Handovers should be a context specific. Three structured tools were identified: 1) BAUM 'Bestand' (inventory), 'Anamnese' (medical history), 'klinische Untersuchungsergebnisse' (clinical findings)

						and 'Massnah- men' (actions). 2) MIST and 3) IMIST-AMBO. (identification, mechanism/medical impact, signs, vitals and Glasgow Coma Scale, treatment and trends/ response to treatment – allergies, medications, back- ground history and other (social) information).
Meisel, Shea, Peacock, Dickinson, Paciotti, Bhatia, Buharin & Cannuscio (2015)	Optimizing the patient handoff between EMS and the ED	To identify issues surrounding the EMS handoff process to describe how the EMS-to-ED handoff functions and how it can be improved.	Qualitative, focus groups	EMS providers (n = 48) Focus groups (n = 7)	No CPG, transition in care, handover- tool/model/ mnemonic mentioned	Handovers should be clear, effective, and delivered to the right ED staff. Changes in patient condition should be described in detail. Participants suggested a direct handover to the physician from EMS. Some but not all aspects of the handover should be standardized. Electronic records should be used for the written component of the handover.
Picinich, Madden, & Brendle (2019)	Activation to arrival: transition and handoff from emergency medical services to EDs	Not provided	Not provided	Not provided	No CPG, transition in care, handover- tool/ model or mnemonic.	An effective standardized handoff is needed. Handover information should include airway status and management, vital signs, neurologic exam, therapeutic interventions, mechanism of injury, time of symptom onset, medical history. Identification, chief complaint, status, assessment, interventions, and background and response to treatment. Should include a verbal and written component.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25	Reay, Norris, Nowell, Hayden, Yokom, Lang, Lazarenko, Abraham (2020)	Transition in care from emergency services (EMS) providers to emergency department (ED) nurses: A systematic review	To examine: (1) factors that influence transitions in care from EMS providers to ED nurses (2) the effectiveness of interventional strategies to improve these transitions.	Mixed methods systematic review	Emergency care practitioners (ECPs), medical providers and ED nurses (n = 20 articles)	No CPG or handover-model/tool/mnemonic in report. Transition in care guideline was suggested.	Transition in care guidelines include: DeMIST (Demographics, Mechanism of injury or illness, Injuries (sustained or expected), Signs (including observations and monitoring), Treatment given) or IMIST-AMBO (Identification, Mechanism/ Medical complaint, Injuries/ Information related to the complaint, Signs, Treatment and Trends - Allergies, Medication, Background history, other information). Guideline should involve the patient and family. Pre-notification and a dedicated person to be allocated to the handover and performing triage. Use of digital images is useful to ED nurses. Using a standardized protocol resulted in conflicting findings. Standardized handoffs can improve patient safety and ensure the transfer of essential information transfer, but flexibility might be needed.
26 27 28 29 30 31 32 33 34 35	Thakore & Morrison (2001)	A survey of the perceived quality of patient handover by ambulance staff in the resuscitation room	To describe current perceptions of medical and ambulance stay.	Descriptive survey with questionnaires	Medical staff (n = 30) Ambulance staff (n = 67)	No CPG, transition in care, handover-tool/model/ mnemonic mentioned	A system including patient details, followed by a concise history of the events, general medical condition, salient physical, and vital signs should be developed. Medical staff (69%) felt the quality of handovers varied a great deal between ambulance crews. Information received included: history, vital signs. Handover training is needed.
36 37 38 39 40 41 42 43 44 45 46	Wood, Crouch, Rowland, & Pope (2015)	Clinical handovers between prehospital and hospital staff: literature review	Intended to inform the policy debate and future research about the quality and effectiveness of pre-hospital to hospital handover	Literature review	Verbal and written handovers in EDs (n = 21 papers)	No CPG, transition in care, handover- tool/ model. Handover mnemonics were mentioned.	Common mnemonics used in the pre-hospital settings for handovers are MIST and ICE/ASHICE (injury, condition, time to hospital, with Age, Sex and History). Unstructured

						handovers caused miscommunication. Verbal handovers are preferred with written documentation. Mnemonics improved handover consistency. Many factors influence handovers making standardization difficult. The utility of mnemonics is still inconclusive.
Yegane, Shahrami, Hatamabadi, Hosseini-Zijoud, (2017)	Clinical information transfer between EMS staff and emergency medicine assistants during handover of trauma patients	Audit current clinical handover using the Identify, Situation, Background, Assessment, and Recommendation (ISBAR) tool. Survey the effect of training the ISBAR tool to staff.	Clinical audit study	Doctors and ECPs (n = 150 handovers)	No CPG, transition in care, handover model or mnemonic. Handover tool was mentioned.	Handover tool: ISBAR The delivery of patients and information to the ED is essential and should be done in a comprehensive and safe manner. Adapting to and using a standard tool can improve patient handover quality and reduce the number of errors. Marked increase in adherence to the tool observed after training. A standardized tool was available but not everyone was aware of it. Using a standardized tool can improve patient handover quality.
Yong, Dent, & Weiland (2008)	Handover from paramedics: Observations and emergency department clinician perceptions	To describe the types of information provided in handovers. To assess perceptions of handovers and handover information. To assess the consequences of poor handover and possible improvements to handovers.	Mixed methods Quantitative questionnaire-based survey Handover observation Post survey questionnaire	<i>Questionnaire:</i> n = 54 (n = 16 doctors, n = 24 nurses and n = 11 undisclosed). <i>Handover observation:</i> n = 311 handovers. <i>Post survey:</i> Nurses (n = 171) and doctors (n = 21)	No CPG, transition in care, handover-tool/model/ mnemonic mentioned	Handovers should be verbal and written. Doctors are not commonly present during handovers of low acuity patients. Handover should be provided to ED nurse and doctor. Patient handovers included information on the presenting problem, vital signs, past medical history, mental and pre-hospital treatment, physical examination, social history, and medications.

5. DISCUSSION

This scoping review aimed to identify and present available information on clinical practice guidelines for person-centered handover practices between ECPs and healthcare professionals in EDs. This information may be used to develop clinical practice guidelines for person-centered handover practices in EDs. Currently, person-centered handover practices in the ED lack standardization and there is no universally accepted framework for what they should encompass. Standardized patient and context specific person-centered handover practices have the potential to improve patient care and safety in ED settings.

We reviewed 19 articles that described various handover practices across the world. None of the articles described clinical practice guidelines for person-centered handover practices in EDs, although most studies confirmed that effective handover is essential for continuity of patient care and safety (Picinich, Madden & Brendle, 2019). Handovers should describe what happened to the patient before arriving in the ED (Carter *et al.*, 2009). Handovers should also be comprehensive, relevant, timely, and safe (Yegane *et al.*, 2017). Handovers depend on clear, concise, confident and respectful communication (Goldberg *et al.*, 2017; Picinich, Madden & Brendle, 2019).

Various mnemonics have been suggested to guide the content and flow of handovers.

These mnemonics include MIST (mechanism, injury, signs, treatment) (Dawson, King & Grantham, 2013; Jensen, Lippert & Østergaard, 2013; Wood *et al.*, 2015), IMIST-AMBO (Identification, mechanism/medical impact, signs, vitals and Glasgow Coma Scale, treatment and trends/ response to treatment – allergies, medications, back- ground history and other [social] information) (Iedema *et al.*, 2012; Jensen, Lippert & Østergaard, 2013; Reay *et al.*, 2020), and DeMIST (Demographics, Mechanism of injury/ illness, Injuries sustained/ suspected, Signs as recorded [observations], treatment administered) (Bost *et al.*, 2010; Ebben *et al.*, 2015). An study by Bost *et al.*, (2012) reported the use of the mnemonic AMIST (Age, Mechanism, Injury, Signs, Treatment) in resuscitation room handovers. The mnemonic ISBAR (Identify, Situation, Background, Assessment and Recommendation) has also been mentioned by Dawson, King & Grantham, 2013; Di Delupis *et al.*, 2015; Dojmi Di Delupis *et al.*, 2014; Yegane *et al.*, 2017, along with the BAUM mnemonic (“Bestand” [inventory], “Anamnese” [medical history], “klinische Untersuchungsergebnisse” [clinical findings] and “Massnahmen” [actions]) (Jensen, Lippert and Østergaard, 2013). In addition to these mnemonics, specific information deemed vital for handovers includes patient name, patient’s date of birth, clinical situation compared to the current situation, reason for emergency call, patient’s past history, home therapies, and an brief overview of the treatment given (Thakore

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 3 and Morrison, 2001; Jenkin, Abelson-Mitchell and Cooper, 2007; Yong, Dent and Weiland,
 4 2008; Bost *et al.*, 2010, 2012; Iedema *et al.*, 2012; Dawson, King and Grantham, 2013;
 5 Yegane *et al.*, 2017). Information on the place of retrieval, signs and symptoms,
 6
 7 observations, treatment provided pre-hospital, and social history if applicable (Bost *et al.*,
 8 2012), and problems requiring immediate attention (Jenkin, Abelson-Mitchell and Cooper,
 9 2007) are also crucial. Recently, Picinich, Madden and Brendle, (2019) emphasized
 10 including information on airway status and management, vital signs, mechanism of injury,
 11 time of symptom onset, assessment, background, and response to treatment in handovers.
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 13 Dawson, King and Grantham, (2013) described handovers according to the ABC's (baseline
 14 information on the airway, breathing and circulation, level of consciousness) while Dojmi Di
 15 Delupis *et al.*, (2014) added family contact information to their list. Evidently, much variation
 16 exists on what information should be included in handovers, which could explain differences
 17 in handover practices. Much of the additional information mentioned can be placed under the
 18 different headings of the various mnemonics. Finding the gold standard between the
 19 mnemonics and important information may improve handover practices.
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 3 Standardizing handover practices may have several benefits including improved
 4 communication and information transfer (Dojmi Di Delupis *et al.*, 2014; Goldberg *et al.*,
 5 2017; Jensen, Lippert & Østergaard, 2013; Reay *et al.*, 2020). A greater volume of
 6 information can be transferred in a short period of time (Iedema *et al.*, 2012; Jensen, Lippert
 7 & Østergaard, 2013; Wood *et al.*, 2015), which reduces handover duration, repetition, and
 8 uncertainties (Iedema *et al.*, 2012; Jensen, Lippert & Østergaard, 2013). Standardized
 9 handovers have also been shown to reduce negative communication events (Jensen,
 10 Lippert & Østergaard, 2013). Additionally, standardized handover practices improve patient
 11 safety (Picinich, Madden & Brendle, 2019; Reay *et al.*, 2020), continuity of care (Picinich,
 12 Madden & Brendle, 2019), and may improve patient outcomes (Goldberg *et al.*, 2017).
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46 One study suggested the development of national guidelines to direct handover practices
 47 involving a structured format (Jensen, Lippert & Østergaard, 2013). Almost all studies
 48 emphasized the need for both verbal and written components during handovers (Bruce &
 49 Suserud, 2005; Dojmi Di Delupis *et al.*, 2014; Jenkin, Abelson-Mitchell & Cooper, 2007;
 50 Jensen, Lippert & Østergaard, 2013; Picinich, Madden and Brendle, 2019; Wood *et al.*,
 51 2015; Yong, Dent & Weiland, 2008). Verbal information handover clarifies the circumstances
 52 around what happened (Bruce & Suserud, 2005), while written information may include
 53 paper or electronic records (Dawson, King & Grantham, 2013; Jenkin, Abelson-Mitchell &
 54 Cooper, 2007; Meisel *et al.*, 2015; Picinich, Madden & Brendle, 2019) that supports the
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3 verbal information and serves as a record of pre-hospital care (Dawson, King & Grantham,
4 2013). This information should be physically transferred (Bruce & Suserud, (2005).

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8 This review highlights that while standardization and guidelines are essential for directing
9 handover practices, they should also be context and patient specific (Bost *et al.*, 2010;
10 Ebben *et al.*, 2015; Jensen, Lippert & Østergaard, 2013; Meisel *et al.*, 2015; Reay *et al.*,
11 2020). Factors such as noise, chaos, lack of adequate space, staff shortages, workload, and
12 interruptions may hamper the standardization of handover practices (Wood *et al.*, (2015).

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17 In addition to information transfer, handovers also involve the transfer of responsibility (Bost
18 *et al.*, 2012). We could not identify many articles that explicitly described the transfer of
19 responsibility during handovers. Bost *et al.*, (2012) suggested that while the patient is still on
20 the ambulance stretcher, the patient remains the responsibility of the ambulance personnel.
21
22 Bruce & Suserud, (2005) suggested that symbolic handover occurs when the patient is
23 transferred from the ambulance stretcher to the hospital stretcher or the words “the patient is
24 now yours” are mentioned. Guidelines for handovers should explicitly include guidance on
25 the transfer of responsibility. Since, handover practices involve the transfer of responsibility
26 and care from one healthcare provider to the next, handover practices should also include
27 ED physicians, ED nurses, ECPs, and patients (Bruce & Suserud, 2005; Meisel *et al.*, 2015;
28 Yong, Dent & Weiland, 2008). Additionally, Reay *et al.*, (2020) and Bost *et al.*, (2012)
29 suggested that a dedicated health care professional (handover leader) should be allocated
30 to each handover. Including the patient’s significant other may also add valuable information
31 (Bruce & Suserud, 2005).
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42 6. LIMITATIONS

43 This review acknowledges potential limitations, including the possibility of missing relevant
44 records and the exclusion of non-English publications. Despite these limitations, this review
45 provides valuable insights into the current state of handover practices between ECPs and
46 health care professionals in EDs.
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51 7. CONCLUSION

52 This scoping review highlights the paucity of clinical practice guidelines for person-centered
53 handover practices. Handover practices are critical for patient safety and favorable patient
54 outcomes. Patient handovers should be conducted in a comprehensive, accurate, person-
55 centered manner. Various mnemonics are available (used or unused) for handover
56 practices, but a universal guideline is lacking. Future research should focus on guiding
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handover practices towards patient and context specific person-centered practices, potentially improving continuity of care and person-centered care in the ED.

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Table 1: Search strategy in MEDLINE (PubMed)

	Search	Number of results retrieved
#1	guideline – MeSH	172,596
#2	patient-centered care – MeSH	23,587
#3	patient handoff – MeSH	1,532
#4	hospital emergency service – MeSH	95,992
#5	“guideline” [title/abstract] OR “guideline” [text word] OR “clinical practice guideline” [title/abstract] OR “clinical practice guideline” [text word] OR “practice guidelines” [title/abstract] OR “practice guidelines” [text word]	249,360
#6	“patient-centered care” [title/abstract] OR “patient-centered care” [text word] OR “patients” [title/abstract] OR “patients” [text word] OR “Person-centered care” [title/abstract] OR “Person-centered care” [text word]	760,568
#7	"patient handoff" [title/abstract] OR "patient handoff" [text word] OR "handover" [title/abstract] OR "handover" [text word] OR "clinical handover" [title/abstract] OR "clinical handover" [text word] OR "emergency handover" [title/abstract] OR "emergency handover" [text word] OR "handoff" [title/abstract] OR "handoff" [text word] OR "care transfer" [title/abstract] OR "care transfer" [text word] OR "shift report" [title/abstract] OR "shift report" [text word]	3,898
#8	"hospital emergency service" [title/abstract] OR "hospital emergency service" [text word] OR "emergency medical services" [title/abstract] OR "emergency medical services" [text word] OR "emergency department" [title/abstract] OR "emergency department" [text word] OR "accident and emergency" [title/abstract] OR "accident and emergency"[text word]	155,816
#9	(“guideline” [MeSH Terms] OR (“practice guidelines” [text word] OR “guideline” [text word] OR "clinical practice guidelines" [text word])) AND ((patient-centered care [MeSH terms]) OR ("patient-centered care" [text word] OR “patients” [text word] OR "person-centred care" [text word])) AND ((“patient handoff” [MeSH Terms]) OR ("patient handoff" [text word] OR handover [text word] OR "clinical handover" [text word] OR "emergency handover" [text word] OR handoff [text word] OR "care transfer" [text word] OR "shift report" [text word])) AND ((hospital emergency service [MeSH Terms]) OR ("hospital emergency service" [text word] OR "emergency medical services"	30

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[text word] OR "emergency department" [text word] OR "accident and emergency" [text word]))	
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Table 2: Data extraction tool

Author	Year	Country	Aim/s of the study	Study Design	Setting	Population and sample size	Available clinical practice guidelines	Content of clinical practice guidelines	Key findings	Gaps in the research

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Table 3: Characteristics of included studies

Year		<i>N</i>	%
	2001 – 2005	2	10
	2006 – 2010	3	15
	2011 – 2015	9	47
	2016 – 2020	4	21
Country	Europe	7	36
	Australia	6	31
	America	5	26
	Middle East	1	05
Design	Qualitative	8	42
	Quantitative	3	15
	Mixed Methods	3	15
	Systematic reviews	1	05
	Literature review	4	21
Sample	ED nurses only	1	05

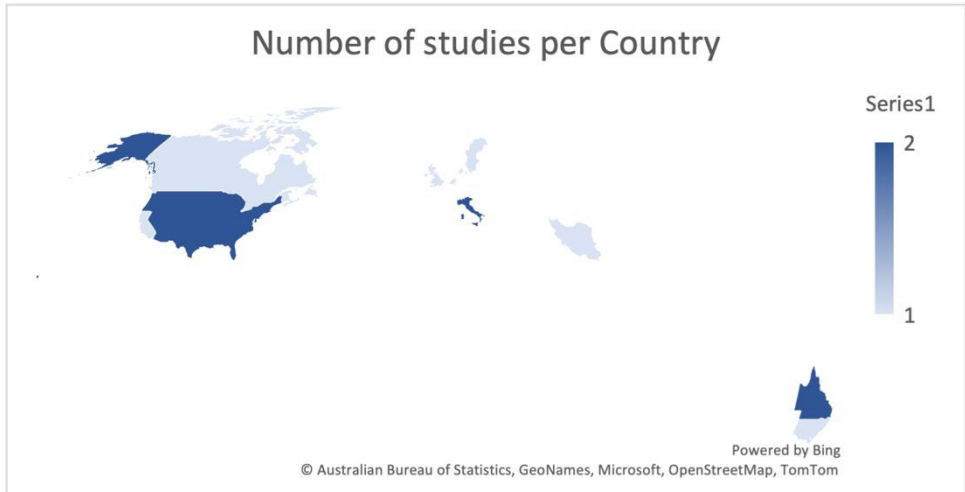


Figure 2: Map of included studies from various countries

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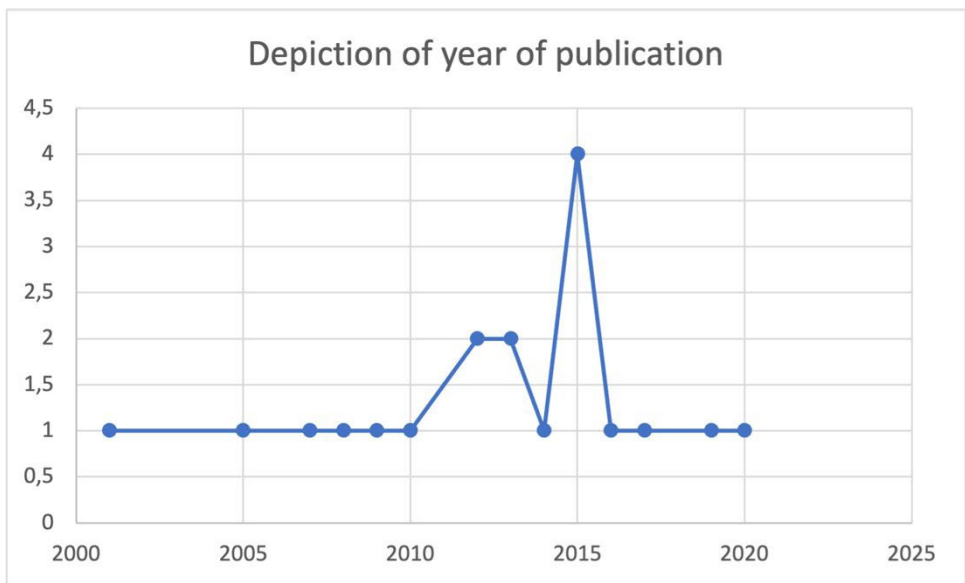


Figure 3: Illustration of year of publication

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Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
TITLE			
Clinical Practice Guidelines for person-centred handover practices in the emergency department: A scoping review	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.	Page 1
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.	Page 2
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.	Page 3
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.	Abstract page
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.	Page 4
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.	Page 4
Search	8	Present the full electronic search strategy for at least 1 database, including any limits used, such that it could be repeated.	Page 3, 4
Selection of sources of evidence†	9	State the process for selecting sources of evidence (i.e., screening and eligibility) included in the scoping review.	Page 5,6
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	Page 7

SECTION	ITEM	PRISMA-ScR CHECKLIST ITEM	REPORTED ON PAGE #
		processes for obtaining and confirming data from investigators.	
Data items	11	List and define all variables for which data were sought and any assumptions and simplifications made.	Page 5
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).	n/a
Synthesis of results	13	Describe the methods of handling and summarizing the data that were charted.	Page 7
RESULTS			
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.	Page 5
Characteristics of sources of evidence	15	For each source of evidence, present characteristics for which data were charted and provide the citations.	Page 7 - 8
Critical appraisal within sources of evidence	16	If done, present data on critical appraisal of included sources of evidence (see item 12).	n/a
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.	Page 7-16
Synthesis of results	18	Summarize and/or present the charting results as they relate to the review questions and objectives.	Page 7 - 16
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.	Page 17 - 19
Limitations	20	Discuss the limitations of the scoping review process.	Page 19
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.	Page 19 - 20
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.	Title page

JB1 = Joanna Briggs Institute; PRISMA-ScR = Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews.

* Where *sources of evidence* (see second footnote) are compiled from, such as bibliographic databases, social media platforms, and Web sites.

† A more inclusive/heterogeneous term used to account for the different types of evidence or data sources (e.g., quantitative and/or qualitative research, expert opinion, and policy documents) that may be eligible in a scoping review as opposed to only studies. This is not to be confused with *information sources* (see first footnote).

‡ The frameworks by Arksey and O'Malley (6) and Levac and colleagues (7) and the JBI guidance (4, 5) refer to the process of data extraction in a scoping review as data charting.

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3 § The process of systematically examining research evidence to assess its validity, results, and relevance before
4 using it to inform a decision. This term is used for items 12 and 19 instead of "risk of bias" (which is more applicable
5 to systematic reviews of interventions) to include and acknowledge the various sources of evidence that may be used
6 in a scoping review (e.g., quantitative and/or qualitative research, expert opinion, and policy document).
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9 *From:* Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA Extension for Scoping Reviews
10 (PRISMA^{ScR}): Checklist and Explanation. *Ann Intern Med.* 2018;169:467–473. doi: [10.7326/M18-0850](https://doi.org/10.7326/M18-0850).
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Annexure F 1

*Demographic information
of external review panel for
clinical practice guidelines*

Demographic information of external review panel for clinical practice guidelines

Name and title	Academic and professional qualifications	Roles and affiliation
Mr Abrie Senekal	Master's in Emergency Medical Care	Clinical facilitator - Department of Emergency Medical Care at the University of Johannesburg (South Africa)
Professor Brendan McCormack	D Phil	Person-centred research - University of Sydney, Australia.
Ms Leanne van Rooy	MCur (Emergency Nursing Clinical)	Trauma Programme Manager – South Africa
Professor Lisa Wolf	Associate Professor, Elaine Marieb CON, UMass Amherst; PhD Staff nurse, ED	Director, emergency nursing research – ENA (United States of America)
Professor Portia Jordan	PhD (Nursing)	Evidence-based practice; CPG development, adoption, adaption or recommendation extraction – South Africa
Dr Sa'ad Lahri	FCEM (SA)	Emergency physician, Academic – South Africa
Mr Yaaseen Hokee	BHS in Emergency Medical Care	Department of Emergency Medical Care - University of Johannesburg (South Africa)
Dr Yolande Magerman	PhD	Emergency Nursing and Critical Care Nursing; Guideline development – South Africa
Ms Ilze van Eeden	Masters Degree Clinical	Emergency Nursing and Critical care Nursing – South Africa
Dr Neville Vlok	MPhil Emergency Medicine	Clinical Emergency Medicine, quality improvement projects related to handover practices – South Africa

Annexure F 2

Clinical Practice Guidelines feedback summary and domain scores

Clinical Practice Guideline feedback and domain scores

Domain 1: Scope and Purpose

Appraiser/Item	Item 1	Item 2	Item 3	Total
Appraiser 1	7	7	7	21
Appraiser 2	4	4	2	10
Appraiser 3	7	7	7	21
Appraiser 4	6	6	6	18
Appraiser 5	5	5	6	16
Appraiser 6	6	6	6	18
Appraiser 7	7	7	7	21
Appraiser 8	5	6	5	16
Appraiser 9	7	7	6	20
Appraiser 10				
Total	54	55	52	161
Score				82.7%
Comments	<p>7.The overall objectives of the guideline are clearly and specifically described in the provided content.</p> <p>8. Suggest that the overall objective be to provide best available recommendations for person-centered handover practices between emergency care practitioners and health care professionals in the ED.</p> <p>8.Explicitly state to guide the content and processes of handover, to standardized handover practices to be more person-centred.</p>	<p>2.I feel the question can be a bit more defined in terms of the specific population. As a ECP, I read it that the CPG will be only developed for use for a small population in the prehospital cohort.</p> <p>7.The health questions covered by the guideline are explicitly described in the provided content.</p> <p>8. Well structured question.</p> <p>9. clearly stated</p>	<p>2.See the comments above. The population is not described adequately in terms of the prehospital cohort. Mentioning emergency care practitioners, it seems as if the focus is only on a small section of bachelor degreed prehospital clinicians. If you maybe define this population in more detail, this misconception will not be made.</p> <p>7. The population to whom the guideline is intended is clearly and specifically described in the provided</p>	

			<p>content.</p> <p>8. See the suggestion made in the guideline by means of track changes.</p> <p>9. Explicitly state to guide the content and processes of handover, to standardized handover practices to be more person-centred.</p>	
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Domain 2: Stakeholder involvement

Appraiser/Item	Item 4	Item 5	Item 6	Total
Appraiser 1	6	6	7	19
Appraiser 2	5	3	4	12
Appraiser 3	7	7	7	21
Appraiser 4	4	5	7	16
Appraiser 5	5	4	6	15
Appraiser 6	6	6	5	17
Appraiser 7	7	5	7	19
Appraiser 8	5	4	7	16
Appraiser 9	6	5	7	18
Appraiser 10				
Total	51	45	57	153
Score				77.7%
Comments	<p>2. Will you be involving groups in the health industry - private and public. I see here that you did define the different groups, i.e. BLS, ILS ect... I feel that this may also be necessary in the above section.</p> <p>4. You only state you and</p>	<p>2. No mention are made of preferences or results from the other stakeholders satisfaction, i.e the practitioners doing handover or receiving handover. Mention is only made of patient satisfaction.</p> <p>a scoping review is g</p>	<p>2. see comments above.</p> <p>6. There is the real users and the optimal users, which will include the whole team involved. Although described, how it will work in reality is not clear as it is just a recommendation.</p> <p>8. Comprehensively described.</p>	

	<p>your supervisors as stakeholders - what about everyone else who was consulted?</p> <p>8. The CPG is developed for the purpose of the doctoral degree and the group included is thus suffice as described. The roles and expertise of the group members are described.</p> <p>9. The GDG did not include an emergency care practitioner but was included in the review group.</p>	<p>but a more comprehensive stakeholder analysis would strengthen this part.</p> <p>7. Could be improved with more explicit patient related experiences.</p> <p>8. No mention of the patients, public or community users include - see the comment in the guideline.</p> <p>9. A Scoping Review was conducted. Perhaps to have considered hearing the patients' voice as literature suggests patient involvement in handover practices.</p>	<p>explained</p>	
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Domain 3: Rigour of development

Appraiser/Item	Item 7	Item 8	Item 9	Item 10	Item 11	Item 12	Item 13	Item 14	Total
Appraiser 1	7	6	6	7	7	7	7	7	54
Appraiser 2	7	7	6	6	6	5	6	7	50
Appraiser 3	7	7	7	7	7	7	7	7	56
Appraiser 4	7	7	7	7	1	4	7	1	41
Appraiser 5	5	6	6	6	5	5	5	5	43
Appraiser 6	6	6	5	7	6	6	7	2	45
Appraiser 7	7	7	7	7	6	7	7	6	54
Appraiser 8	5	4	4	6	5	5	6	6	41

Appraiser 9	5	7	3	6	7	7	7	6	48
Appraiser 10									
Total	56	57	51	59	50	53	59	47	432
Score									83.3%
Comments	<p>8. See the comments on the CPG - I suggest that these methods be included in the CPG or reference to an additional document made.</p> <p>9.The Delphi method and Scoping review mentioned, otherwise not very clear</p>	<p>8. The information must be included to ensure rigour and replicability of the search strategy.</p> <p>9. Yes, clearly indicated</p>	<p>4. the tiering of the evidence reviewed is a great approach.</p> <p>6. I am not so sure that the limitations were described in detail. Maybe I missed them.</p> <p>8. Suggest that you include it in the CPG or a additional reference document.</p> <p>9. Not clearly explained.</p>	<p>4. the approach is rigorous and comprehensive.</p> <p>8.The methods for formulating the recommendations are described in details. However it is suggested that the specifics related to using the PARM is included - see the comment on the CPG.</p> <p>9. Not clear if the extraction and synthesis process was done independently</p>	<p>4. not relevant .</p> <p>8. The non-applicability of this section explained.</p> <p>9. Explanation given why this is not relevant .</p>	<p>2. I do feel that there is evidence lacking on the recommendations to a dedicated space. All type of handovers may not be considered in this, i.e. green patient(p3) handover vs red patient (p1), will occur in different areas. This distinction I did not notice.</p> <p>4. in most cases this is the case but I don't believe the evidence about person-centred</p>	<p>6. Several rounds of review where done.</p> <p>8. The section is explained. However, it is suggested that the credentials and the inclusion of the 10 experts be done more explicitly - see the comment in the CPG.</p> <p>9. The guideline was submitted to a guideline review group.</p>	<p>4. limited by being a Phd project.</p> <p>6. Only a recommendation that it should be updated . How is not explained.</p> <p>8. The recommendation made for updating the guideline is realistic and relevant . As this is done for a qualification awarding degree purpose , I suggest that the updating of the guideline be considered for post-doctoral work.</p>	

						care is explicit in recommendations 3 and 6.		9. Stated every three years, no procedure provided.	
						8. See the comments made in the CPG.			
						9. Clearly stated.			

Domain 4: Clarity of presentation

Appraiser/Item	Item 15	Item 16	Item 17	Total
Appraiser 1	6	7	7	20
Appraiser 2	6	6	5	17
Appraiser 3	7	7	7	21
Appraiser 4	4	1	6	11
Appraiser 5	4	6	5	15
Appraiser 6	6	1	7	14
Appraiser 7	7	7	7	21
Appraiser 8	6	5	6	17
Appraiser 9	7	7	7	21
Appraiser 10				
Total	53	47	57	157
Score				80.2%
Comments	4. it is difficult to be unambiguous in recommendations associated with handover practice. so I think they are as clear as they can be as they are targeted at two distinct professional groups. 8. The recommendations are clear and specific. 9. Clear	4. not relevant 6. I am not sure that this question applies to this study. 8. The non-applicability for this item mentioned. 9. Mentioned that it is not applicable for the guideline.	8. The recommendations are presented in boxes. For the final guideline, using color might add to the visibility and user friendliness of the CPG.	

Domain 5: Applicability

Appraiser/Item	Item 18	Item 19	Item 20	Item 21	Total
Appraiser 1	6	7	7	2	22
Appraiser 2	6	4	3	4	17
Appraiser 3	7	7	7	7	28
Appraiser 4	5	5	3	3	16
Appraiser 5	5	5	5	6	21
Appraiser 6	5	4	6	2	17
Appraiser 7	7	7	7	1	22
Appraiser 8	5	5	5	5	20
Appraiser 9	6	7	7	7	27
Appraiser 10					
Total	52	51	50	37	190
Score					71.2%
Comments	<p>4.these tend to be integrated in the text - might be better to separate them out and name them as facilitators and barriers explicitly.</p> <p>6.Not in detail. More research needed to find more barriers is what the author suggests. Maybe give an example or 2 of a barrier.</p> <p>8. See the suggestions on the CPG for this section.</p> <p>9. Briefly described.</p>	<p>2.How will this tool be implemented in operational areas. Mention is made to educators and managers, but operational staff in both areas may be missed if only new graduates or trainees will be trained in the CPG.</p> <p>4.an algorithm will be provided and reference to education is made. I think the implementation process could be more clearly addressed.</p> <p>6.Not enough advice. The use of mnemonics is mentioned, but it is left to the ED to figure out how to do this.</p> <p>8. Additional information regarding the algorithm</p>	<p>2.See above. Curriculum creep may be an unintended purpose of implementation.</p> <p>4.it is considered but needs further research to be properly addressed.</p> <p>8. Suggest that brief examples of the potential costs considered is included under this section.</p> <p>9. Was considered but can only be established with implementation.</p>	<p>2.Not clear.</p> <p>4.also an issue for implementation consideration.</p> <p>6. It is not included in this part of the research. Mentioned that it will be done in the post doctoral and mentioned that it should be monitored. How is not clear.</p> <p>7. The guideline does mention implementation considerations, but it does not explicitly specify detailed monitoring and auditing criteria. The guideline provides recommendations and considerations for implementing person-centered handover practices but does not include specific metrics, indicators, or performance measures for monitoring and auditing the implementation of</p>	

		<p>might be beneficial to add - see the comments in the CPG.</p> <p>9. Mentioned that the final guideline will have an algorithm for ease of application.</p>		<p>these recommendations.</p> <p>8. See suggestion on the CPG document.</p> <p>9. Mentioned that this did not form part of the guideline development process.</p>	
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Domain 6: Editorial independence

Appraiser/Item	Item 22	Item 23	Total
Appraiser 1	7	7	14
Appraiser 2	6	6	12
Appraiser 3	7	7	14
Appraiser 4	7	7	14
Appraiser 5	6	5	11
Appraiser 6	6	Not sure that I saw it. Can therefore not score it.	6
Appraiser 7	7	7	14
Appraiser 8	6	6	12
Appraiser 9	7	7	14
Appraiser 10			
Total	59	52	111
Score			86.1%
Comments	<p>8. Explicitly stated.</p> <p>9. clearly stated</p>	<p>8. Indicated as per the scope of the guideline.</p> <p>9. has been declared</p>	

Overall Guideline Assessment

Appraiser	Score
Appraiser 1	6
Appraiser 2	5
Appraiser 3	7
Appraiser 4	5
Appraiser 5	6
Appraiser 6	6
Appraiser 7	6
Appraiser 8	5
Appraiser 9	?
Appraiser 10	

Guideline recommendation

Appraiser	Yes	Yes, with modifications	No
Appraiser 1	√		
Appraiser 2		√	
Appraiser 3	√		
Appraiser 4		√	
Appraiser 5	√		
Appraiser 6		√	
Appraiser 7		√	
Appraiser 8		√	
Appraiser 9	√		
Appraiser 10			

Additional comments

Appraiser	Comment
Appraiser 1	Although eluded to in the introduction of your draft guideline, it might be useful to just define the term "emergency care practitioner" better to explicitly include all levels of pre-hospital/emergency care personnel. Emergency Care Practitioner in the everyday sense refers to a specific subset pre-hospital cadre (i.e. 4-year degree paramedics that register on the ECP Register). It might be confusing to people whom have glanced over your introduction and might then regard this guideline as exclusionary and/or only focused on ECP's (i.e. a small subset of prehospital personnel).
Appraiser 2	The suggested guideline includes recommended information already mentioned in most literature and included in training at HEI in emergency care programmes. Pneumonics like AMPLE, DECAPBTLs and AIMED AT ITCH are commonly used. It is felt that one of the big barriers for missing information during handovers are more linked to unprofessionalism and professions not understanding each others' working environments.
Appraiser 3	Very complete. Nothing to add.
Appraiser 4	Overall I think you have done a great job in developing this work. My biggest concern pertains to the person-centred focus of the work as I struggle to see the explicit focus on person-centredness. The p-c literature used is limited and specific to ED contexts which we know is very under-developed. why not draw more heavily on person-centred literature more generally? also you do not define anywhere what you mean by person-centredness and person-centred handover. I would expect those to be clearly defined in the introduction and based on evidence. It is impossible to assess the person-centredness of these guidelines in terms of their person-centredness without a 'benchmark' of a clearly defined concept of person-centred handover. This issue follows through in the recommendations that are person-centred specific (R3 and R6) where little or no reference to person-centredness and p-c evidence is made. These are two significant issues for me that need to be addressed if these guidelines are to be accepted as truly person-centred in nature. Good luck with the final stages of the work and I look forward to seeing some great implementation studies emerging from it.
Appraiser 5	None.
Appraiser 6	I think that the guidelines are spot on. The only problem I can see is that they are not very specific when it comes to implementation, which will make it difficult to implement in practice as is. Maybe after these guidelines have been tested and audited, more specific guidelines will follow. I will keep my eyes open for that post doctoral where this can happen.
Appraiser 7	It seems to me that the clinical practice guideline has provided a clear and transparent description of its methodology, criteria for evidence selection, the strength and limitations of the evidence, and the methods used for formulating recommendations.

	<p>The guideline does mention implementation considerations, but it does not explicitly specify detailed monitoring and auditing criteria. The guideline provides recommendations and considerations for implementing person-centered handover practices but does not include specific metrics, indicators, or performance measures for monitoring and auditing the implementation of these recommendations.</p> <p>Consider the use of a memorable and concise acronym to help healthcare professionals easily recall and apply the key implementation considerations from the guideline. This can enhance the guideline's usability and promote consistent adherence to the recommendations.</p> <p>Summary or Key Points: Consider adding a summary section at the beginning of the document that highlights the key recommendations and implementation considerations. This can provide a quick overview for busy healthcare professionals.</p> <p>Visual Aids: Incorporate tables, flowcharts, or diagrams to visually represent complex information, such as the components of handover or the implementation process. Visual aids can enhance understanding.</p>
Appraiser 8	It is suggested that the modifications as suggested be considered in the final guideline. The methodological rigor can be strengthened by adding the detail as requested. The overall guideline adheres to the aspects assessed.
Appraiser 9	
Appraiser 10	

Final Score

Maximum possible score = 7 (strongly agree) x 3 (items) x 4 (appraisers) = 84

Minimum possible score = 1 (strongly disagree) x 3 (items) x 4 (appraisers) = 12

The scaled domain score will be:

$$\frac{\text{Obtained score} - \text{Minimum possible score}}{\text{Maximum possible score} - \text{Minimum possible score}}$$

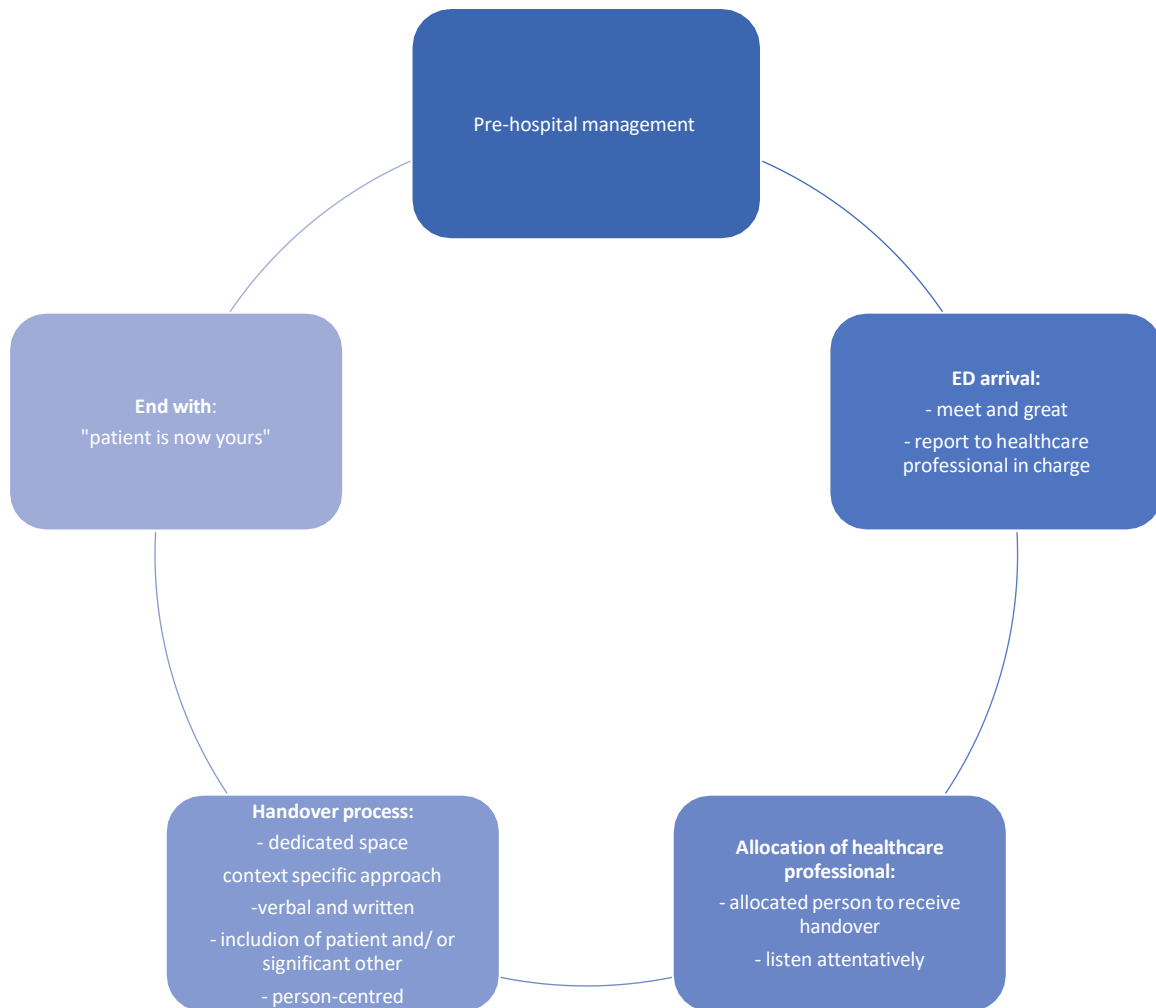
$$\frac{53 - 12}{84 - 12} \times 100 = \frac{41}{72} \times 100 = 0.5694 \times 100 = 57 \%$$

$$84 - 12 = 72$$

Annexure F 3

Algorithm of clinical practice guidelines for person-centred handover practices

Algorithm of clinical practice guideline for person-centred handover practices



Annexure G 1

Declaration from the editor

53 Glover Avenue
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0157 Centurion

16 December 2023

TO WHOM IT MAY CONCERN

I hereby certify that I have edited Santel de Lange's doctoral dissertation,
**Development of clinical practice guidelines for person-centred handover
practices in the emergency department**, for language.

lauma M Cooper
192-290-4

Mobile: 073 782 3923

Annexure H 1

JBI training certificate



JOANNA BRIGGS INSTITUTE

I hereby certify that

**Santel
de Lange**

attended

**Comprehensive Systematic Review
Training Program**

Module 1: Introduction to Evidence-Based Healthcare
and the Systematic Review of Evidence

Module 2: Conducting Systematic Reviews of
Quantitative Evidence

Module 3: Conducting Systematic Reviews of
Qualitative Evidence and Text and Opinion

**Remote attendance
South Africa**

between

25 August 2020 – 2 September 2020



Professor Zoe Jordan, PhD
Executive Director
Joanna Briggs Institute

Certificate