Exploration of a nursing role in emergency department waiting rooms

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CERTIFICATE OF ORIGINAL AUTHORSHIP

I, Kelli Innes, declare that this thesis is submitted in fulfilment of the requirements for the award of Doctor of Philosophy, in the Faculty of Health at the University of Technology Sydney. This thesis is wholly my own work unless otherwise referenced or acknowledged.

In addition, I certify that all information sources and literature used are indicated in the thesis. This document has not been submitted for qualifications at any other academic institution. This research is supported by the Australian Government Research Training Program.

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LIST OF ABBREVIATIONS

ACEM	Australasian College of Emergency Medicine
ATS	Australasian Triage Scale
CASP	Critical Appraisal Skills Programme
CENA	College of Emergency Nursing Australasia
CIN	Clinical Initiative Nurse
DNW	Did not wait
ECG	Electrocardiograph
ED	Emergency Department
EN	Enrolled Nurse
HREC	Human Research Ethics Committee
IV	Intravenous
KPI	Key Performance Indicator
LOS	Length of Stay
LWBS	Left without being seen
MDRNSTAT	Physician [MD]-Nurse [RN] Supplementary Team
NEAT	National Emergency Access Target
NMBA	Nursing and Midwifery Board of Australia
NSW	New South Wales
NUM	Nurse Unit Manager
NTS	National Triage Scale
RITZ	Rapid Intervention and Treatment Zone
RN	Registered Nurse
WR	Waiting room
WRN	Waiting Room Nurse

ANTHOLOGY OF PUBLICATIONS

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LIST OF CONFERENCE PRESENTATIONS

2018 Oral presentation – Waiting Room Nurse roles in the emergency department: Current practice and praxis content, Sigma Theta Tau International 29th International Nursing Research Congress, Melbourne.

2016 Oral presentation – The why and how of introducing a waiting room nurse role into the emergency department, 14th International Conference for Emergency Nurse, Alice Springs.

2016 Poster presentation – The introduction of an emergency department waiting room nurse role: findings from key informants, 2nd Global Conference on Emergency Nursing & Trauma Care, Sitges Spain.

2014 Poster presentation – Patient care in the emergency department waiting room: a literature review, National Nursing Forum 2014, Adelaide.

ABSTRACT

The waiting room nurse role was introduced into emergency department waiting rooms in response to increased waiting times, poor patient outcomes and failure to meet key performance indicators. The aim of role was to decrease waiting times, reassess patients and improve communication. There is a paucity of literature relating to the role. The aim of the research was to explore nurses perception of the implementation of a nurse allocated to care for patients in emergency department waiting rooms.

An exploratory sequential mixed-methods design was used. In Phase 1, data exploring factors contributing to the development of the role were collected from key informant (n=6) through semi-structured interviews. In Phase 2 waiting room nurses (n=8) from a major metropolitan and regional hospital in Victoria (Australia) were observed in clinical practice over 13 periods of observation. Phase 3 surveyed members of the College of Emergency Nursing Australasia, the peak professional body, on the implementation of the role across Australia and their perception of the role. There was a total of 197 survey responses.

The key findings of the research were that nurses perceived the role contributed to care quality and patient safety in the waiting room. Waiting Room Nurses developed therapeutic relationships to deliver holistic patient-centred care and facilitated the flow of patients out the waiting room. Variations in preparation, experience and supporting policy were found. A number of challenges including role confusion, funding issues and high exposure to occupational stressors were noted.

Integration of the results identified the characteristics and attributes of nurses performing the role, along with the organisational resources required. The activities of the WRN were found to be assessment, secondary triage interventions, communication and facilitating patient flow. Finally, expediting care, patient advocacy, therapeutic relationships, de-escalation, empowerment, improving care quality and safety and deliver of patient-centred care were identified as outcomes of the role.

A standardised approach, with considerations for local priorities and work practices, to the preparation, education and supporting policies is required. In addition, policy relating to high exposure of WRNs to occupational stressors is necessary. Further research into the role is essential, including exploring patient outcomes and experiences of the role.

CHAPTER ONE – RESEARCH PROBLEM

1.1 Introduction

Emergency departments (EDs) face many challenges as demand for their services increases both nationally and internationally. Allocated resources have not kept pace with issues such as increasing patient presentations, resulting in overcrowding and access block (Harris & Sharma 2010). Overcrowding leads to increased waiting times and length of stay in the emergency department (ED) (Lowthian et al. 2011), patients leaving without being seen (Vieth & Rhodes 2006), and a risk of poor outcomes due to deterioration in patients' clinical conditions while waiting (Blank et al. 2007). The overall patient experience is also negatively impacted, with patient dissatisfaction (Gilboy & Tanabe 2008) and episodes of violence and aggression due to patients and relatives becoming distressed or anxious based on perceptions of their waiting experience (Pich et al. 2011).

Several initiatives to improve patient care and flow through the ED have been implemented (Crawford et al. 2014). Initiatives specific to nurses included expanding the scope of the triage role (Gerdtz & Bucknall 2000), introduction of advanced practice nursing roles (Considine et al. 2006), and nurse-initiated interventions (Kocher et al. 2012). Other, broader initiatives included a policy directive of a maximum four-hour time limit from triage to discharge (Department of Health State Government Victoria 2011); fast track, whereby patients with low acuity illness or injury are streamed to a separate area of the ED to prevent them queuing behind those with higher acuity presentations who are prioritised first (Combs, Chapman & Bushby 2006; Gill et al. 2018); rapid assessment and care coordination teams (Bird, Noronha & Sinnott 2010; Eller 2009); short stay units (Konnyu et al. 2012), and improved flow and care of patients in waiting rooms (Fry & Jones 2005).

One initiative to improve patient flow and care was the introduction of a nurse specifically allocated to care for patients and families in ED waiting rooms, decrease waiting times and increase patient satisfaction by commencing interventions early, reassess waiting patients, and improve communication between the presenting patient, family and clinical staff (Considine et al. 2012; Fry et al. 2012) .

1.2 Background

1.2.1 Nursing in the Australian context

Australia has a three-tiered nursing workforce: Registered Nurses (RNs), Enrolled Nurses (ENs) and Nurse Practitioners (NPs). RNs have completed, on average, a three-year Bachelor degree, while ENs have completed either a 12-month Certificate IV or 18-month Diploma, generally in the Vocational Education and Training sector. Graduates. The final tier, NPs, are RNs who have a minimum three years full-time clinical experience at an advanced practice level in their area of speciality and have completed a Nursing and Midwifery Board of Australia (NMBA) approved program leading to endorsement. NMBA is the regulatory body that registers all nurses to practice in Australia (Nursing and Midwifery Board of Australia 2016c) (Health Workforce Australia 2014). In 2017, there were approximately 289,00 RNs and 62,000 ENs registered in Australia (Australian Institute of Health and Welfare 2018).

The NMBA determines standards of practice for nurses. RNs undertake comprehensive assessments, determine and implement patient care and evaluate outcomes. They work both independently and within an interdisciplinary team while being accountable and responsible for their own actions. In addition, RNs supervise and delegate care to ENs and other members of the health care team (Health Workforce Australia 2014; Nursing and Midwifery Board of Australia 2016b). ENs, also accountable and responsible for their own actions, provide clinically focused care, delegated by and

under the supervision of RNs (Health Workforce Australia 2014; Nursing and Midwifery Board of Australia 2016a).

Working conditions for nurses and midwives in Australia vary between jurisdictions, predominantly based on enterprise bargaining agreements. This is the good faith negotiation between employers, employees and their representatives to establish minimum terms and working conditions for nurses (Fair Work Ombudsman 2018). In Australia, enterprise agreements, particularly in the public health system, cover employment conditions, wages, allowances, hours of work, leave entitlements, education and professional development, classifications and staffing, occupational health and safety and dispute resolution (Fair Work Ombudsman 2018). Enterprise agreements also interact with relevant legislation specific to each jurisdiction, meaning that they vary from state to state and sector to sector. An example in Victoria (Australia) is the Nurses and Midwives (Victorian Public Sector) (Single Interest Employers) Enterprise Agreement 2016-2020. This enterprise agreement incorporates the Safe Patient Care Act 2015 which outlines the minimum staffing levels, or the ratio of nurses and midwives to patients, across a range of clinical settings in the public health care sector (Department of Health State Government Victoria 2016). In the emergency setting this results in large, busy metropolitan public hospital EDs needing to meet minimum patient ratios of one nurse in charge, one triage nurse and one nurse for every three beds, with two triage nurses required on an afternoon shift (Department of Health and Human Services State Government of Victoria 2015). Waiting rooms, though, are explicitly excluded from these minimum ratios (Department of Health and Human Services State Government of Victoria 2015).

1.2.2 Overview of the Australian health care system

The Australian health care system is comprised of public and private providers with an expenditure in 2011-12 of approximately $140.2 billion. The majority of funding was provided by the Federal Government (42.2%), followed by state and local

governments (27.3%), patients (17%), private health insurers (8%) and compensation schemes (5%) (Australian Institute of Health and Welfare 2016). Although the majority of funding is from the Federal Government, the State and Territory governments administer the health care system (Australian Institute of Health and Welfare 2016).

Federal Government funding incorporates a universal public insurance scheme, Medicare. The aim of Medicare is to ensure adequate and affordable health care to the population. Medicare therefore provides free or subsidised health care to all Australian citizens who present to public hospitals through the Australian Care Agreements with State and Territory governments (Australian Institute of Health and Welfare 2019; Parliament of Australia 2004), general practitioners, specialists and optometrists irrespective of their income or personal circumstances (Australian Institute of Health and Welfare 2016; Parliament of Australia 2004). Various medications are also subsidised through the Pharmaceutical Benefits Scheme (Australian Institute of Health and Welfare 2016).

The Australian health care system is comprised of three levels. Most patients initially engage the health care system at the primary level. Primary health care incorporates care outside of hospitals including general practitioners, pharmacists and allied health professionals. From the primary health care level, patients are referred to secondary care for specialist assessment or investigations. The final level is hospitals. In 2012-13, 38.2% of the Australian health expenditure was spent on 1 345 public and private hospitals with a total of 9.3 million hospitalisations (Australian Institute of Health and Welfare 2016).

1.2.3 Emergency care

A crucial component of hospital services is emergency care. EDs were established in the early 1970s, originally acting as an after hour's entry point for patients to hospitals. Ward nurses met patients, directing them to an area to wait for their doctor,

or were staffed on a needs-only basis. With increasing demand, improved resuscitation techniques and advancing technology it was identified that emergency care needed to expand and deliver a specialty service within the hospital system (Fry 2016; McKay 1999). This is still evident today, with 12% of ED presentations being patients who require resuscitation or immediate care (Australian Institute of Health and Welfare 2015).

Emergency care is accessible to the entire population, encompassing all age groups with differing cultural and socioeconomic backgrounds. The care is episodic, unplanned and required on demand, and is often undertaken in a chaotic, noisy environment in front of distressed relatives. Urgent care is delivered to patients with a variety of illness or injury, varying in severity from minor to critically unwell. Management can be complicated and changing, ranging from primary health care through to advanced life support (Australasian College of Emergency Medicine 2012; College of Emergency Nursing Australasia 2013; Schriver et al. 2003) .

EDs are a dedicated area of a hospital that, in general, provide 24 hours seven days a week nursing and medical services (Australasian College of Emergency Medicine 2012). EDs are categorised based on the level of services provided, ranging from Level 1 (providing a minimum level of service in a remote or rural setting) through to Level 4 (part of a large tertiary referral hospital capable of managing a large range of complex conditions and the ability to provide support to lower level EDs) (Australasian College of Emergency Medicine 2012). Due to the unlimited number of patients presenting, EDs need to have the ability to respond to surges in demand (Australian Institute of Health and Welfare 2015; Redfern, Brown & Vincent 2009; Schriver et al. 2003).

To be able to meet the varying health care needs of presenting patients, there are similarities in the clinical environment of most EDs. The main treatment areas of EDs are commonly comprised of a resuscitation and acute areas which are resourced to care for both adult and paediatric patients (Fry 2016). The resuscitation area has sufficient space to house equipment and large teams working collaboratively to care for the

critically unwell and those with life threatening conditions. In the acute area, patients with urgent conditions who have the potential to deteriorate can be closely observed, including continuous vital signs, invasive and cardiac monitoring (Fry 2016). Fast track is another treatment area in EDs, where low acuity patients with minor illness or injury are streamed for management (Fry 2016).

Australian EDs are under increasing demands and pressures from the growing (Lowthian, Curtis, et al. 2012; NSW Government 2007) and aging population with increased morbidity and complexity of care (Fatovich & Hirsch 2003; Hwang et al. 2013; NSW Government 2007; Productivity Commission 2005). In 2016-17, there were 7.8 million presentations to Australian public hospital EDs, an average increase of 2.6% per year since 2010-11. Of these presentations, 11% were children less than four years of age and 21% were 65 years and over. In regards to waiting times, 72% of patient presentations spent four or less hours in the ED, 31% were admitted to in-patient hospital beds, and 73% of patients were seen within the clinically relevant time (discussed below in Section 1.2.5 of this chapter) (Australian Institute of Health and Welfare 2016).

These increasing demands and pressures can result in EDs becoming overcrowded. Overcrowding transpires when the number and acuity of patients exceeds the resources available, impeding function and contributing to delays (College of Emergency Nursing Australasia 2018). Access block and surge contribute to overcrowding. Surge is a sudden increase in demand for emergency care services where reasonable standards of care cannot be maintained (College of Emergency Nursing Australasia 2018). Access block is a lack of capacity within the hospital, leading to a delay (generally defined as greater than eight hours) for ED patients to access an inpatient bed (Richardson 2002; Richardson & Mountain 2009). Overcrowding and access block have been shown to contribute to delays in resuscitation (Hong et al. 2013) and administration of antibiotics and analgesia (Pines et al. 2007; Sikka et al. 2010), resulting in increased length of stay and mortality (Richardson 2006; Sprivulis et al. 2006).

The ED is a challenging and stressful environment for patients and families, who have reported being stressed, distressed and anxious, and described a sense of uncertainty and vulnerability when in this setting (Hermann, Long & Trotta 2019; Kamali et al. 2013; Luck, Jackson & Usher 2009; Philip et al. 2018). In addition, patients and families recounted feeling threatened, frightened and unsafe when waiting with others (Kamali et al. 2013; Welch 2010). ED processes and procedures have been labelled as daunting and difficult to understand and follow (Cashin et al. 2007; Philip et al. 2018), including policies relating to not being seen in order of arrival and the multiple points of waiting in the system. The ED has been described as busy, noisy and chaotic (Welch 2010), as lacking privacy, comfort (Kamali et al. 2013; Lovato et al. 2012) and cleanliness (Enns & Sawatzky 2016), and as having accessibility issues relating to toilets and refreshments (Enns & Sawatzky 2016).

Over the last two decades a number of strategies have been implemented in Australian EDs to address overcrowding, access block and poor patient experiences. Decreasing the length of time patients were in the ED was the aim of a number of the initiatives. These initiatives included the National Emergency Access Target (NEAT), designed to limit patient time in the ED to four hours (discussed further in section1.3.1) (Australian Institute of Health and Welfare 2014; Crawford et al. 2014), and allied health and nursing teams who identified high-risk patients for discharge. These teams' co-ordinated hospital and community services to facilitate the timely, safe discharge, of patients with the ultimate aim of reducing representation rates (Bird, Noronha & Sinnott 2010; Crawford et al. 2014). Finally, short stay units, co-located in EDs, were utilised for patients who required greater than four hours of monitoring or interventions but were not anticipated to require hospital admission (Crawford et al. 2014; Konnyu et al. 2012).

Patient flow through the ED was also impacted by other initiatives. Patient streaming, also referred to as fast track, resulted in patients with minor injury or illness being seen in a separate area of the ED (Crawford et al. 2014; Oredsson et al. 2011),

while rapid assessment teams, comprising medical and nursing staff, performed an assessment of the patient while in the waiting room resulting in interventions being commenced early and directing patients to the most appropriate point of care in the ED based on disposition (Crawford et al. 2014; Shetty et al. 2012).

Lastly, WRNs and nurse-initiated interventions were introduced to decrease length of stay in the ED. In summary the WRN commenced interventions early, reassessed patients and improved communication with those in the waiting room (Considine et al. 2012; Fry et al. 2012). The WRN role discussed further in section 1.2.8. Nurse-initiated interventions, discussed in 1.3.2, allowed for nurses to commence interventions prior to patients being seen by the medical officer (Crawford et al. 2014; Sturesson et al. 2018).

1.2.4 Emergency medicine

The emergence of emergency medicine as a specialty influenced also the development of emergency care. Prior to 1981, there was a collection of state based groups and organisations representing emergency medicine. Formation of The Australian Society for Emergency Medicine, in 1981, saw the first national body established. Two years later saw the Australian College of Emergency Medicine (ACEM) launched, with the aim of establishing and advancing emergency medicine as a recognised specialty. As the peak national body for Australia and New Zealand, ACEM develops and promotes professional standards of practice for emergency medical care and provides a formal training and examination programme. As part of their education, trainees must complete training in paediatrics and either anaesthetics or intensive care (Australasian College for Emergency Medicine 2018).

Now an established medical speciality, emergency medicine is based on the knowledge and skills required to provide care for acutely unwell and injured patients, often with urgent care needs, across the life span (International Federation for Emergency Medicine 2019). Working primarily within EDs of private and public hospitals,

emergency physicians can also be found in clinics and aeromedical organisations. Emergency physicians are required to work collaboratively with other health care practitioners, including nurses, physiotherapists and radiologists, as well as external parties such as paramedics and police (Australasian College for Emergency Medicine 2019).

1.2.5 Emergency nursing

Along with emergency care and emergency medicine, emergency nursing has evolved over the last four decades after it was identified that all staff allocated to the ED (including nurses) needed to be highly trained clinical experts with specific skills and in-depth knowledge to meet the emergency health care needs of the population (College of Emergency Nursing Australasia 2015a). A complex and specialised field, emergency nursing is undertaken in a unique environment distinct from other settings in the hospital (Fry 2016). In 2006, emergency care was identified as a nursing specialty in the National Specialisation Framework for Nursing and Midwifery (National Nursing and Nursing Education Taskforce 2006), and is supported internationally by a number of associations. These associations promote the speciality of emergency nursing through policy development and identification of role performance (Fry 2008; Fry 2016). In Australia, the College of Emergency Nursing Australasia (CENA) is the peak professional body representing emergency nurses. Among its work, CENA has developed practice standards for the emergency nursing specialist in Australia (College of Emergency Nursing Australasia 2013).

Emergency nurses incorporate professional development, practice, education and research to provide quality safe care in the ED. By integrating all available information, including theoretical knowledge, past experiences and patient information, emergency nurses prioritise, assess, diagnose, manage and reassess patients in the ED (Fry 2008; Fry 2016). In terms of education, CENA recommends that emergency nurses

are educated to a minimum of a Graduate Certificate level for the specialty (College of Emergency Nursing Australasia 2015a).

Needing to be able to function in stressful and emotionally difficult situations (Nairn 2004) whilst encountering unpredictable workloads and multiple interruptions during care provision (Coughlan et al. 2017), emergency nurses are required to make sound, accurate judgements based on rapid assessment of patients (Nairn 2004). The ED environment requires emergency nurses to be dynamic and adaptive to promptly respond to changing patient's condition or the unpredictable nature of the ED (McCracken 1999; Valdez 2009).

Generally, as the first to see and interact with patients, emergency nurses need to develop therapeutic relationships over a short period of time with patients and relatives who themselves are often anxious and distressed due to their presentation (Luck, Jackson & Usher 2009). This is often made more challenging by patients' varying cultural, socioeconomic and psychological backgrounds (Fry 2016). Additionally, emergency nurses need to be able to work collaboratively with a range of disciplines in the ED, in particular with medical teams (McCracken 1999; Olde Bekkink, Farrell & Takayesu 2018).

Quick and accurate patient assessment is a fundamental element of emergency nursing practice (Considine & Currey 2015). Assessment, including reassessment, occurs throughout a patient's time in the ED and involves planning and evaluation (Curtis et al. 2009). Emergency nurses use the systematic approach of a primary survey to rapidly identify actual or potential life threatening conditions associated with a patients airway, breathing, circulation and disability (Considine & Currey 2015; Curtis et al. 2009). Utilising a primary survey has been linked to improving patient safety, as the framework guides the clinician on the priority of data collection and interpretation relevant to the potential for clinical deterioration (Considine & Currey 2015). A body systems approach or focused assessment guided by the patients' presenting complaint follows the primary survey (Considine & Currey 2015; Curtis et al. 2009). Vital sign assessment, a part of

patient assessment, is a core emergency nursing responsibility (Considine & Currey 2015; Munroe et al. 2016). Vital sign assessment includes temperature, heart rate, respiratory rate, oxygen saturations, blood pressure and conscious state (Considine & Currey 2015). Frequency of assessment is generally determined by the emergency nurse (Considine, Jones & Bellomo 2013).

1.2.6 Triage

Triage is a critical initial process in emergency care. Being the single entry point to the ED, with potentially any number of patients arriving simultaneously, triage is undertaken in an uncertain and changing environment. Triage is performed by experienced emergency nursers who have received specialised education (Department of Health and Ageing 2007).

Triage is the process where all patients presenting to an ED are assessed for clinical urgency, and care prioritised according to actual or potential severity of illness or injury (Australasian College of Emergency Medicine 2016a). Patients are allocated a category reflecting their urgency of care and resources required to manage their condition. Distribution of resources, including allocation of an appropriate treatment area, is also often determined by the triage nurse (College of Emergency Nursing Australasia 2015b; Department of Health and Ageing 2007).

The first triage scale in Australia, the Box Hill Triage Scale, was developed by an emergency nurse in 1977 (Pink 1977). This three tier scale was then adapted by an emergency physician, Gerald Fitzgerald, to form the five tier Ipswich Triage Scale, which for the first time included a maximum waiting time (Jelinek 2001). Further work saw the Ipswich Triage Scale evolve into the National Triage Scale (NTS) in 1993. The NTS, also a five tier scale, based on acuity of illness, was formally implemented across Australian EDs by ACEM in 1994 (Australasian College for Emergency Medicine 1994; Jelinek & Little 1996). After a review by ACEM in 2000, the NTS became the Australasian Triage

Scale (ATS). The key difference between the NTS and the ATS is the presence of clinical descriptors indicating the severity of illness (Australasian College for Emergency Medicine 2001).

The ATS is utilised by the majority of Australian EDs use ATS to guide allocation of a triage category (Table 1.1). The ATS is a five-tier scale ranging from life threatening to non-urgent which includes levels of acuity (categories) and maximum waiting times based on identified severity of illness or injury. Clinical indicators have also been incorporated to assist emergency nurses to identify the urgency of care required (College of Emergency Nursing Australasia 2015a, 2015b). In Australia, in 2016-17, of the 7.8 million ED presentations 77% were allocated a triage Category 2 or Category 3 (Australian Institute of Health and Welfare 2016). Patients with higher acuity are prioritised.

The ATS has been shown to be a valid and reliable scale for differentiating clinical urgency of presenting patients (Ebrahimi et al. 2015; Forero & Nugus 2011; Fry 2016). This standardised approach contributes to patient safety and consistency with primary triage decisions. Applying the ATS promotes equity, whereby the same category is allocated for the same presentation irrespective of the ED the patient presents to. Secondly, application of the ATS ensures the sickest patients (Category 1 and 2) are identified and prioritised for assessment and management (Department of Health and Ageing 2007). This may result in patients assigned a lower acuity (Categories 3-5) being allocated to the waiting room, especially during periods of overcrowding. As previously discussed, overcrowding can lead to delays, transpiring as increased waiting times. This may result in patients in the waiting room potentially exceeding their maximum time as prescribed by the ATS (Table 1.1) (College of Emergency Nursing Australasia 2018).

Table 1.1 Australasian Triage Scale

Category	Response and maximum waiting times	Description of category	Examples of clinical indicators
Category 1	Immediate simultaneous assessment and treatment	Immediately life threatening	Cardiac or respiratory arrest Immediate risk to airway or extreme respiratory distress Blood pressure <80mmHg or severely shocked child/infant Unresponsive or responds to pain only
Category 2	Assessment and treatment start within 10 minutes (may be simultaneous)	Imminently life-threatening OR Important time-critical treatment OR Very severe pain	Airway risk or severe respiratory distress Circulatory compromise or chest pain (likely cardiac) Severe pain (any cause) Drowsy, decreased response (Glasgow Coma Scale <13)
Category 3	Assessment and treatment start within 30 minutes	Potentially life threatening OR Situational urgency OR Relief of severe discomfort/distress within 30 minutes	Circulation - severe hypertension, dehydration or moderate blood loss Moderate shortness of breath Immunocompromised patient with fever Head injury with loss of consciousness
Category 4	Assessment and treatment start within 60 minutes	Potentially serious OR Situational urgency OR Significant complexity or severity OR Relief of discomfort/distress within one hour	Mild haemorrhage Chest injury without rib pain or respiratory distress Vomiting or dehydration without dehydration Minor limb trauma or swollen “hot” joint Non-specific abdominal pain
Category 5	Assessment and treatment start within 120 minutes	Less urgent OR Clinico-administrative problems	Minimal pain with no high risk features; low risk conditions or history Minor wounds (not requiring suturing) Scheduled revisit or immunisations

(Australasian College for Emergency Medicine 2013)

The decision-making process at triage is complex and requires advanced cognitive processes. The triage nurse needs to establish the urgency of care, determine appropriate resources, initiate interventions, manage incidents and facilitate patient flow in the waiting room (Fry 2016). Decisions at triage are classified as either primary or secondary. Primary triage decisions relate to urgency of care and allocation of resources, while secondary triage decisions relate to expediting care such as administering analgesia (College of Emergency Nursing Australasia 2015b; Fry 2016).

The triage assessment, predominantly using a primary survey approach, should take no longer than five minutes to complete. Patients are assessed for any life-threatening conditions; general appearance, a focused history to identify presenting problem or chief complaint, potential clinical risk and any relevant physiological data are collected. Based on this information the patient's urgency of care is established and a triage category allocated (College of Emergency Nursing Australasia 2015a, 2015b).

1.2.7 Emergency department waiting room

The waiting room is an area provided for patients and families to wait for a cubicle or transport after discharge from the ED. The primary purpose of the ED waiting room is to observe patients for clinical deterioration and security reasons. The waiting room should be located adjacent to triage, reception, entrances (ambulance and walk in) and the clinical area of the ED (Australasian College of Emergency Medicine 2014). The Australasian College of Emergency Medicine (2014) recommends the waiting room provide facilities and access to:

- toilets;
- food and drink;
- adequate seating, lighting and temperature;
- communication (public phone)

- patient information (signage, brochures, indication of wait times)
- distraction and entertainment area (television, children's play area)
- those with disabilities;
- nappy change and feeding area;
- emergency call system
- drop off and pick up area.

A multitude of people utilise and interact within the waiting room, including, but not limited to, ED staff, multidisciplinary health care professionals from outside the ED, patients and families, administration staff, pre-hospital emergency care providers (ambulance and fire brigade), security personnel, and cleaners (Australasian College of Emergency Medicine 2014). This means the waiting room is utilised for multiple purposes. For example, waiting can be for care to commence, for updates on those already being treated and for further treatment plans; in addition, the waiting room can be utilised for handover, assessment, formal and informal conversations and education purposes. The multiple people and usage of the waiting room makes it a complex environment for all interacting in the space (Jenkins et al. 2011)

Patients are allocated to the waiting room if a cubicle is not available or not required in the ED after primary triage (Gerdtz & Bucknall 2000). Traditionally, a nurse is not allocated to care for patients in the waiting room, with the triage nurse being responsible for care of patients in this area (Cashin et al. 2007). For the majority of patients, care commences once they are allocated a space in the treatment area of the ED (Cashin et al. 2007; Fry et al. 2012). This, however, can conflict with public expectations that care and management would begin on arrival at triage (Garling 2008a).

Although primary triage is the priority for triage nurses, they are also responsible for secondary triage decisions and reassessments when caring for patients in the waiting room. Time permitting, the triage nurse may initiate interventions such as analgesia or

collecting pathology. In regards to reassessing patients, triage nurses are expected to reassess all patients in the waiting room once their allocated triage time has expired. For example, if a patient was allocated a Category 4 they should be reassessed after one hour (Australasian College of Emergency Medicine 2016a). The aim of this process is to identify if the patient's clinical condition has changed whilst they are waiting. If any change is identified, the triage nurse can re-triage the patient to reflect the urgency of their current clinical condition (Australasian College of Emergency Medicine 2016a; Department of Health and Ageing 2007).

Reassessment can however be challenging during busy periods. Unlike other areas of the ED, there are no limits on the number of patients allocated to the waiting room. Overcrowded waiting rooms, resulting in patients waiting longer, has major implications for both the triage nurse and patient safety. During busy times it is unrealistic to expect that the triage nurse could not only perform primary triage, but also reassess all patients in the waiting room (Cox 2011). If reassessments are delayed or not undertaken, there is potential for deterioration not being detected until the patient is critically unwell (Fry 2016).

1.2.8 Waiting room nurse

In response to challenges encountered by patients and families, over the last decade EDs have expanded care, with the allocation of a RN dedicated to care for those in the waiting room (Considine et al. 2012; Fry & Jones 2005; Fry et al. 2012). Key aims of the role are to decrease waiting times by commencing appropriate diagnostics and interventions early, monitor waiting persons for deterioration in clinical condition, enhance communication, and improve the overall experience for patients and families in the ED. Waiting room nurses (WRNs) are viewed as an adjunct to triage, allowing for secondary triage interventions to be commenced (Considine et al. 2012; Fry et al. 2012).

The extent of implementation of waiting room nurse (WRN) roles in Australia is however unclear. Evidence from grey literature notes implementation of the role in several Victorian EDs; e.g. Peninsula Health (Fox 2014), Royal Melbourne, Southern Health [now Monash Health] (Stark 2011), Ballarat Base Hospital (Ballarat Health Services 2014) and The Northern Hospital (Gorman et al. 2011).

One model, titled Clinical Initiative Nurse (CIN), was first introduced into major New South Wales (NSW) EDs in 2002 (Fry & Jones 2005; NSW Government 2011a). In 2009, the CIN role was declared a vital position by The Special Commission of Inquiry into Acute Care Services (Garling 2008c). This led to a State Government review of the role, resulting in the role being expanded into all major NSW EDs (defined as those with 25 000+ patient presentations per year) in 2010 (NSW Government 2011a).

A CIN Educational Program was developed to implement this state-wide approach (NSW Government 2010). Comprising a series of manuals (CIN Resource Manual, Participants Manual, Facilitator Manual and Role Description), the aim of the education program is to guide EDs and prepare nurses for working in the role by expanding experienced emergency nurses' skills and knowledge to allow them to confidently care for patients in the waiting room. The program provides:

- background information
- overview and purpose of the role
- resources required for implementation
- the role as part of the ED team
- accountabilities
- expected outcomes
- experience, and
- knowledge.

Completion of the program results in nurses being accredited as a CIN nurse. The program encompasses 13 modules including communication, management of the

waiting room, pain management, musculoskeletal assessment, wound care and management of specific presentations such as mental health, paediatrics, pregnancy and geriatrics. There are clear requirements for assessment and documentation process with nurses needing to achieve or demonstrate a set of skills and knowledge to complete the course:

- read and complete learning activities relating to 13 modules in the program;
- attendance and participation in face to face education sessions;
- pass a written exam on pain pathophysiology and assessment;
- being assessed as being competent in musculoskeletal assessments;
- being assessed as being competent in abdominal assessments;
- being assessed as being competent in wound assessment and initial management; and
- being assessed as being effective in communication in the waiting room (NSW Department of Health 2011; NSW Government 2011a, 2011b).

1.2.9 Patient-centred and person-centred care

Key to WRNs achieving the aims of the role, which as discussed above are to decrease waiting times, assess for deterioration, improve communication and improve experiences, is implementation of patient-centred care. Patient-centred care is fundamental to delivering safe, quality care and has become a priority for health care globally (Mead & Bower 2000). Patient-centred care has evolved from the traditional, paternalistic, biomedical model approach to health to the recognition of the need to collaborate with individuals to plan and deliver personalised care (Australian Commission on Safety and Quality in Health Care 2010; Institute of Medicine 2001; World Health Organization 2007).

The benefits of patient-centred care for all involved have been clearly established. Patients have reported improved health outcomes and increased satisfaction through enhanced communication and appropriate interventions (Jayadevappa & Chhatre 2011; Stewart et al. 2000). Health care providers have been more satisfied with the care they deliver, while organisations have reported improved efficacy and efficiencies in the system (Stewart et al. 2000).

In the hospital setting, the framework by the Picker Institute and Harvard Medical School underpins most contemporary definitions and interpretation of patient-centred care. This framework was the first to clearly identify and define patients perspective, comprised of eight dimensions: patient preferences, emotional support, physical comfort, information and education, continuity and transition, coordination of care, access to care and family and friends (Gerteis et al. 1993). Mead & Bower (2000) developed a patient-centred medicine framework, which encompassed the dimensions of biophysical aspects, patient-as-person, sharing power and responsibility, therapeutic alliance and doctor-as-person. In a number of countries, concepts that drive policy development and implementation of patient-centred care in organisations have also been created (Adkinson & Chung 2014; Australian Commission on Safety and Quality in Health Care 2010; Canadian Medical Association 2008).

To enable stakeholders to work from the same framework, Scholl et al. (2014) developed an integrative model of patient-centred care (see Table 1.2). This model allows all health care providers to speak the same language, establishes a mechanism for creating and measuring interventions, and can inform policy development.

In developing this model, the authors acknowledged that the 15 dimensions are interrelated and dependent on each other to implement patient-centred care (Scholl et al. 2014). The ‘Fundamental Principles’ underpin patient-centred care; the range of ‘Activities’ allow the principles to be enacted, and the ‘Enablers’ are useful to implement the activities (Scholl et al. (2014). Table 1.2 presents an overview of the Integrative Model of patient-centredness.

Table 1.2 Overview of Integrative Model of Patient-Centredness

Dimension	Description
Fundamental Principles	
Essential characteristics of the clinician	• Qualities health care workers should have e.g. respectful, empathetic, tolerant, honest, accountable, compassionate, commitment and ability to self-reflect on own emotional responses
Clinician-patient relationships	• Through collaboration build a partnership with patients' based on constancy, trust, connection, mutual caring and knowledge, positive rapport, guidance • Mutual understanding of roles and responsibilities
Patient as a unique person	• Incorporating each patient's needs, preferences, values, feelings, beliefs, concerns, ideas and expectations
Biopsychosocial perspectives	• Recognising patient as a whole and incorporating biological, psychological and social context to understand illness
Enablers	
Clinician-patient communication	• General communication skills including verbal and non-verbal
Integration of medical and non-medical care	• Showing sensitivity for non-medical and spiritual aspects of care
Teamwork and team building	• Building effective teams based on communication, trust, respect, mutually agreed goals and values, accountability, responsibility, identifying abilities and priorities,
Access to care	• Facilitating timely, appropriate and preferred access to care
Coordination and continuity of care	• Coordination of care with acute, subacute and primary care services which allows for continuity of care
Activities	
Patient information	• Reciprocal sharing of information and knowledge between health care providers and patients
Patient involvement in care	• Active involvement in care; encouraging patient participation and informed decisions
Involvement of family and friends	• Providing family and friends with information and involving them in decision-making
Patient empowerment	• Acknowledging and encouraging patients to self-manage and be responsible for their health care
Physical support	• Behaviours that ensure physical needs are met e.g. pain management, assistance with activities of daily living and ensuring safe care
Emotional support	• Recognition of emotional state and ensure emotional support provided

(Scholl et al. 2014)

Patient-centred care and person-centred care are often used interchangeably in the literature (Coyne, Holmström & Söderbäck 2018). Hughes, Bamford & May (2008) found that despite there being different types of centredness in health care, fundamentally they are underpinned by similar principles, and that the context or environment determines the actual centredness being implemented. Despite this, Starfield (2011) argues that there is a difference between patient-centred and person-centred care. Starfield (2011) found that patient-centred care is episodic and directed towards the disease process. There is a focus on communication and the quality of the interactions between patients and health care providers, with relationships built on shared understanding, emotional support, trust and empowering patients to make informed choices (Starfield 2011). In comparison, person-centred care focuses on the prevention and management of health care issues over an extended period of time, a long-term relationship, rather than one developed in a visit or episode. The underlying premise of person-centred care is that it is accessible, comprehensive and continuous, dealing with all patient issues and concerns, with a co-ordinated approach if multiple health care services are needed (Starfield 2011). Although communication is an important factor, a fundamental principle is patient knowledge is built over time, and mutual decisions are made between patients and health care providers (Starfield 2011).

Based on this discussion, in terms of the WRN, it could be argued that the ED environment, including the waiting room, is more closely aligned with the provision of patient-centred care, as care is generally episodic and primarily directed towards the presenting illness or injury. Relationships between ED staff, which includes the WRN, are built on communication and focused on understanding the presenting problem. Emotional support is also often limited to the current episode of care (Starfield 2011). Despite this, in the ED there should be consideration for the inclusion of person-centred care, in particular for those presenting with chronic illnesses. There is clear evidence that emergency care is being increasingly utilised by those with chronic illness, and as a result ED staff a playing a greater role in managing this complex cohort of patients (Fry

et al. 2018; Lowthian, Brand, et al. 2012; Mallitt et al. 2015). As patients with chronic illness are more likely to re-present (Lowthian, Brand, et al. 2012), relationships may develop over an extended period of time. ED staff could also be involved in developing and implementing care derived from a multidisciplinary approach and in collaboration with the patient, so that comprehensive and continuous care can be implemented for this cohort of patients (Starfield 2011).

1.3 Policies influencing practice

As with all health care, policies are used in EDs to ensure safe, quality, evidence based care is delivered (Australasian College of Emergency Medicine 2016b; Australian Commission on Safety and Quality in Health Care 2017). In relation to the WRN, three policies specifically influence the role - key performance indicators, standing orders and clinical pathways. These policies are discussed below.

1.3.1 Key performance indicators

Key performance indicators (KPIs) are used to determine performance in key areas of service delivery within an organisation. In health care, KPIs are used to evaluate activities, performance and standards of an organisation against predetermined outcomes, identifying areas of service that are meeting expected outcomes, and areas for improvement where outcomes are not being achieved. Overall, KPIs contribute to developing and maintaining safe, quality care (Taylor 2016; Wakai et al. 2013).

In regards to emergency care, current KPIs are timed-based targets and do not consider patient outcomes or experiences. KPIs broadly relate to: length of ED stay and time to treatment in the ED, including transfer time of patients from ambulance to ED; length of stay in ED within 24 hours; mental health patient length of stay within 24 hours; and patients treated within allocated triage time (Australian Institute of Health and Welfare 2014; NSW Government 2016; Victorian State Government 2015). A further KPI

is the National Emergency Access Target (NEAT), a performance measure of length of stay in the ED, which requires that 90% of patients be transferred, admitted or discharged within four hours of arrival at triage (Australian Institute of Health and Welfare 2014). Time from triage to treatment is measured against a patient's clinically relevant waiting time, as determined by the maximum waiting time linked to their triage category (Australasian College of Emergency Medicine 2016a). This KPI requires a percentage of patients within each category to be seen within the allocated category time; for example, 75% of Category 3 patients must be seen within 30 minutes (Table 1.1) (Sibbritt, Isbister & Walker 2006).

1.3.2 Standing orders and clinical pathways

WRN practice is often underpinned by standing orders or clinical pathways (Considine et al. 2012; Fry & Jones 2005). Standing orders, often referred to as nurse-initiated protocols, allow for the initiation of interventions and/or diagnostic investigations, according to pre-determined protocols, prior to patients being seen by a medical officer or Nurse Practitioner (Sturesson et al. 2018), for example administration of analgesia (Van Woerden et al. 2016) and ordering x-rays (Thompson et al. 2016). In comparison, clinical pathways ensure a uniform approach to management by integrating guidelines and protocols into a coordinated and sequenced plan of care for patients presenting with a variety of illnesses (van der Kolk et al. 2017).

1.4 Research aim

The overall aim of this thesis was to explore nurses perception of the implementation of a nurse allocated to care for patients in ED waiting rooms. The specific study objectives were to:

1. Explore the factors contributing to the development of the WRN role.
2. Identify the activities and behaviours of WRNs in ED settings.
3. Explore the implementation of the role in Australian EDs.
4. Identify emergency nurses' perceptions of the WRN role.
5. Integrate findings into the development of a Logic Model and framework for implementation of the WRN role.

1.5 Significance and scope of the study

There is a paucity of literature relating to WRNs. From the integrative review presented in Chapter Two, a gap in the knowledge on WRNs was identified. This research was designed to fill this gap and generate new knowledge on the role. The limited literature focused on the technical aspects of WRNs. Research to date has therefore not discussed the reasons for WRNs being implemented in EDs, nor has it presented an overall picture of the role in the clinical setting.

To address this gap, this study explores the implementation, activities, behaviours and emergency nurses' perspectives of WRNs in Australian EDs. Key informants and emergency nurses were considered to be experts able to inform the research aims, and were therefore the sample in the various phases of this research. The scope of this research was to explore organisational structures and processes. Patient perspectives were therefore outside this scope and were not explored.

1.7 Thesis structure

This thesis is presented in eight chapters. This Chapter provided context for the study, with a background discussion on nursing in the Australian context, overview of the Australian health care system, emergency care, emergency nursing, ED waiting rooms, WRNs and patient-centred care. The aims, objectives and significance of the study were also presented.

Chapter Two introduces the findings of an integrative review examining health care roles introduced into ED waiting rooms. The chapter is presented as a verbatim narrative of the published review, which includes an introduction and background. Following this is the review, which includes the aim, design, search method, search outcome, quality appraisal, data abstraction and synthesis. Finally the results, discussion and conclusion are presented.

In Chapter Three the methodology and overview of the thesis methods are outlined, including justification for using a mixed-methods exploratory sequential design. The selection and justification of methods is offered, along with the sample, setting, recruitment, data collection and data analysis relevant to each of the three study phases. This chapter concludes with a discussion on the integration of the data, trustworthiness and rigour. Ethical considerations and processes to gain ethics approval in each phase are also discussed.

The results of Phase 1, key informant interviews, are presented in Chapter Four. The chapter is the verbatim narrative from the published manuscript relating to this interview study. The chapter begins with the introduction, followed by the materials and methods and results. The chapter concludes with the discussion, study strengths and limitations, and conclusion.

Chapter Five presents the results of Phase 2 (observation in practice) of the research. The verbatim narrative from the published manuscript is presented in this

chapter. The chapter begins with an introduction and background. Methods, including design, study setting, sample and recruitment, data collection, data analyses and ethical considerations, follow. Finally the results, discussion and conclusion are presented.

Phase 3 (practice survey) findings are presented in Chapter Six. This chapter presents the verbatim narrative of the published manuscript, beginning with the introduction and background. Next, the methods are outlined, comprised of design, sample/participants, data collection and validity. Results, discussion and conclusion complete the chapter.

Findings from the three study phases are integrated in Chapter Seven using the Logic Model. Nurse characteristics and attributes, along with organisational resources required to support the role have been identified. This is followed by a discussion on the activities undertaken by the WRN, as well as the outputs and outcomes of the role. The chapter finishes with a dialogue on the WRN improving patient safety and delivering patient-centred care.

Finally, in Chapter Eight, the methodological strengths and limitations of the research are presented. Implications for practice, policy and education and recommendations for future research are also described.

1.8 Conclusion

The ED waiting room is a challenging environment for patients, families and staff. In response to these challenges some EDs have introduced WRNs to care for patients and families in waiting rooms. The aim of this research was to explore reasons for WRNs being implemented, provide an overview of the role in the clinical setting and explore emergency nurses' perceptions of the role. An integrative review on waiting room roles is presented in the next chapter.

CHAPTER TWO – INTEGRATIVE REVIEW OF THE LITERATURE

2.1 Overview

This chapter presents an integrative review of published literature relating to roles in ED waiting rooms. Using a systematic approach the aim of the review was to synthesise the findings of primary, peer reviewed literature exploring ED waiting room roles. Firstly the introduction and background are presented, followed by the review, results and discussion prior to the conclusion of the review.

The integrative review is presented verbatim from the manuscript published as part of this thesis. The full reference for the integrative review is:

> Innes, K., Jackson, D., Plummer, V. & Elliott, D. (2015). Care of patients in emergency department waiting rooms – an integrative review. *Journal of Advanced Nursing, 71*(12), p.2902-2714, DOI: 10.1111/jan.12719.

Presented in Word version, the review is the accepted version of the manuscript by the Journal, formatted to match the thesis for consistency. Tables and figures have been re-numbered, and references have been re-located from the paper and collated in the reference list at the end of the thesis.

2.2 Care of Patients In Emergency Department Waiting Rooms – An Integrative Review

2.2.1 Introduction

Health care services globally are under pressure to meet demand for emergency department (ED) services (Arain, Campbell & Nicholl 2015; Kamali et al. 2013; Lowthian,

Curtis, et al. 2012). The allocation of a health care professional specifically to care for patients in waiting rooms and improve flow through the department was one strategy introduced to manage ED workload. In particular to assess and initiate early interventions to decrease waiting times, detect patient deterioration, and improve patient and staff communications. Given the literature reporting these roles has not been systematically evaluated, an integrative review was required to assess the effectiveness and implications of introducing such a role into the ED waiting room.

2.2.2 Background

Increasing presentations combined with limited staff and physical resources, and delays in accessing inpatient hospital beds (access block) (Fatovich & Hirsch 2003; Forero, McCarthy & Hillman 2011) create significant challenges for ED staff (Lowthian, Curtis, et al. 2012). In particular, the ED waiting room has long been a challenging area for both staff and patients. Overcrowded emergency departments, including waiting rooms, result in patient dissatisfaction (Dinh et al. 2013); increased stress occasionally leading to distress, aggression and violence (Knowles, Mason & Moriarty 2013); and potential deterioration of a patient's clinical condition while waiting to be seen by a medical officer (Bernstein et al. 2009). Of particular note, several adverse outcomes in ED waiting rooms in New South Wales, Australia were a catalyst for a Special Commission of Inquiry to examine the level of patient care in public hospitals (Garling 2008a, 2008c).

Traditionally, emergency care and treatment did not commence until the presenting patient moved from the waiting room into designated clinical practice areas (Fry et al. 2012). All patients presenting to the ED received primary triage (Gerdtz & Bucknall 2000), prioritised and placed in the waiting room if a treatment space was not immediately available. The triage nurse re-assessed and re-triaged patients in the waiting room if their clinical condition changed (Australasian College for Emergency Medicine 2013). Secondary triage, however, was only undertaken when time permitted;

these triage decisions commonly involved initiation of care and management including pathology requests and administering analgesia (Gerdtz & Bucknall 2000).

While waiting, patients and carers often found the ED system and processes difficult to understand (Garling 2008c), particularly with patients often not seen in order of arrival. Some patients and carers also found their experience of waiting distressing, fearful and uncomfortable; with challenges including excessive noise (Kamali et al. 2013), lack of privacy and comfort (Kamali et al. 2013; Lovato et al. 2012), safety concerns (Welch 2010) and not receiving assistance when required (Lovato et al. 2012). Importantly, inadequate communication about waiting time or reasons for waiting added to patient dissatisfaction (Kamali et al. 2013; Welch 2010).

In an effort to address these patient care challenges, some EDs introduced roles to specifically manage care for patients in the waiting room. One role in Sydney, Australia, undertaken by a Registered Nurse (RN), aimed to provide appropriate and timely management; decrease waiting times from presentation to assessment and interventions; monitor patients for any deterioration in their clinical condition; and to improve the overall experience for patients in the ED (Considine et al. 2012; Fry et al. 2012). Clinical assistants in a Taiwanese ED (Huang et al. 2013); and a Physician [MD]-Nurse [RN] Supplementary Team (MDRNSTAT) in an ED in Toronto, Canada (Cheng et al. 2013) were similar initiatives to improve care in waiting rooms.

There has, however, only been limited research evaluating these roles in ED waiting rooms. Lack of a clear or standard use of terms may have contributed to this paucity; for example, scope of practice, extended practice, advanced practice nursing and advanced nursing practice have all been terms associated with ED waiting room roles. A clear definition of terms is therefore important to discuss and analyse initiatives introduced to improve care of patients in the waiting room (Table 2.1).

Importantly, the impact and implications of introducing these roles into ED waiting rooms, including patient, carer and staff perspectives, and influence on patient outcomes, has

not been established. These identified gaps in the literature led to this review being undertaken.

Table 2.1 Definition of key terms

Term	Definition / description
Scope of practice	The legal basis that defines the roles, responsibility and expectations of an RN. Founded in educational preparation, experience, confidence, and demonstrated or perceived competency. Varies between jurisdictional legislative bodies (Stasa et al. 2014; Wilhite 2012).
Extended (expanded) practice	Assuming responsibilities outside their scope of practice. Role includes knowledge or skills previously undertaken by other health care professionals. Greater autonomy, accountability and responsibility are required. Planning, consultation with experts, educational preparation and assessment of competence are required to ensure safety and quality outcomes for patients when extending RN practice (Nursing Council of New Zealand: Te Kaunihera Tapuhi o Aotearoa 2010). Underpinned by local protocols, providing a legal basis for the broadened scope of practice; could therefore be referred to as advanced practice (Stasa et al. 2014).
Advanced practice nursing	A regulated position in some countries; e.g. United Kingdom and Australia Regulatory bodies stipulate minimum practice standards to be registered as an advanced practitioner (Nursing and Midwifery Board of Australia 2014; Nursing and Midwifery Council 2005) Common standards (with some variation) relate to prerequisite educational standards, experience and clinical requirements (Nursing and Midwifery Board of Australia 2014; Nursing and Midwifery Council 2005; Stasa et al. 2014) A legally protected role, with legislation providing a framework for practice. Work within a different scope of practice than a traditional RN (Nursing and Midwifery Board of Australia 2011; Stasa et al. 2014).
Advanced nursing practice	The level at which a scope of practice is undertaken. Reflects a continuum for nurses developing their clinical skills, professional knowledge, judgement, and behaviours to an advanced level (Bryant-Lukosius et al. 2004; Nursing and Midwifery Board of Australia 2014). The level of practice of the nurse undertaking the role, not specific skills or knowledge, determines advanced nursing practice. Nurses with more experience are therefore expected to perform at a higher level than novice graduate nurses (Bryant-Lukosius et al. 2004; Nursing and Midwifery Board of Australia 2014; Scanlon et al. 2012).

2.2.3 The Review

2.2.3.1 Aim

The aim of this review was to synthesise the findings of primary research examining health care roles introduced into ED waiting rooms. Using a modified SPICE

framework (Booth 2006) the review components were - Setting: ED waiting room; Perspective: patients and families presenting to the ED; Intervention: health professional roles in the waiting room; Comparison: different waiting room initiatives; and Evaluation: patient outcomes, staff factors or ED performance indicators.

2.2.3.2 Design

An integrative review framework was used to guide this review, incorporating problem identification, literature search, data evaluation, data analysis, and presentation components (Whittemore 2005; Whittemore & Knafl 2005). The purpose and problem for the review was initially identified. A comprehensive literature search was then conducted in November 2014, to ensure that all relevant data sources were identified. During data evaluation, inclusion criteria for studies were applied, along with quality appraisal of the selected primary studies. Data interpretation and synthesis was then conducted for retained studies (Whittemore & Knafl 2005). This approach enabled inclusion of a diverse range of designs and methodologies and therefore various perspectives, providing a comprehensive understanding of the identified issue (de Souza, da Silva & de Caarvalho 2010; Whittemore 2005; Whittemore & Knafl 2005). Further description of these review stages is detailed below.

2.2.3.3 Search methods

A comprehensive search of the databases CINAHL, Scopus, Medline and Web of Knowledge was performed, using the following keywords: emergency department, waiting room, emergency room, accident and emergency, emergency nurse, emergency nursing, advanced practice nurse, advanced practice, extended practice nurse, extended nursing role, literature review and integrative review. These keywords were used in combination using ‘OR’ and ‘AND’ to identify all relevant papers. Given that patient care initiatives in the ED waiting room were relatively new, an initial search identified no appropriate literature prior to 2003. The search was therefore limited to 2003

– 2014; primary peer reviewed published manuscripts in English language. Reference lists from retrieved papers were also manually assessed for further relevant papers.

After duplicate papers were discarded, a total of 2153 papers were screened for relevance, with title and abstract reviewed against the inclusion and exclusion criteria (Table 2.2). The search method is presented in Figure 2.1.

Table 2.2 Inclusion and exclusion criteria.

Inclusion	Exclusion
Published peer reviewed journal articles	Grey literature, conference presentations, abstracts, opinion papers
Published between 2003-2014	Studies that examined advanced practice roles in emergency departments e.g. nurse practitioners
Primary research	
Studies that examined the implementation of a role in emergency department waiting room	

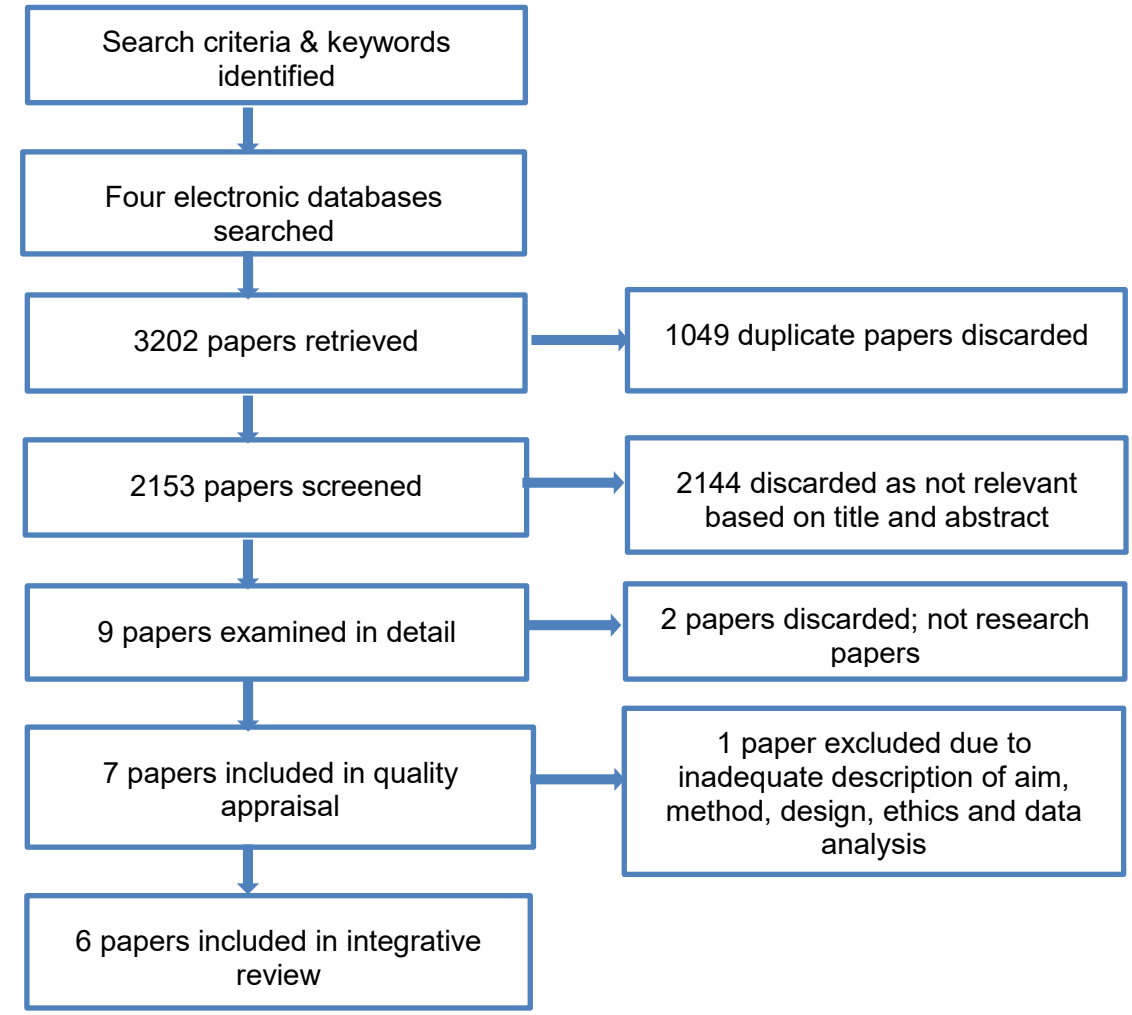


Figure 2.1 Search method

2.2.3.4 Search outcome

Nine papers were identified for examination in further detail, with two non-peer reviewed papers then excluded after full-text review. Seven papers were subjected to quality appraisal. Findings from two papers (Fry et al. 2013; Fry et al. 2012) were considered separately for outcomes despite being from the same study.

2.2.3.5 Quality appraisal

The seven papers were subjected to a quality appraisal process to ensure minimum research criteria were met (Critical Appraisal Skills Programme [CASP] 1993). As noted, the CASP framework examines for clear aims and appropriate method by assessing aspects of the research including design, recruitment, data collection, ethics,

rigor of data analysis, results and the significance of the study to practice (see Appendix A). The relevant CASP tool was applied to papers based on their study design and method (Critical Appraisal Skills Programme [CASP] 1993).

Three papers were qualitative studies (Blank et al. 2007; Fry et al. 2013; Fry et al. 2012), one a randomised controlled trial (Cheng et al. 2013), one a case-control (Fry & Jones 2005), and two cohort studies (Considine et al. 2012; Huang et al. 2013). Of the qualitative studies, two papers satisfied nine of the ten quality criteria (Fry et al. 2013; Fry et al. 2012), while Blank et al. (2007) addressed four of the ten criteria. For the quantitative designs, Cheng et al. (2013) addressed 11 of the 12 criteria for randomised control trials; Huang et al. (2013) and Considine et al. (2012) both addressed eight of the 12 cohort study criteria; and Fry & Jones (2005) addressed six of the 11 criteria for case control studies. As a result of the quality appraisal (Blank et al. 2007) was excluded due to inadequate description of the aim, method, design, ethics and data analysis (Table 2.3).

Table 2.3 Quality appraisal of papers

Author (year)	**Questions**											
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
	Qualitative											
Blank *et al.* (2007)	x	x	x	✓	✓	x	x	x	✓	✓		
Fry *et al.* (2012)	✓	✓	✓	✓	✓	x	✓	✓	✓	✓		
Fry *et al.* (2013)	✓	✓	✓	✓	✓	x	✓	✓	✓	✓		
	Randomised controlled trial											
Cheng *et al*. (2013)	✓	✓	✓	x	✓	✓	✓	✓	✓	✓	✓	
	Cohort study											
Considine *et al*. (2012)	✓	✓	✓	✓	✓	x	✓	x	✓	✓	x	x
Huang *et al.* (2013)	✓	✓	✓	✓	✓	x	✓	x	✓	✓	x	x
	Case control											
Fry & Jones (2005)	✓	✓	✓	✓	x	x	✓	x	✓	x	x	

2.2.3.6 Data abstraction

Data abstraction of the remaining six papers was undertaken using the framework of data reduction, data display, data comparison and drawing a conclusion. The key steps were classification of papers, coding and tabulation of data, verification of

extracted data with primary sources and finally integration of all themes into a comprehensive portrayal of the topic (Whittemore 2005; Whittemore & Knafl 2005). Initial analysis was undertaken by the first author; co-authors then independently reviewed the articles, and collectively agreed on the emerging sub-themes. Themes were then developed iteratively through group discussion involving all authors.

2.2.3.7 Synthesis

Papers were initially categorised based on the role implemented in the ED waiting room. Extracted data were then coded into nine subcategories identified (Table 2.4), and compared to identify themes and patterns. All primary sources were reviewed to ensure that the identified themes were compatible. As only two qualitative and four quantitative papers were available, a narrative synthesis was developed (Whittemore & Knafl 2005).

Table 2.4 Sub-categories identified

	Advanced practice role	Extended practice role	Autonomy	Scope of practice	Positive impact on patients / improved patient outcomes	Direct patient care	Patient advocate	Supported/ teamwork	Compassionate caring/strong interpersonal relationships
Fry & Jones (2005)	✓	x	✓	✓	✓	✓	✓	x	x
Considine *et al.* (2012)	✓	x	x	✓	✓	x	x	✓	x
Fry *et al.* (2012)	x	✓	✓	✓	✓	✓	✓	x	x
Cheng *et al.* (2013)	x	x	x	x	✓	x	x	x	x
Fry *et al.* (2013)	x	✓	x	x	x	x	x	✓	✓
Huang *et al*. (2013)	x	x	x	x	✓	x	x	x	x

2.2.4 Results

All six papers evaluated implementation of a waiting room intervention (Cheng et al. 2013; Considine et al. 2012; Fry & Jones 2005; Huang et al. 2013), explored activities of the role (Fry et al. 2013) and perceptions of the role (Fry et al. 2012). Four papers referred to a role titled 'clinical initiative nurse' (Considine et al. 2012; Fry & Jones 2005; Fry et al. 2013; Fry et al. 2012), one referred to MDRNSTAT (Cheng et al. 2013), and one referred to clinical assistants (Huang et al. 2013).

Four papers were from single site studies (Cheng et al. 2013; Considine et al. 2012; Fry & Jones 2005; Huang et al. 2013), with the remaining two from the same multi-site study (Fry et al. 2013; Fry et al. 2012). The design and methods used varied: retrospective exploratory (Fry & Jones 2005), descriptive exploratory (Considine et al. 2012), retrospective cohort (Huang et al. 2013), cluster randomised (Cheng et al. 2013), interview (Fry 2012) and observation (Fry et al. 2013). Data collection tools included an interview guide of 18 items (Fry et al. 2012), data mining of patient records (Cheng et al. 2013; Considine et al. 2012; Fry & Jones 2005; Huang et al. 2013) and a 22-item questionnaire (Fry & Jones 2005). Four papers reported ethics approval (Cheng et al. 2013; Considine et al. 2012; Fry et al. 2013; Fry et al. 2012).

Statistical significance values ($P \leq 0.05$) were reported in three papers (Cheng et al. 2013; Considine et al. 2012; Huang et al. 2013), and two also reported confidence intervals (Cheng et al. 2013; Huang et al. 2013). Two studies did not report confidence intervals (Considine et al. 2012; Fry & Jones 2005), reflecting methodological limitations. Summaries of the selected papers are presented in Tables 2.5 and 2.6. The following themes, nature of the role; patient care and outcomes; and teamwork and communication were identified, and are described below.

Table 2.5 Summary of selected qualitative papers

Study, location, position title	Aim/s	Design	Setting & sample	Key Findings
Fry *et al.* (2012) New South Wales, Australia CIN	To explore emergency nurses' perceptions of the extended practice CIN role	Qualitative exploratory study Semi-structured interviews	Three EDs from: 550 bed tertiary referral hospital 581 bed regional referral hospital 213 bed regional hospital Purposeful sample of staff in the CIN role (n=16)	Three themes identified: • Managing the waiting room – Changing characteristics influenced the CIN role • Beneficial role – Enabled use of advanced practice skills – Supported patients' rights – Provided a safe environment • Situational barriers impacted on the CIN role e.g. access block and institutional policies
Fry *et al.* (2013) New South Wales, Australia CIN	To explore what emergency nurses' do in their extended practice roles in observable everyday life in the ED	Qualitative exploratory study Non participant observations	Three EDs: tertiary referral regional referral regional hospital Purposeful sample of staff in the CIN role (n=16)	Experienced nurses, including CINs, used compassionate caring to quickly establish therapeutic relationship with patients.

CIN, Clinical initiative nurse; ED, emergency department; EDs, emergency departments.

Table 2.6 Summary of selected quantitative papers.

Study, location, position title	Aim/s	Design	Setting & sample	Results
Fry & Jones, (2005), NSW, Australia CIN	To evaluate the impact of the CIN and to identify the areas for change in the role	Quantitative data mining of patient records 22 item questionnaire examining role function, professional practice and role satisfaction	550 bed principal referral hospital Emergency nurses undertaking the CIN role (n=26)	CIN role: • Had a positive impact on the delivery of care • Provided timely interventions and decreased the number of patients who DNW* for treatment • Enabled independent practice, focusing on initiating investigations and management of patients waiting • Identified a need for CIN guidelines expansion, specific orientation program, clearer boundaries and role clarification
Considine *et al.* (2012) Melbourne Australia CIN	To examine and compare three advanced emergency nursing roles: EDFT; CIN; and RITZ	Descriptive exploratory study of patient records	330 bed urban district hospital Total 551 patients managed in each stream: EDFT (n=195) CIN (n=163) RITZ (n=193)	Compared with the EDFT and RITZ, patients seen by the CIN: • Were older (EDFT median 29 years [IQR 17-42]; RITZ 31 years [IQR 20-46]; CIN 39 years [IQR 29-60.5], $P < 0.001$;) • Were allocated a higher triage scale: – ATS category 3 (EDFT n = 11; 5.6%; RITZ n = 30, 15.5%; CIN n = 60, 63.5%, Pa <0.001) compared to – ATS category 4 (EDFT n = 157; 80.5%; RITZ n = 148, 77.2%; CIN n = 95, 57.9%, Pa <0.001) and – ATS category 5 (EDFT n = 27; 13.8%; RITZ n = 11, 5.7%; CIN n = 4, 2.4%, Pa <0.001) • Had higher hospitalisation rates (EDFT n = 1; 0.5%; RITZ n = 0, 0%; CIN n = 25, 15.3%, P <0.001) compared to discharged home (EDFT n = 190; 97.4%; RITZ n = 192, 99.5%; CIN n = 134, 81.2%, P <0.001) • Had shorter waiting times to nursing assessment (n = 162; median 23 [IQR 12-54]; P^a=0.001) compared to medical assessment (n = 162; median 53 [IQR 25-102]; P^a = 0.081)

Study, location, position title	Aim/s	Design	Setting & sample	Results
				• Had a longer LOS in the ED: admitted patients n = 25; median 7.9 (IQR 4.8-12.6) compared to discharged patients n = 134; median 3.3 (IQR 2.2-4.6); *P*[a] <0.001 • Had higher incidence of 12 lead ECG (EDFT n = 0; 0%; RITZ n = 30, 15.5%; CIN n = 60, 63.5%, *P*[a] <0.001), blood glucose measurement (EDFT n = 0; 0%; RITZ n = 7, 3.6%; CIN n = 29, 17.6%, *P*[a] <0.001) and intravenous cannulation (EDFT n = 1; 0.5%; RITZ n = 15, 7.8%; CIN n = 48, 29.1%, *P*[a] <0.001) and pathology testing (EDFT n = 0; 0%; RITZ n = 18, 9.3%; CIN n = 72, 43.6%, *P*[a] <0.001)
Cheng *et al.* (2013) Toronto, Canada MDRNSTAT	To evaluate the addition of a MDRNSTAT on ED patient flow and quality of care	Randomised cluster study of patient records	1200 bed academic tertiary level hospital Control cluster: nurse only triage (n=65 days; 3173 visits) Intervention clusters: MDRNSTAT triage (n=66 days; 3163 visits)	Intervention median ED LOS for discharged non-consulted, high acuity patients was 1.05 (95% CI 3.58-4.15) minutes compared to control cluster 4.29 (95% CI 4.19-4.39) minutes. Intervention median ED LOS for discharged non-consulted, low acuity patients was 1.55 (95% CI 1.48-2.05) minutes compared to control cluster 2.08 (95% CI 2.02-2.14) minutes. Intervention LWBS rate was 1.5% compared to 2.2% for the control (*P* =0 .06). MDRNSTAT reduced delays and the number of patients who LWBS*, without increasing representations or compromising the urgent care of severely ill patients.
Huang *et al.* (2013) Taipei, Taiwan Clinical Assistant	To evaluate the potential benefit of introducing clinical assistants to a busy and crowded ED	Retrospective cohort study	Academic tertiary medical centre Case group (n=12 257); control group	The mean waiting time of the case group was 4.51 minutes (17.8%) shorter than control group 1 and 7.41 minutes (26.2%) than control group 2. – 1st control period: case group waiting time (minutes) mean 20.86 (SD 17.34; *P* <0.0001); median 16 (*P* <0.0001) compared to 1st control period mean 25.37 (SD 21.68); median 19

Study, location, position title	Aim/s	Design	Setting & sample	Results
			1 (n=12 985); control group 2 (n=12 965)	– 2nd case period: case group waiting time (minutes) mean 20.86 (SD 17.34; *P* < 0.001); median 16 (p=<0.001) compared to 2nd control period mean 28.27 (SD 22.49); median 22; *P* <0.0001 There was a reduction in the number of patients who LWBS* (case group n = 242 compared to 1st control group period n =3 29 [*P* = 0.004) and 2nd control period n=356 [*P* =0.001])

*DNW and LWBS refer to patients who present to the ED but leave prior to being assessed and managed by the medical team. The terms are interchangeable within the literature (Crilly et al. 2012; Melton et al. 2014).

[a]Chi square test.

ATS, Australasian Triage Scale; CIN, Clinical initiative nurse; DNW, did not wait; ED, emergency department; EDFT, ED fast track; LOS, length of stay; LWBS, left without being seen (by a physician); MDRNSTAT, Physician-Nurse Supplementary Triage Assistance team; WR, waiting room; RITZ, Rapid Interventions & Treatment Zone.

2.2.4.1 Nature of the role

A single paper referred to a physician and nurse team (MDRNSTAT) (Cheng et al. 2013), who, after triage, commenced interventions on patients who had not yet been allocated an ED treatment space (Cheng et al. 2013). The clinical assistants' role supported physicians with patient management and flow through the ED waiting room (Huang et al. 2013), communicated anticipated waiting times, reasons for delays, and assisted with administrative requirements for patients. Clinical assistants held a health-related Bachelor degree and had received additional training to work in the ED setting (Huang et al. 2013).

The majority of papers (n=4) referred to the clinical initiative nurse (CIN) role (Considine et al. 2012; Fry & Jones 2005; Fry et al. 2013; Fry et al. 2012). The aim of the CIN role was to as early as possible, assess, initiate diagnostics and implement management strategies for patients with a range of conditions in ED waiting rooms, prior to being seen by a medical officer (Considine et al. 2012; Fry et al. 2013; Fry et al. 2012). A focus on communication and patient education was also identified (Considine et al. 2012; Fry et al. 2013; Fry et al. 2012). The CIN role was viewed as an adjunct to the triage role, often performing secondary triage activities (Considine et al. 2012; Fry & Jones 2005). Fry & Jones (2005) and Fry et al. (2012, 2013) labelled the role as extended practice, while Considine et al. (2012) referred to the role as advanced practice (see Supplementary Information Table S1 Definition of key terms).

Fry & Jones (2005) identified that RN undertaking the CIN role required a minimum of two years emergency nursing experience and had completed an orientation program. A later study by Considine et al. (2012) required a CIN to hold postgraduate emergency nursing qualifications, be triage-proficient and have advanced assessment, decision-making and conflict resolution skills. Two other more recent studies (Fry et al. 2013; Fry et al. 2012) stated that experienced emergency nurses undertook the role.

Role and responsibilities of the CIN were determined by local policy in the form of clinical pathways (Fry & Jones 2005) and clinical guidelines (Considine et al. 2012), providing the CIN with structure and direction to initiate investigations or administer medications (Considine et al. 2012). Mixed findings were noted regarding the extent of skills and roles that the pathways and guidelines provided. Fry & Jones (2005) recommended that the existing 24 pathways be reviewed, to enable an increase in CIN activities to more effectively meet the care needs of waiting patients. Conversely, Considine et al. (2012) found that the existing 16 local guidelines were sufficient to meet the care needs of patients in the waiting room. The guidelines related to patients presenting with chest pain, headache, early pregnancy vaginal bleeding and abdominal pain for example (Considine et al. 2012). Later studies reported inconclusive findings, with the scope of practice reported as meeting the care needs of patients in the waiting room. On occasions however, it was noted that the RN had to work outside guidelines; for example, a CIN assessing that the patient would require a CT scan but they were unable to order the investigation (Fry et al. 2013; Fry et al. 2012).

The CIN role was referred to as autonomous in two studies (Fry & Jones 2005; Fry et al. 2012). Although not allowing independent practice (Considine et al. 2012), the CIN role enabled use of advanced skills and knowledge to assess, plan and initiate safe care for patients in the waiting room (Fry & Jones 2005; Fry et al. 2012). The role was therefore perceived as offering RN an opportunity to advance both their professional and clinical skills (Fry & Jones 2005). An increased sense of accountability and responsibility was also associated with the CIN role. Of note, this often resulted in staff concerns for quality of care and safety for patients in the waiting room, particularly when the ED and the waiting room were overcrowded (Fry et al. 2012), occasionally leading to role dissatisfaction (Fry & Jones 2005).

2.2.4.2 Patient care and outcomes

As described above, two studies identified a key aspect of the CIN role as providing direct care and creating a safer environment for patients in the waiting room (Fry & Jones 2005; Fry et al. 2013). Based on patient assessment, the CIN could initiate treatment early and regularly reassess patients based on individual need (Fry & Jones 2005). Furthermore, the CIN was able to advocate for those in the waiting room (Fry & Jones 2005; Fry et al. 2013).

Of note, Fry et al. (2012) also identified policies aimed at meeting government imposed key performance indicators that conflicted with the CIN role; for example prioritising ambulance offloads and patients with shorter waiting times ahead of other patients in the waiting room. Participants felt patient care in the waiting room was therefore compromised, leading to frustration and tension (Fry et al. 2012).

There was limited evidence supporting that introduction of strategies to improve care in the ED waiting room decreased waiting times. Two single site studies (Cheng et al. 2013; Huang et al. 2013) found small reductions in waiting times. Huang et al. (2013) found a reduction in average waiting times of 18-26%. This however only equated to a reduction in waiting time of 5-7 minutes, arguably not a clinically significant time period. A small decrease in waiting times for high acuity admitted patients was also found by Cheng et al. (2013) with the introduction of MDRNSTAT, decreasing length of stay to interventions by 24 minutes ($P = 0.005$). Fry et al. (2012) found that initiating interventions early did not necessarily equate to a decreased waiting time.

The number of patients leaving ED without being seen was measured in three studies (Cheng et al. 2013; Fry & Jones 2005; Huang et al. 2013). Statistically significant reductions were demonstrated for both the introduction of clinical assistants and the CIN; Huang et al. (2013) reported reductions between the case group ($n = 242$) and control groups (control group 1: $n = 329$, $P = 0.004$; control group 2: $n = 356$, $P = 0.001$); while Fry & Jones (2005) reported a 1% ($P = 0.001$) reduction. Although not statistically

significant, Cheng et al. (2013) demonstrated a very small reduction (0.6%; P = 0.06) in the number of patients who left without being seen with MDRNSTAT. Clinical significance for these findings was negligible.

Concerns were identified in relation to the quality of care provided in the waiting room, particularly in overcrowded emergency departments (Fry et al. 2012). During busy times the waiting room was described as another acute ward full of high acuity patients; in particular older patients, more likely to deteriorate due to chronic illnesses and multiple comorbidities (Fry et al. 2012). No limit to the number of patients in the waiting room, the number of presenting patients, and ward bed access block were identified as concerns affecting the quality of care provided by CINs (Fry et al. 2012).

The need for the CIN to prioritise their workload, particularly during high workloads, was also evident. Despite being in a single role position, the CIN was often required to attend to multiple care needs simultaneously; including both physical and emotional needs of patients and families, in unfamiliar and stressful environments (Fry et al. 2012).

2.2.4.3 Teamwork and communication

Establishing effective interpersonal relationships with patients and the multidisciplinary ED team were reported in three papers on the CIN (Considine et al. 2012; Fry et al. 2013; Fry et al. 2012). Of note, non-verbal communication, including body language, eye contact and touch, were key desirable attributes (Fry et al. 2013). Effective interpersonal relationships specifically enabled the CIN to de-escalate situations when patients and families became frustrated, hostile or aggressive (Considine et al. 2012; Fry et al. 2013; Fry et al. 2012). Effective interpersonal relationships were however negatively affected when the workload of the CIN increased (Fry et al. 2013).

A perceived lack of support for the CIN was also found during busy periods and increased workload, when all ED staff were under stress to meet patient needs and targets. Under these circumstances the CIN was working to their full capacity but were hindered by conditions outside their control (Fry et al. 2013). Collaboration with the nursing team was therefore essential (Fry et al. 2013), where the CIN, generally a senior and experienced RN (Considine et al. 2012), was able to facilitate education of less experienced staff (Fry et al. 2013) and act as a mentor to advocate for safe, quality care (Fry et al. 2013). Acting in the mentor role also allowed the CIN to role model care, including establishing effective and appropriate interpersonal relationships, with patients in the waiting room, and members of the multidisciplinary team (Fry et al. 2013).

2.2.5 Discussion

This paper reports an integrative review of six articles that explored the implementation of various patient care roles in ED waiting rooms. The review established that there is limited literature assessing the roles and therefore only limited conclusions and generalisations can be made. Key findings of the review related to the variability and lack of clarification within the roles, the importance of communication, support of the ED to facilitate the roles and patient outcomes including waiting times.

Having no clearly defined role resulted in variations in process and practice, which may affect patient outcomes (Cashin et al. 2007; Hudson & Marshall 2008). With policy and governance for the various roles determined at local levels, fundamental variations existed in who performs the roles; level of experience; educational requirements; skills; and responsibilities of those undertaking the roles (Considine et al. 2012; Hudson & Marshall 2008). These variations likely contribute to increased stress, anxiety, frustration and aggression (Fry et al. 2012).

Ambiguity in the terminology associated with the ED waiting room roles was evident, in particular the terms advanced practice, extended practice and scope of

practice. This is not unexpected, as these definitions were also unclear in the wider literature (Bryant-Lukosius et al. 2004; Stasa et al. 2014; Wilhite 2012). As clinical pathways and guidelines underpin most ED waiting room roles (Considine et al. 2012; Fry & Jones 2005), RN when undertaking the role, use a different scope of practice, as opposed to working outside their scope of practice (Stasa et al. 2014; Wilhite 2012). Depending on the experience and confidence of the RN in the role, it could be viewed as an advanced nursing practice role (Stasa et al. 2014). In Australia, to ensure quality care and consistency a national approach needs to be adopted, to clearly define the title, scope of practice and preparation of the RN undertaking the role (Cashin et al. 2007).

Specific roles in ED waiting rooms may assist in addressing public expectations. Traditionally the waiting room has been a non-nursed area, with only very occasionally some patients receiving interventions during busy periods (Cashin et al. 2007). For the large majority of patients, however, care and management commenced upon entering the main treatment area of the ED and being assessed by a medical officer (Cashin et al. 2007; Fry et al. 2012). This process did not meet the expectations of the public, who perceived that all care and management needs would begin on arrival to the triage and waiting room of the ED (Garling 2008c). A person specifically allocated to the ED waiting room therefore makes it easier for patients and carers to identify somebody responsible for caring and looking after their needs, and support them during their wait (Luck, Jackson & Usher 2009).

Highly developed communication and de-escalation skills are required by staff undertaking roles in ED waiting rooms. These skills enable establishment of a therapeutic relationship with respect and trust, key to preventing escalation of tension and possible violence (Luck, Jackson & Usher 2009). There are clear challenges however for establishing therapeutic relationships in ED waiting rooms. Importantly, there is a very short time period to interact with patients, who are often distressed, stressed or anxious due to their presentation (Vitali, Ficarra & Presti 2013). Other

contributing factors include varied cultural and socioeconomic backgrounds of patients (Mahmoud et al. 2014; Parsons et al. 2014). Those performing the roles therefore need to have or may need further development of this skill set to ensure patient satisfaction and safe, quality care in the waiting room.

Several clinical implications for the implementation of roles to care for patients in ED waiting rooms are therefore evident. One area that needs further analysis is the impact that ED waiting room roles have on waiting times. While small decreases in waiting times was demonstrated in this review, the impact this has in the clinical setting needs to be explored further. A demonstrated clinically significant decrease in waiting times could see ED waiting room roles positively impact patient outcomes. It is widely accepted that increased waiting times contribute to delays in commencing interventions such as administering antibiotics (Sikka et al. 2010), analgesia (Pines et al. 2010) and resuscitation (Hong et al. 2013). These delays have led to deterioration in patient conditions, resulting in increased length of stay and mortality for ED patients (Richardson & Mountain 2009; Sprivulis et al. 2006). Decreasing the number of patients who leave without being seen by a doctor improves clinical risk and patient outcomes. Despite a low risk, there is potential for the condition of these patients to deteriorate, resulting in increased morbidity and mortality (Clarey & Cooke 2012). Based on this, one could assume that even a small decrease in waiting time may have a positive impact on outcomes for patients in the waiting room.

To ensure that roles in the ED waiting room are clearly positioned as part of the broader ED team, the role needs to be embraced by leaders of the ED who can assist with development of the role, and create a positive culture. All team members need education about the role to promote mutual understanding and respect, including expectations and responsibilities. This will contribute to the ED team becoming responsive and adaptable. Systematic monitoring of patient numbers and workload in the waiting room is therefore required to ensure high quality care and patient safety at

all times (Salas, Sims & Shawn Burke 2005; Weller, Boyd & Cumin 2014). In particular, there needs to be discussion about role priorities and workload in relation to the number and acuity of patients that one RN can safely care for in the waiting room. Undertaking a mixed-method study would comprehensively assess staff and patient perspectives of roles in ED waiting rooms.

Limitations are acknowledged with this review. First, limiting the literature to peer reviewed published journal articles only may lead to publication bias. Second, combining diverse methodologies may affect the rigor, accuracy and bias (Whittemore 2005). Third, the majority of the reviewed papers originated in Australia from a limited number of qualitative studies.

2.2.6 Conclusion

This review examined the peer reviewed published literature on roles implemented to improve care in ED waiting rooms. The key findings of the review related to lack of clarification within the roles, communication, support of the ED to facilitate the roles and patient outcomes. Generalisations and recommendations are, however, limited due to the small number of papers available and the variations in study methodologies. The review highlights the need for further research into this role, particularly the impact that it has on patient outcomes. Larger multi-site mixed-method studies are required to further explore this important role in patient care in the ED.

2.3 Summary

The synthesised findings of a systematic literature review relating to roles introduced to care for patients in ED waiting rooms have been presented in this chapter. As outlined above the key findings were lack of clarification associated with the roles, communication, appropriate support and patient outcomes. The review identified the

need for further research into the role. The following chapter presents the methodology and overview of methods used in this research.

CHAPTER THREE – METHODOLOGY AND OVERVIEW OF METHODS

3.1 Introduction

This chapter describes the methodology and methods used for the three-phase study. The literature presented in Chapter Two identified that the aim of implementing the WRN role was to assess and initiate interventions early, to detect patient deterioration, and improve patient and staff communications. Overall, there is however a paucity of literature relating to the management of patients in ED waiting rooms, including reasons for implementing WRNs, the extent to which they have been implemented and a current picture of WRNs roles and responsibilities.

This study was conducted in three phases using a mixed-methods approach to guide data collection and analysis. An exploratory sequential design, with a priority on qualitative data, was identified as the most appropriate method to address the research aims. As identified in Chapter One the research aim was to explore nurses perception of the implementation of a nurse allocated to care for patients in ED waiting rooms; with the specific objective of:

1. Explore the factors contributing to the development of WRN roles.
2. Observe and record activities and behaviours of ED WRNs in the clinical setting.
3. Explore the implementation of the role in Australian EDs.
4. Identify emergency nurses' perceptions of the WRN role.
5. Integrate findings into the development of a Logic Model and framework for implementation of the WRN role.

Firstly, qualitative data were collected and analysed followed by a quantitative phase undertaken to give context to the qualitative findings (Morgan 2007). Transcripts

of key informant interviews were analysed to identify reasons for implementation of the WRN role. Findings from the key informant interviews guided development of an observation tool to observe participants performing the WRN role in practice during Phase 2. Findings from Phase 2 then guided the development of a survey (Phase 3) to explore the current profile of WRN roles in EDs.

There are ten main sections to this chapter. This section introduces the chapter, while in Section 3.2 the use of mixed-methods is explored and validated. The study design and selection and justification of methods are outlined in Sections 3.3 and 3.4. Ethical considerations are presented in Section 3.5. Sections 3.6, 3.7 and 3.8 introduce and outline the three study phases, describing the sample, setting, recruitment, data collection, data analysis and methods. In Section 3.9 the approach used to integrate and interpret the research is presented, while trustworthiness and rigour are presented in Section 3.10. A conclusion then summarises the key elements of the chapter and provides a link to the following chapters.

3.2 Mixed methods as a methodology

The concept of mixing multiple research methods originated in the late 1950s (Campbell & Fiske 1959). Mixed methods allows for the collection, analysis and integration of two forms of data to give a more complete analysis of a single topic (Creswell & Plano Clark 2011; Teddlie & Tashakkori 2009).

As two different approaches are blended together (Bazeley 2009), mixed methods has been referred to by a number of differing terms including multi-methods, convergence, integrated, combined, quantitative and qualitative methods, hybrid and methodological triangulation (Creswell 2009; Creswell & Plano Clark 2011; Morse 1991). Merging two forms of data allows descriptive data to be combined with scientific data, especially when statistical significance could not be established (Cronbach 1975).

By utilising the strengths and counteracting weaknesses of both approaches, and by neutralising any inherent bias in either approach (Creswell 2009; Fetters, Curry & Creswell 2013), mixed-methods research expands and enhances the flexibility of research designs (Sandelowski 2000). Mixed-methods research is used when either quantitative or qualitative on their own cannot answer the research aim, when both methods could be used simultaneously or sequentially, or when the research problem is complex in nature (Creswell & Plano Clark 2011; Tashakkori & Teddlie 1998b). Mixed methods contextualises findings, and in this research it allowed for a more in-depth meaning to them, as data collected in key informant interviews added context to observations in practice, which in turn influenced the practice survey (Morgan 2007).

3.2.1 Philosophical assumptions

Debate continues as to the epistemology that underpins mixed-methods research. Some authors argue that it is challenging to merge the paradigms of positivism (quantitative) with constructivist (qualitative) due to their distinct and alternate ontological worldviews (Gilbert 2006; Morgan 2007; Sandelowski 2000; Tashakkori & Teddlie 1998a). Other authors have suggested that mixed-methods research is actually the third paradigm for research (Bazeley 2009; Burke Johnson & Onwuegbuzie 2004; Teddlie & Tashakkori 2009).

A paradigm is the way a researcher embodies experiences and thinks about the world, including morals, values, and aesthetics (Morgan 2007). The broad consensus is that pragmatism is the paradigm underpinning mixed methods (Creswell & Plano Clark 2011). Pragmatism as a paradigm primarily focuses on the importance of the question and the consequences or outcomes of the research, rather than the methods or underlying philosophical worldview. By focusing on what works to answer the research question, rather than a paradigm, pragmatism advocates the use of mixed methods (Burke Johnson & Onwuegbuzie 2004; Creswell & Plano Clark 2011; Teddlie & Tashakkori 2009).

Traditional philosophy is based on the rigid ideology of certainty, inflexibility, and unwillingness to compromise, no matter what the outcome. The belief is that people are separated from the external world and only have an immediate awareness of their mind. According to traditional philosophy, knowledge is acquired when the mind develops a mirror representation of real world events, with basic beliefs inferred from this representation (Bacon 2012; Tashakkori & Teddlie 1998a).

A form of philosophy, pragmatism has its origins with the philosophers Charles Sanders Pierce, William James and John Dewey, whose works date from 1881 – 1940 (Shook & Solymosi 2013). Referred to as major classical pragmatists, they rejected the basis of traditional philosophy, as it did not take into account the ability to develop knowledge in areas outside of a person's immediate environment. Pragmatism therefore countered the aspects of certainty and the concept of absolute; it was open to alternate ideas and interests, and considered how human behaviour was affected by thoughts, ideas, tolerance and compromise (Bacon 2012; Shook & Solymosi 2013; Tashakkori & Teddlie 1998a). Based on a matter-of-fact approach to problem-solving, pragmatism is viewed "as a tradition of thought" (Bacon 2012, p. 2) that focuses on what is tangible and practical. Only meaningful questions which lead to noticeable differences in behaviour should be considered, referred to as the 'pragmatist maxim' (Bacon 2012; Tashakkori & Teddlie 1998a).

Making significant contributions to pragmatism, John Dewey presented "a social, contextualized interdisciplinary view of human science" (Teddlie & Tashakkori 2009, p. 64). His philosophical stance was based on the principle of naturalism, an active process whereby humans and the environment interact (Bernstein 1959). When investigating and describing the natural world, the focus should be on the network of relationships, power of interaction, correlations, and dependency that occurs (Godfrey-Smith 2002). This is an important aspect in relation to this research, as WRNs operate within a complex

health care system which is influenced, among other things, by the networks and relationships developed with staff and patients.

Dewey argued that humans learn through a 'hands-on approach', that experience is not isolated and separate experiences are not consciously joined in the mind (Bacon 2012). A key aspect of Dewey's philosophy was paying "careful attention to the consummatory phase of experience and to those experiences which are integrated and characterised by their qualitative coherence" (Bernstein 1959, p. 342). Everyday experience is due to social interactions and communications in a person's social world, while knowledge is the outcome of the inquiry. Knowledge is viewed as hypothetical, where current knowledge may need to be revised as new knowledge is acquired (Bernstein 1959). Pragmatism and mixed-methods research therefore offered opportunities for addressing issues and limitations in both quantitative and qualitative methodologies.

Clear differences are seen with data analysis in quantitative and qualitative methodologies through the distinctive approaches of induction (quantitative) and deduction (qualitative) (Gilbert 2006). With a mixed-method approach, researchers use abductive reasoning, moving between induction and deduction through an iterative process to theorise about emerging themes and reflect on conclusions. In this research, the researcher utilised abduction by moving between the inductive results from the key informant interviews and observation in practice (qualitative), to serve as input to the deductive (quantitative) aspect of the practice survey to test theories (Morgan 2007). Table 3.1 presents the mixed-methods framework.

Table 3.1 Mixed-methods framework

	Qualitative approach	Quantitative approach	Pragmatic approach
Connection of theory and data	Induction	Deduction	Abduction
Relationship to research process	Subjectivity	Objectivity	Inter-subjectivity
Inferences from data	Context	Generality	Transferability

(Morgan 2007)

According to Morgan (2007), researchers can be neither 'completely objective' or 'completely subjective' (Table 3.1). In mixed methods, researchers use an inter-subjective approach, which recognises both approaches in data analysis and enables movement between objectivity and subjectivity to develop a mutual understanding or shared meaning of the situation.

Morgan (2007) also argued that pragmatism uses transferability for the practical application of knowledge, as research cannot be so specific that it falls outside one particular context (quantitative) or so broad that it applies to every context (qualitative). Transferability allows for working back and forth between specific results and their general implications, considering whether knowledge gained from one setting can be applied to another setting. Adopting a mixed-methods design in this research, therefore, allowed for inter-subjectivity and transferability when collecting and analysing data. Inter-subjectivity was utilised during data analysis, as the researcher moved between the subjective and objective data collected from the three phases to develop a mutual understanding of the WRN. Moving between the findings of each phase of the research during data analysis also ensured transferability, as knowledge gained on the role could then be applied in other EDs.

3.2.2 Types of mixed-methods research designs

Four major types of mixed-methods research designs are described: convergent, exploratory, explanatory and embedded (Table 3.2). As the research design guides when

and how data are collected, analysed and interpreted, selection of a design is based on what is already known about the topic, as well as the research problem and aim (Creswell & Plano Clark 2011). The research design as applied to this research is discussed below in Section 3.3.

Table 3.2 Mixed-methods research designs

Research Design	Definition
Convergent	Two independent (quantitative and qualitative) strands in a single phase Data sets are then compared for convergence, divergence, contradictions or relationships
Explanatory	Two distinct phases Initially quantitative, followed by qualitative to explain quantitative results
Exploratory	Two phase design Initially qualitative, followed by quantitative to test or generalise qualitative results
Embedded	One data collection approach is embedded in the other approach e.g. qualitative phase within quantitative research Enhances the larger design

(Creswell & Plano Clark 2011)

A researcher also needs to consider the sequence, priority, timing and integration of data in mixed-methods research (Creswell & Plano Clark 2011; Fetters, Curry & Creswell 2013). Sequence refers to the order in which the various quantitative and qualitative data will be collected and analysed. The researcher needs to determine the data collection method that will address the research aim. This method is then utilised as the primary means of data collection. In addition, the researcher needs to consider how one data set may influence other data sets (Creswell 2009; Creswell & Plano Clark 2011).

Dominance or weighting of one method over another is referred to as priority. The dominant method is expressed in capital letters, while the other method playing a secondary role is expressed in lower case lettering. For example, ‘QUAL’ indicates the dominant design is qualitative, while ‘quan’ indicates that quantitative is the secondary design. Methods can also have equal weighting; for example ‘quan’ and ‘qual’ denotes

that both methods have been given equal priority in the research design (Teddlie & Tashakkori 2009). Finally, timing refers to when the various data sets are collected and describes how the researcher uses the results from the data sets within the study, and is classified as concurrent, sequential or multiphase (Table 3.3) (Creswell 2009).

Table 3.3 Classifications of timing in mixed-method research

Timing	Description
Concurrent	Quantitative and qualitative phases implemented at the same time
Sequential	Two distinct phases with the collection and analysis of data prior to next phase
Multiphase	Multiple phases implemented that include concurrent and/or sequential within one study phase

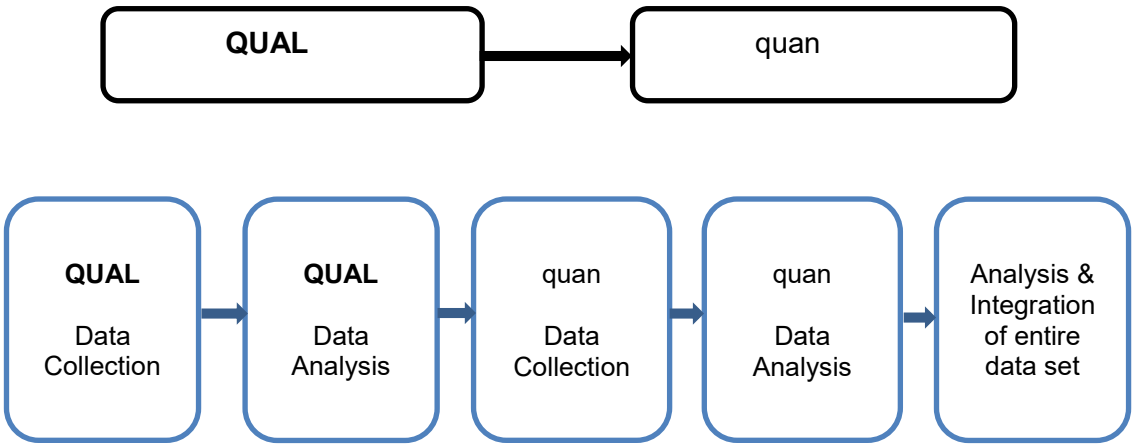
(Creswell 2009)

Integration is when the two methods are mixed through merging the data sets, connecting the analysis of one data set with the collection of a subsequent one, embedding one set of data into a larger one, or using a framework to bind the data sets together. Data can be mixed during the data collection, data analysis or integration phases or across all three stages (Creswell 2009; Creswell & Plano Clark 2011). An exploratory sequential design was used in this research, and is discussed further in the following section.

3.3 Study design

An exploratory sequential design was identified as the most appropriate to address the aims of this research. As the name suggests, exploratory designs are used to explore a phenomenon when little is known about it (Creswell 2009), while a sequential design is used when the researcher wants to expand on the findings of one method (qualitative) with another method (quantitative) (Creswell & Plano Clark 2011; Greene, Caracelli & Graham 1989). This design allows the researcher to move from finding general to context-specific information (Creswell 2009; Fetters, Curry & Creswell 2013), and when a data collection instrument needs to be developed. Exploratory sequential

designs generally have an initial qualitative phase, followed by a quantitative phase which builds on the former. Weighting is generally placed on the qualitative phase with data integrated through Phase 1 data analysis and Phase 2 data collection (Figure 3.1) (Creswell 2009).



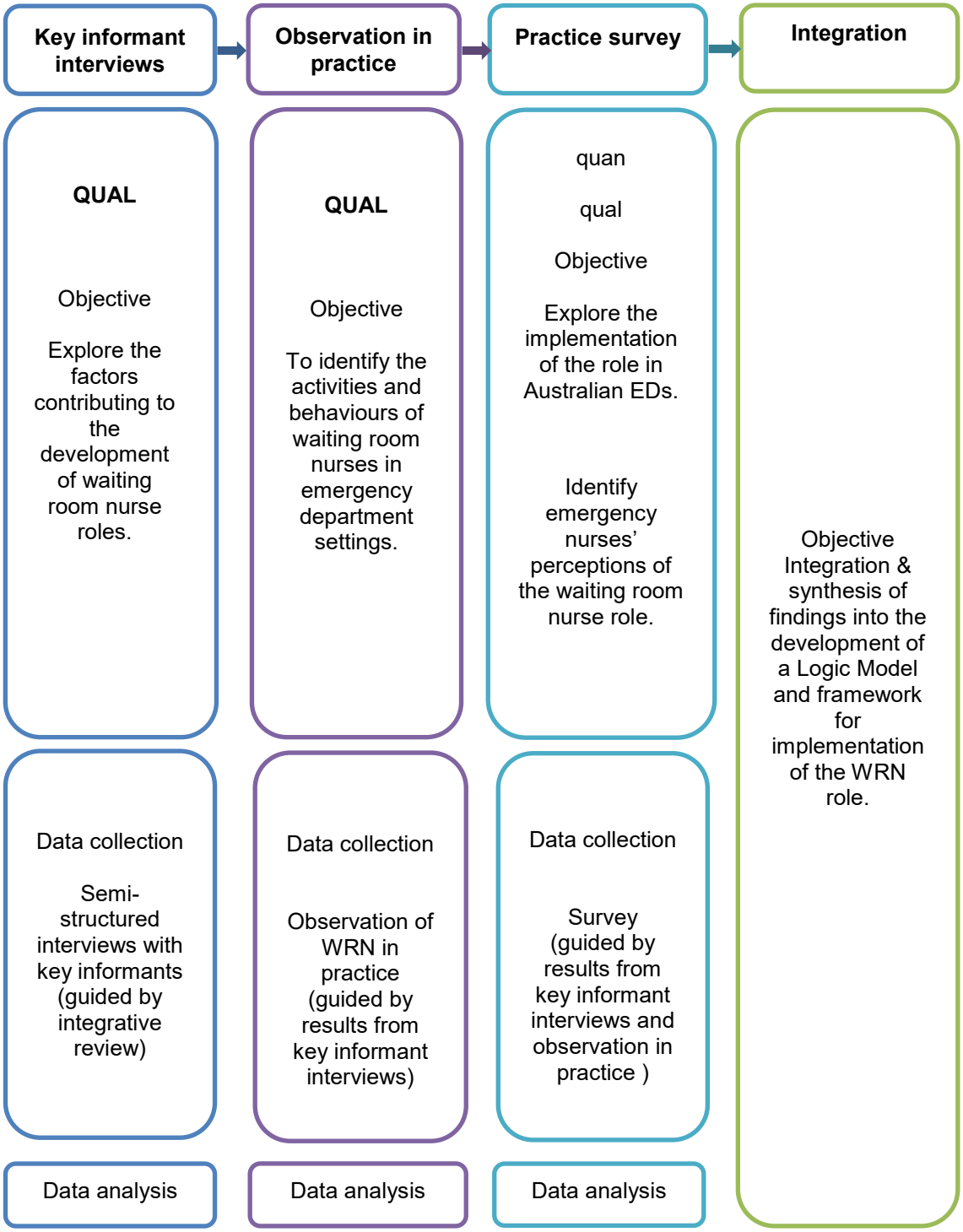
(Creswell 2009)

Figure 3.1 Exploratory sequential design

In this three phase research, key informant interviews (Phase 1) and observations in practice (Phase 2) were qualitative, while the Phase 3 practice survey produced quantitative and qualitative data. The advantages of using an exploratory sequential design were that the research was straightforward, with two clear phases which could be used to explore a phenomenon and expand on the qualitative findings. A potential drawback of this design is that it requires significant time to collect data and analyse both strands of the research (Creswell 2009; Creswell & Plano Clark 2011).

An exploratory sequential design was selected for a number of reasons. As there is a paucity of literature relating to WRNs, there was a need to initially explore implementation of the role into Australian EDs. A qualitative phase was used initially so that theory could be generated (Morse 1991) and variables that impacted on the WRN could be identified (Creswell & Plano Clark 2011). Findings from the key informant interviews both informed and were built upon by a second qualitative phase observing a

sample of WRNs in practice. The final phase collected quantitative and qualitative data to further build on the previous findings of key informant interviews and observations in practice in a larger population to test the generalisability of findings (Creswell 2009). The use of both qualitative and quantitative designs meant that a deeper understanding could be generated, which could not be achieved if each design was used in isolation. The exploratory sequential design of this study is presented in Figure 3.2.



Uppercase letters, major weighting; lower case letters, minor weighting (Creswell & Plano Clark 2011)

Figure 3.2 Exploratory sequential design of this study

3.4 Selection and justification of methods

This section discusses and critiques the data collection and data analysis approaches used in this research; semi-structured interviews, observation, survey, thematic analysis, quantitative content analysis and statistical analysis.

3.4.1 Semi-structured interviews with key informants

In the first phase, semi-structured interviews with key informants were used to collect data. Termed key informants, individuals were sought who had a high level of knowledge and/or engagement with developing and introducing WRN roles in Australia, and were respected as being experts in the field. These selected individuals were therefore able to provide in-depth insights and reflections on the topic, based on their practice and background knowledge (de Vaus 2014; Schneider et al. 2014).

Widely used in qualitative research, interviews allow for experiential data to be collected from participants (Taylor & Francis 2013). Semi-structured interviews were used, as a set of guiding questions to be addressed were identified (Table 3.4).

Table 3.4 Guiding questions for key informant interviews

	Questions
1.	What were the reasons for the ED WRN role being implemented?
2.	Who performs/ed the role; their level of nursing and emergency nursing experience and educational preparation (formal or informal)?
3.	Were there any specific preparations prior to commencing in the role (e.g. orientation)?
4.	What are/were the responsibilities and skills to be undertaken?
5.	Were there any underpinning protocols/governance?
6.	Was any evaluation of the role performed?

Participants were able to informally discuss their experiences and were invited to spontaneously tell their story, while the researcher was able to explore their answers, gain deeper insights into the topic and seek clarification to ensure research aims were met (Morse 2012; Schneider et al. 2014; Taylor & Francis 2013). Prompts were used to

re-focus key informants or encourage expression during the interviews (Schneider et al. 2014). Face-to-face interviews allowed for direct interaction between the researcher and key informants to collect narratives on how and why WRN were implemented in the ED. Telephone interviews were used when distance and timing prevented a face-to-face interaction.

3.4.1.1 Interview pilot

A pilot study, undertaken in June 2015, tested the feasibility of the interview process and schedule to identify any ambiguity or misunderstanding key informants may have with the questions (Schneider et al. 2014). The pilot semi-structured interview was audio recorded with an emergency nurse, not a key informant, who had experience with a WRN role in their ED. The duration of the interview was 33 minutes, and the participant provided verbal and written feedback on the process and questions. Based on the feedback and reviewing the audio recording, no changes to questions were deemed necessary.

3.4.2 Observation in practice

In the second phase, WRNs were observed in the clinical setting. Participant observation is widely used in social research (Salmon 2015) and was identified as the most appropriate method, as it enabled WRNs to be observed directly undertaking their normal responsibilities in their usual practice setting. This allowed the researcher to see how participants worked within and related to their environment in real time (Mulhall 2003; Schwartz-Barcott et al. 2002). Referred to as the ‘gold standard’ in qualitative research (Murphy & Dingwall 2007), observation is a systematic approach to data collection that allows for thorough and accurate descriptions of participants and their activities, as well as their perceptions of and perspectives about their role (Mays & Pope 1995; Salmon 2015). The researcher is therefore able to gather information by seeing what people actually do, rather than what they report they do (Gold 1958; Mulhall 2003).

Observation allowed the researcher to collect data through observing WRNs practices, responses, and behaviours. Data were also collected by enquiring conversations and listening to responses (Borbasi, Jackson & Wilkes 2005; Jackson et al. 2016). As observation provides context and captures the complexity of the topics being studied, it was an ideal method for exploring the activities and behaviours of WRN in the clinical setting, as in-depth insights and understandings could be gained (Hammersley & Atkinson 1983; Morse 2003; Mulhall 2003; Schwartz-Barcott et al. 2002).

Naturalism, or the observation of topics or subjects in their natural setting, is a key aspect of observation. With naturalism, researchers are sensitive to the nature of the setting and respect the social world in which the research is undertaken (Hammersley & Atkinson 1983). Proponents of naturalism argue that human interaction in the social world is affected by intentions, motives, attitudes, and beliefs, and cannot be understood purely based on interpreting casual interactions, or assuming interactions are based on universal laws of society. The aim of any observational research is therefore to interpret the social world in the same way participants interpret their world (Hammersley & Atkinson 1983; Schwartz-Barcott et al. 2002).

Overt or covert observations can be used to collect data in observational studies. In overt observation, used in this research, participants are aware of the aim of the study and that they are being observed (Hammersley & Atkinson 1983; Turnock & Gibson 2001). While overt observation allows for relationships and trust to develop between participants and researchers, it may limit access to and flexibility in the field, place undue demands on participants, or influence the behaviour of participants (Hammersley & Atkinson 1983; Monahan & Fisher 2010). This influence may extend to the concept of social desirability, where participants adjust their activities or behaviours so that they are viewed favourably by the observer (Schneider et al. 2014). Any observer effect can however be decreased by developing close relationships with participants and ensuring data is analysed within the study context (Monahan & Fisher 2010). In this study phase,

any potential limitations were minimised by developing close relationships with participants, ensuring that initial periods of observations were passive (with no actual data collected). This allowed the observer to focus on getting to know the participants, and vice versa for the participants to become relaxed in the presence of the observer. The remainder of the observation period then allowed for rich data to be collected (Groenkjaer 2002; Van Groenou & Bakes 2006).

Compared to overt observation, covert observation infers that individuals are not aware of the research occurring. While potentially improving access to the field and decreasing observation-influencing behaviours, ethical concerns exist around informed consent and deception with covert observation (Hammersley & Atkinson 1983).

Researchers also adopt either a non-participatory or participatory observer role in the field. In non-participant roles, observers are outsiders to the observed group, and remain independent and non-judgemental. In participatory roles observers are active members of the group (Gold 1958; Mays & Pope 1995; Mulhall 2003). In this research a non-participatory role/observer as participant was adopted. Observer roles are presented in Table 3.5.

Table 3.5 Observer roles

Observer roles	Description
Non-participant observer roles	
Observer as participant	Have brief or intermittent interactions with participants Potential for superficial interactions which may affect interpretation and understanding of the subject observed
Complete observer'	No social interaction between the observer and participants Observer may take a subordinate role or view participants through mirrors
Participant observer roles	
Complete Participant	Covert observation Observer becomes immersed as a member of the group Key aspect is role-pretense, where the observer pretends to be a colleague interacting on a day to day basis with participants, without true identity or purpose of the research being known
Participant as observer	Involves long periods of observation Similar to complete participant except role-pretense is minimised with relationships developing between the observer and participants Overt observation

(Gold 1958; Mays & Pope 1995; Mulhall 2003)

A structured or unstructured approach can be used to collect data during observation. Structured observation uses a systematic approach, such as a checklist or tool, to collect data on a specific behaviour or topic, providing a focus for observation. Unstructured observation allows the observer to take notes in the setting on observations, reflections and conversations as needed, allowing for flexibility with data collection (Schwartz-Barcott et al. 2002; Turnock & Gibson 2001). In this study, in-the-moment conversations allowed the researcher to validate their observations to ensure situations were interpreted fairly and appropriately, and to clarify and elaborate on responses from participants (Schneider et al. 2014). A combination of structured and unstructured data was collected in this phase by using a specifically developed observation tool.

3.4.2.1 Observation tool development

Development of the observation tool (Appendix B) was informed by a review of literature and findings from the key informant interviews. The structured aspect of the tool collected data on common WRN actions – medication administration, interventions

and diagnostics – and focused the observer on observing communication, collaboration and documentation activities performed by participants. Unstructured data were collected using free text spaces and white spaces in the observation tool, allowing the observer to record notes on, for example, observation of participant interactions, reflections and quotes from in-the-moment conversations whilst in the setting, as they occurred.

Two expert emergency nurses, who had experience with the role, reviewed the observation tool in March 2016 to determine content and face validity, as discussed in Section 3.10.2. A pilot study in March 2016 was also undertaken to test feasibility of the observation tool in the clinical setting. Permission was obtained from the Nurse Unit Manager (NUM) of one of the participating EDs for the researcher who would conduct the observation sessions to perform a four-hour observation period in the clinical setting. Verbal consent was obtained from the WRN working at that time.

Based on feedback from the content and face validity measures and pilot study, the tool was redesigned. The final version contained four sections for recording data: i) episodes of communication; ii) documentation and episodes of triage performed by WRN; iii) interventions and diagnostics; and iv) free notes and reflections throughout the observation. Space was also available in each of the first three sections for free notes. A summary of the observation tool is presented in Table 3.6.

Table 3.6 Summary of observational tool

Section	Number of items	Descriptor	Source for items
Verbal communication	7	Number of times WRN verbally communicated with patients, Triage Nurse, Nurse-in-charge, allied health, medical officer, attendants and family/carers Free text space for observations, reflections and conversations with WRN during observation	Integrative review Key informant interviews
Documentation	8	Number of times WRN was observed to perform written documentation Number of times WRN completed triage process with presenting patients Free text space for observations, reflections and conversations with WRN during observation	Key informant interviews
Interventions/Diagnostics	27	Number of times medications were administered by WRN Number of times intravenous fluids were administered by WRN Number of interventions performed by the WRN e.g. cannulation, first aid and patient assessments Free text space for observations, reflections and conversations with WRN during observation	Integrative review Key informant interviews
Free text and white space	-	Free text and white space for observations, reflections and conversations with WRN during observation	-

3.4.3 Survey

An online survey (Appendix C) was used to collect data in Phase 3. Surveys enable systematic collection of data on the same variables from large samples, providing a structured data set that enables direct comparison between respondents (de Vaus 2014). The advantages to using web-based surveys are that they are easy to distribute, have faster response times, decreased costs to administer, are convenient to respondents (Roberts 2007), and have reduced data entry errors (Jansen, Corley &

Jansen 2007). Additionally, if skip logic is used, respondents are only asked relevant questions (de Vaus 2014; Roberts 2007), as was the case in this research. There is no evidence in the literature to justify an appropriate length of time a survey should be open to maximise the response rate, although when planning for the data collection period the researcher needs to consider factors such as seasonality and holidays (Schmidt, Wang & Sonenstein 2008).

3.4.3.1 Survey design

A search of the literature revealed no surveys that addressed the aims of this phase of the research. Therefore, an original survey was designed using four stages – i) identifying the data for collection, ii) developing draft questions, iii) establishing validity of the survey items, and iv) piloting the survey.

The first step of identifying data to be collected involved re-reading the literature and reviewing findings from the key informant interviews and observations in practice. This process identified broad concepts that related to exploring current policies and processes, roles and responsibilities, preparation and experience of nurses prior to commencing as the WRN, and perceptions of the role. During the process of determining concepts, clear definitions were developed to ensure consistency for respondents (de Vaus 2014). For example, in this survey, a statement on what constituted a WRN was provided for respondents.

The second step was drafting questions and identifying an appropriate order so that concepts identified could be measured. This required moving from broad concepts to specific items sin the survey. An important consideration at this stage was how the data would be analysed, as this would affect how questions would be asked or constructed (de Vaus 2014).

Based on this, the survey was developed with 112 questions divided into five sections: i) participant demographic data; ii) roles and responsibilities, experience and

educational preparation of RN performing the role; iii) policies and processes; iv) communication and documentation; and v) general comments.

After drafting the questions, the survey was entered into SurveyMonkey®[1]. The link was then emailed to the supervision team to review the survey for interpretation, clarity, and functionality. Based on this feedback the categories did not change but the total number of items decreased to 43 through the use of multi option lists and greater use of open-ended questions, to lessen the burden on participants (de Vaus 2014). A summary of the survey content is provided in Table 3.7.

[1] www.surveymonkey.com

Table 3.7 Summary of survey

Section	Number of items	Descriptor	Source for item
Participant demographics	7	Place of employment; role/title; years of nursing and emergency nursing experience; highest educational qualification; and if triage prepared	Observation
Waiting room nurse role	13	Allocation of WRN in their ED; title of role; aim/purpose; roles and responsibilities; minimum emergency experience prior to commencing in the role; able to perform triage; minimum postgraduate qualifications; any additional educational requirements	Integrative review Key informant interviews Observation
Policies and protocols	19	Identify if standing orders or clinical pathways guide practice; identify specific standing orders or clinical pathways; identify any other policies or protocols that guide practice; identify how often policies and protocols are reviewed; and if nurses are involved in the review process Identify if WRN is permitted to administer any of the following: Oral, inhaled and topical medications (19 medications listed and one option for other) Any intravenous medications and/or /fluids (fluids and four medications and one option for other) Oxygen administration Identify and discuss if any medications are not permitted to be administered by WRN Identify interventions permitted to perform (13 listed and one option for other) Identify and discuss if any interventions are not permitted to be performed Under which circumstances is the WRN permitted to triage Discuss any specific aspects of patient assessment; any policy or protocols associated with reassessment; and process for escalating patient deterioration	Integrative review Key informant interviews Observation
Communication and documentation	2	Discuss importance of effective communication and documentation in the WRN role	Integrative review Key informant interviews Observation
General comments	2	Identify any barriers or challenges associated with WRN role Add any additional comments	

Skip logic was utilised to ensure that respondents were not asked irrelevant questions. For example, if a respondent indicated that their ED did not have WRN, then skip logic directed respondents to the end of the survey and asked if they thought a WRN might be beneficial to their ED, and why or why not, before ending the survey. The maximum number of questions a respondent could answer was 43, based on having a WRN role in their ED and answering all relevant questions. If their ED did not have WRN, respondents answered 11 questions.

The third step was to establish face and content validity, discussed in Section 3.10.2. In February 2017, the survey web-link was sent to two experienced emergency nurses, who had familiarity with WRN and some research knowledge. These nurses were not included in the survey sample. Feedback was provided on wording and flow of questions to ensure they were appropriate and clearly written, contributed to meeting the study aim, and flowed logically. Overall the nurses agreed that the questions were appropriate and addressed the aims of the survey; some suggestions were made for changes to the skip logic to improve the experience for respondents.

The final step was a pilot study to confirm reliability. Six experienced emergency nurses with backgrounds in management and education completed the survey as a pilot in February and March 2017. These emergency nurses were not involved in establishing content or face validity and were excluded from the survey sample. It was deemed that these nurses would be able to interpret and answer questions appropriately and be able to provide feedback. Two of the respondents in the pilot study were not familiar with a WRN role, ensuring that all aspects of the survey, including skip logic, could be tested. Respondents were requested to complete the survey, noting the time it took them to complete, and provide feedback on the questions including clarity, flow and whether they addressed the aim of the research. Analysing the results from the pilot study found similar responses from respondents, therefore establishing reliability of the survey. Overall the nurses in the pilot agreed that the questions addressed the aim, were

appropriate, flowed well and took between 10 to 30 minutes to complete depending on the number of questions they were required to answer.

3.4.4 Thematic analysis

Qualitative data collected from the key informant interviews and observations in practice were analysed using a six-step thematic analysis approach, as outlined by Braun & Clarke (2006). Data were initially read separately, and then repeatedly re-read to allow immersion. Similar words or phrases were then identified and coded, with categories identified as relationships and links emerged in the codes. Categories with similar meaning were then merged to create themes. Themes were then re-checked against the entire data set for relevance to the research aim and refined prior to finally being written up (Braun & Clarke 2006).

3.4.5 Quantitative content analysis

Quantitative content analysis is a form of content analysis used to analyse data from research in the naturalistic paradigm (Hsieh & Shannon 2005). This approach was used to analyse data from the open-ended responses from the practice survey. Quantitative content analysis is a numerical approach to data analysis, consisting of a systematic interpretation of the text data by counting codes (keywords or content) identified within the data set. The codes are then tabulated to summarise the data, with results presented numerically. Effectively the researcher is answering a question by identifying what the responses are and their frequency in the data. This approach is used when meaning cannot be inferred from the data (Hsieh & Shannon 2005; Morgan 1993); it also allows for unobtrusive, objective analysis of the data set, and provides basic insights into how words are used (Hsieh & Shannon 2005).

Quantitative content analysis is an acceptable data analysis technique, as counting is actually a form of pattern recognition. This is important for describing the content, or what needs to be understood, in the text data (Morgan 1993). All qualitative

data undergo a degree of quantification to identify patterns as part of any analysis (Berelson 1952).

The content analysis framework by Hsieh & Shannon (2005) was used to guide the analysis. This framework uses the steps of i) identifying the research question, ii) selecting the sample, iii) defining categories, iv) outlining the coding process, v) implementing the coding process, vi) determining trustworthiness, and vii) analysing results.

3.4.6 Statistical analysis

Descriptive data were collected from the survey. Each item response was entered into IBM's SPSS Software© (V.24) data file for analysis. Each data set was given a unique identifier (1-198) and entered as a single observation. Responses from the survey were recorded using 83 variables.

First, continuous data were assessed for normality using the Kolmogorow-Smirnov test and significance was set at <0.001 for violating the assumption of normality. Based on the non-normal distribution of all data variables, nonparametric tests were used to analyse the data (Pallant 2013). Participant demographics were examined using descriptive statistics (frequencies, percentages, median and interquartile range). Demographic data included highest educational qualification, role/title, state/territory working in, triage prepared, and years of nursing and emergency nursing experience. Frequencies, percentages, median and interquartile range were also used to examine the data relating to the profile of WRNs in Australia. Data in this set related to the presence of a WRN in their ED, title of the role, experience and/or preparation prior to commencing in the role, any requirements to be postgraduate and/or triage prepared and which standing orders or clinical pathways (if any) underpinned practice. This data also identified the roles and responsibilities of WRNs including medication administration, interventions performed, triage and reassessment of patients.

3.5 Ethical Considerations

This section presents the overarching ethical considerations relevant to the research. This is followed by a discussion on the ethical considerations specific to each phase of the study.

3.5.1 Overarching ethical considerations

This study was conducted in accordance with the National Statement on Ethical Conduct in Human Research (National Health and Medical Research Council 2007), and the University of Technology Sydney, Responsible Conduct of Research Policy (University of Technology Sydney 2014). The values and principles of autonomy, privacy, confidentiality, beneficence and justice applied to this research. Potential risks were minimised by careful consideration of ethical principles related to the study.

3.5.1.1 Autonomy

The use of Participant Information Sheets and obtaining consent in each phase ensured that autonomy and individual responsibility was maintained. Autonomy and individual responsibility ensure participants are able to independently make informed decisions, free of coercion, and based on their personal beliefs and values (Schneider et al. 2014). Participant Information Forms outlined the research aims and purpose, potential risks and benefits of the research, and highlighted voluntary participation with options to withdraw free of any repercussions, allowing for an informed decision about participation to be made (Schneider et al. 2014).

3.5.1.2 Privacy and confidentiality

Participant privacy and confidentiality was considered (National Health and Medical Research Council 2015), with all data collected de-identified, gender-neutral pseudonyms used to report findings, and anonymity protected in published works arising from the study. Demographic data were presented in aggregate form. Digital data were

stored on a password-protected computer in the locked office of the researcher, and printed documents were stored in a locked filing cabinet in a locked office to which only the researcher had access.

3.5.1.3 Beneficence

Beneficence means that the benefits must outweigh any risks of harm or discomfort to participants (National Health and Medical Research Council 2007). All three phases of the study were considered as being low/negligible risk for participants, as inconvenience, but no harm, was anticipated (National Health and Medical Research Council 2015). There were no high-risk, vulnerable or culturally diverse populations involved in the research (National Health and Medical Research Council 2007).

3.5.1.4 Justice

Fairness when dealing with others and ensuring risks and benefits are clear to participants, referred to as justice, was considered in this research (Schneider et al. 2014). Justice was achieved by selecting participants who met the clear inclusion criteria and informing them of the research aims and their role through the use of Participant Information Sheets (Schneider et al. 2014). Research findings, a benefit of the research, were distributed to participants as soon as practicable (National Health and Medical Research Council 2007). Both organisational and individual consent was required for the study, which is described for each phase later in this chapter.

3.5.2 Ethical considerations for key informant interviews

Approval was granted from the UTS Human Research Ethics Committee (HREC) (UTS HREC Approval Number: 2015000226) (Appendix D) in June 2015. Following approval, an email inviting key informants (Appendix E) to participate was sent to their publicly available email addresses, with a Participant Information and Consent Form (Appendix F) attached. Written informed consent was obtained from key informants prior to interviews commencing.

3.5.3 Ethical considerations for observations in practice

Ethical approval was gained from Monash Health (Site A) HREC (LNR/16/MonH/130; LNRSSA/16/MonH/168; HREC Ref: 16188L) in May 2016 (Appendix G). Approval was then ratified by the UTS HREC (UTS HREC REF NO. ETH16-0546) in July 2016 (Appendix H), with Ballarat Base Health Services (Site B) HREC approval (HREC Reference Number: LNR/16/BHSSJOG/35) granted in August 2016 (Appendix I).

A Participant Information Form (Appendix J) was attached to an email inviting participation (Appendix K), outlined the purpose and potential risks and benefits of the research, and that participation was voluntary, with no repercussions if they chose not to do so. Contact details of the research team and complaints officer were also included.

On advice from the HREC secretariat at one of the health services, only verbal consent was required, due to the low level of risk for participants. Verbal consent was therefore obtained from each participant at the beginning of each observation session. In a private location, a conversation took place between the observer and the participant. Participants were reminded of the aim of the research, offered a printed copy of the Participant Information Form to keep, advised that participation was voluntary and that the session could end at any time they requested. Participants were also informed that the observer would be taking notes of observed interactions, processes and practices with patients, family and staff, and from general conversations that took place to ensure that situations would be interpreted in a fair and appropriate way. One participant declined to participate and no further communication was made with them. No complaints were received by the ethics secretariats in regards to the research. Patients were considered part of the research environment, therefore consent from patients was not required.

3.5.4 Ethical considerations for practice survey

Ethics approval was granted from the UTS HREC (UTS HREC Approval Number: ETH17-1248) in May 2017 (Appendix L). A letter requesting permission to use the membership database to recruit participants was sent to CENA in May 2017. Permission was granted in June 2017 (Appendix M). The CENA research committee does not grant ethics approval, but reviews applications to ensure the research is methodologically and ethically sound, and will contribute to emergency nursing knowledge. Implied consent was based on respondents' completion of the survey. Respondents were informed of consent in the Participant Information Form (Appendix N), attached to the email inviting (Appendix O) them to participate prior to commencing the survey.

3.6 Key informant interviews method

The primary aim of the key informant interviews was to explore the factors contributing to development of the WRN role. Semi-structured interviews with key informants were identified as the most appropriate data collection. A description of the sample, recruitment, data collection and data analysis is presented below.

3.6.1 Sample and recruitment

A purposive sampling approach was developed to recruit key informants. These were identified through reviewing published literature on WRN roles, and through consultation with emergency nurse leaders in key positions from CENA. Six key informants were identified and invited to participate via email, with five consenting to participate. Publicly available email addresses were used to contact key informants.

3.6.2 Data collection

As described above, interviews were guided by six open-ended questions (Table 3.4). Interviews were conducted by the researcher and audio-taped with permission.

Three interviews were face-to-face, at a time and location convenient to the key informant, while two were conducted by phone.

3.6.3 Data analysis

Interview recordings were transcribed verbatim and responses de-identified prior to beginning analysis. Data were analysed using the six-step thematic analysis by Braun & Clarke (2006) as previously discussed in Section 3.4.5. Initial analysis was performed by the researcher, with emerging categories and themes discussed with the supervision team until consensus was reached. After analysis and summary of results were drafted, member checking occurred: key informants were sent a copy of their interview transcript and summary of results, enabling them to provide feedback, clarify points, question interpretations and present alternate reasons or opinions (Kumar 1989). This ensured that a detailed understanding of key informant perspectives and experiences of implementing WRN was ascertained.

Data saturation was achieved with a homogeneous sample of five key informants, representative of the population being studied. No new information or insights emerged from reflection and re-reading the data, therefore no further interviews were required.

3.7 Observations in practice method

The primary aim of this phase was to identify the activities and behaviours of WRNs working in the ED setting. Participant observation was identified as the most appropriate method to collect data in this phase. A description of the setting, sample recruitment, data collection and data analysis is presented below.

3.7.1 Setting

The study setting was two Australian EDs (Table 3.8). Both settings had a private, dedicated space for use by WRNs, close to triage and the waiting room. This space consisted of a desk with a computer and a patient assessment space; one ED had a

trolley, while the other had a reclining chair. Both spaces also contained oxygen and suction supplies, emergency airway equipment, blood glucose machines and trolleys with equipment for venepuncture and cannulation. An electrocardiography (ECG) machine and weight scales were located in close proximity in both settings. Standing orders were in place in both settings in the form of nurse-initiated policies. As discussed in Chapter One, standing orders, authorised by medical officers, provide a guide for appropriate assessment and interventions for a variety of patient presentations (Considine 2011). In both settings nurse-initiated analgesia administration and x-ray ordering were in use; one ED also had nurse-initiated pathology ordering. Nurses were not directly supervised and determined their own priorities for work.

Table 3.8 Description of ED settings

Study setting characteristics	**Setting 1**	**Setting 2**
Hospital		
Type	Secondary referral	Tertiary referral
Location	Metropolitan hospital, major Australian city	Regional hospital, Victoria (Australia)
ED Presentations (2015-16)[1]	69 289	53 307
ED Structure (n=bed spaces)	59	28
Resuscitation	4	3
Cardiac monitored	20	10
Non-monitored	0	8
Fast Track	9	5
Short stay	18	8
Nurse Staffing (per shift)		
Morning (0700-1530hr)	18	18
Afternoon (1300-2130hr)	19	20
Night (2100-0730hr)	14	16
Varied shift hours[2]	3	1

[1] (Australian Institute of Health and Welfare 2016); [2] Included Waiting Room Nurse role

3.7.2 Sample and recruitment

Inclusion criteria for the sample were RNs currently working in the WRN role. Purposive sampling was used to recruit participants. Nurse Unit Managers (NUMs) from both settings identified RNs who worked as WRNs, and sent them an email providing details of the study and their participation. Commencement of each observation session

was the first time the observer had direct contact with participants. At this time, the observer spoke with the nurse who had been allocated to the role to identify if they were willing to participate in the research, and gained verbal consent.

3.7.3 Data collection

A combination of structured and unstructured approaches supported the observation periods, using an observation tool. A separate tool was completed for each observation period. Further reflections on observations were entered into a field diary at the end of each session. The observer gained permission from the NUM to enter the field to perform the observation on pre-determined dates and times. As previously discussed, the researcher adopted a non-participatory role of 'observer as participant'. Any risk to the interactions being classified as superficial or not being understood were lessened as the observer was an experienced, triage-prepared ED nurse with knowledge and experience of the ED setting and activities. This enabled the observer to be accepted in the setting and to draw on their own expertise and experience to interpret the activities and behaviours of participants (Bonner & Tolhurst 2002; Goodwin et al. 2003; Turnock & Gibson 2001). Although not part of the group and only having brief interactions with participants, the observer was able to interact and converse with them, and could step in and out of the group as needed.

The conversations occurred in areas of the ED free of patients, predominantly in the WRN space or the triage area, after the participant had attended to all patient care needs and prior to commencing an interaction with another patient. Conversations occurred over periods of five to 10 minutes at a time on multiple occasions during each observation session. Conversations were not audio recorded.

Observation and conversations occurred over the entire time the WRN was in operation for that work period. The WRN role operated in both EDs for specific periods of the day: 1200-2000hr and 1000-1900hr to coincide with peak patient presentations.

No observations therefore occurred between 2000hr–1000hr. In total, observations and conversations occurred with eight nurses over thirteen episodes between June and November 2016 (Table 3.9). Data saturation was reached during these observation periods, with no new activities or interactions observed and repetition in field notes entries evident.

Table 3.9 Description of observations

Observation	Site	
	A	B
Observation period	June-July 2016	November 2016
Number of observations	8	5
Number of nurses	6	2
Observation times	1200 - 2000 hours	1000 - 1900 hours
Duration of observations	4:00h – 5h:25m	3h:30m – 6h:25m
Average length of observations	4h:40m	5h:41m
Total observation time	37h:25m	28h:25m

3.7.4 Data analysis

Data collected from the observation tool and diary were analysed using descriptive statistics and thematic analysis. Descriptive statistics, reported as frequencies and percentages, were used to report observable activities such as the frequency of medications administered and interventions and diagnostics performed by participants.

All qualitative data from observation, reflection, and conversations, including direct quotes, were viewed as one data set for analysis. Handwritten notes were typed and then analysed using the six-phase thematic analysis framework by Braun & Clarke (2006) as previously discussed in Section 3.4.5. The data set was read and reread for familiarity, then coded, categorised and merged into themes with similar meaning through an iterative process. Initial analysis was conducted by the researcher. Supervisors then independently reviewed the data set and collectively agreed on the identified codes and themes.

Data saturation was reached within the context of the naturalist paradigm guiding the research, and a relatively homogeneous population was observed in the clinical setting. After re-reading field notes and reflecting on the data, no new information or themes emerged, therefore no further observation time was required.

3.8 Practice survey method

The primary aims of this phase was to explore implementation of the role in Australian EDs, and to identify emergency nurses' perceptions of the WRN role. A survey was identified as the most appropriate method to collect these data. A description of the sample, recruitment, data collection and data analysis is presented below.

3.8.1 Sample and recruitment

Purposive sampling was used to identify respondents. The sample consisted of RNs who were members of CENA and who had relevant professional knowledge and insights, and were able to reflect on and explore their experiences of WRN roles.

Recruitment was via the CENA secretariat, who distributed an email to all members inviting them to respond to the survey. The email contained a link to the survey, brief statement on the study, Participant Information Form and contact details of the researcher so that members could ask any questions.

3.8.2 Data collection

After ethics approval and permission was granted from CENA to access their membership database, data collection commenced. As outlined in Section 3.4.3, a survey was developed to collect data via an online platform SurveyMonkey®. The survey remained open from the 1st June until 30th June 2017. A reminder email was sent to members by the CENA secretariat on the 19th June, one week prior to the survey closing. A four-week period was chosen to allow for rotation of emergency nurses onto night duty, usually a two-week period.

3.8.3 Data analysis

As discussed in Section 3.4.7, descriptive data were collected from the survey, with each item response entered into IBM SPSS Software© (V.24) data file. Each data set was given a unique identifier (1-198) and entered as a single observation. Responses from the survey were recorded using 83 variables.

Non-parametric tests were used to analyse the data due to non-normal distribution, determined using the using the Kolmogorow-Smirnov test (significance set at <0.001 for violating the assumption of normality) (Pallant 2013). Frequencies, percentages, median and interquartile range were used to analyse participant demographics, including highest educational qualification, role/title, state/territory working in, triage preparation, and years of nursing and emergency nursing experience. These tests were also used to analyse data relating to the profile of WRNs in Australia, including presence of a WRN, title of the role, experience and/or preparation prior to commencing in the role, postgraduate and/or triage prepared, and standing orders or clinical pathways (if any) underpinning practice and responsibilities of WRNs.

The quantitative content analysis framework by Hsieh & Shannon (2005), as outlined in Section 3.4.6, was used to analyse responses to the open-ended items. Keywords were identified from review of the literature and findings from key informant interviews and observations of practice. Responses were analysed manually. Initially the data set was read to evaluate the quality of the responses and to become familiar with the data so as to identify keywords in the text. Supervisors then independently reviewed the data set and collectively agreed on the selected keywords.

A word count was then performed to discover the frequency of keywords. The researcher then identified words or phrases that had similar meaning to the keyword to ensure context of the data were ascertained. An example of this was survey Item 10 (shown in Appendix C), ‘Discuss the aim or purpose of the WRN in your ED’, where the keyword ‘observation’ was counted; the researcher then reread the data to identify terms

that had similar meaning, for example ‘re-assessment’, ‘monitor’ and ‘detect patient deterioration’. All of these terms were then counted together. The process was then repeated with the remaining open-ended responses. Additional key words were also identified during the data analysis.

3.9 Integration at analytical and interpretation level

Integration of qualitative and quantitative data in a single study is a cornerstone of mixed-methods (Guetterman, Fetters & Creswell 2015; Teddlie & Tashakkori 2009). Effectively integrating different but complementary data sets allows for a comprehensive understanding of the topic to be developed, including agreeing or opposing findings (Bazeley 2012; Fetters, Curry & Creswell 2013; Teddlie & Tashakkori 2009). Integration occurs best when results are being identified and before final conclusions are made (Bazeley 2012).

In this study, integration of data occurred at several points. The sequential design allowed data collection and analysis from each phase to guide data collection in the next phase (Bazeley 2012; Fetters, Curry & Creswell 2013). Questions for the semi-structured interviews used in the initial phase were derived from the critical analysis of the literature. Findings from the key informant interviews guided the identification of items in the observation tool. The results of key informant interviews and the observations then guided development of survey questions for the final phase. Integrating findings from each phase helped to clarify qualitative findings and provided context, expanding the data collected in each phase (Teddlie & Tashakkori 2009).

On completion of data collection and analyses from the three phases, each phase was then integrated using the Logic Model to examine organisational structures and processes. Used in health care, the model has been used to collect input data and summarise outcomes from programs (Alter & Murty 1997; MeDeiros et al. 2005). The Logic Model uses a diagram to demonstrate links between components (W. K. Kellogg

Foundation 2004; Weiss 1972). Demonstrating linear relationships, the Model identifies resources required to implement a program (inputs), identifies the activities/services (process) of the program and the immediate and longer term outcomes and results (output) (W. K. Kellogg Foundation 2004). Figure 3.3 presents the Logic Model.

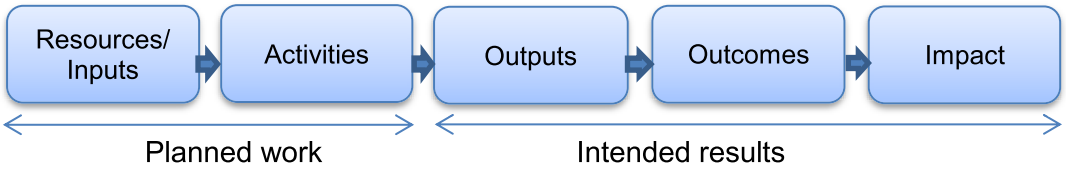


Figure 3.3 Basic Logic Model (W. K. Kellogg Foundation 2004)

The Logic Model assumes that certain resources are required, and that if accessible the activity can be completed, benefitting patients in a particular way. This has an ultimate effect on the organisation, system or community (W. K. Kellogg Foundation 2004). As demonstrated above in Figure 3.3, the Logic model is comprised of two stages – planned works and intended results. Each of these stages is then comprised of elements – resources, activities, outputs, outcomes and impact (W. K. Kellogg Foundation 2004; Weiss 1972). The stages and elements of the Logic Model are described in Table 3.10.

Table 3.10 Logic Model

Stages	Elements
Planned works	Resources • human, financial, organisational and community resources anticipated to implement the program Activities • processes, tools, technology and actions required to implement the program. Generally derived from the resources available
Intended outcomes/results	Outputs • desired direct results of implementing the program. May include types of service and target audience. Outcomes • measured short term outcomes of implementing the program Impact • long-term implications (intentional or unintentional) of implementing the program

(W. K. Kellogg Foundation 2004; Weiss 1972)

Results from the three phases of this thesis have been integrated using an adaptation of the logic model to demonstrate the resources (inputs) required to implement the WRN (Section 7.4), the activities performed by the WRN (Section 7.5) and the outcomes of implementing the role (Sections 7.6, 7.7 and 7.8).

3.10 Trustworthiness and rigour

The following section discusses the methods for assessing trustworthiness of the qualitative data collected in all phases of the research and rigour of the quantitative data collected in the survey.

3.10.1 Trustworthiness

As the research was conducted within the paradigm of naturalism, trustworthiness was used to evaluate the worth or quality of the qualitative data (Guba 1981; Lincoln & Guba 1985). Assessing trustworthiness was based on the four criteria of truth value, applicability, consistency, and neutrality. In naturalistic terms, the criteria

are referred to as credibility, transferability, dependability, and confirmability (Guba 1981; Lincoln & Guba 1985). A descriptor for each criterion is presented in Table 3.11.

Table 3.11 Naturalistic criteria to assess trustworthiness

Criteria	Descriptors
Credibility	'Truth' established in the findings
Transferability	Degree to which findings can be applied in other contexts or with other participants
Dependability	Ability to repeat the research in the same or similar context
Confirmability	Degree by which results are based on participants and not on bias, interests or perspectives of the researcher

(Guba 1981; Lincoln & Guba 1985)

Trustworthiness was established with the key informant interviews. Credibility was initially determined by: i) key informants volunteering to participate, therefore offering data freely; ii) the researcher developed rapport with key informants; iii) the use of clarifying questions to obtain data during the interview; iv) use of an iterative process to analysis data with the researcher and supervisors; and v) member checking of results and conclusions (Guba 1981; Lincoln & Guba 1985; Shenton 2004).

Sufficient, descriptive data were collected and provided to allow for transfer or comparison in other settings, including details on the number of key informant and data collection methods, contributing to transferability (Guba 1981; Lincoln & Guba 1985; Shenton 2004). Consistency was attained as the method was described in detail, allowing the research approach to be repeated in the future (Shenton 2004). Additionally, all data from key informants were included in the findings and given equal weighting (Kumar 1989).

For confirmability in key informant interviews, there were several potential sources of bias. By maintaining an objective position, and ensuring conclusions were drawn from consensus within the research team, investigator bias and hypothesis confirmation bias were minimised. Consistency bias and coherence, seeking consistent responses or searching for coherence in opposing comments, was evident in key informant responses. Finally, responses were re-examined to ensure that an emphasis

was not placed on any specific key informant to decrease elite bias and concrete bias (Guba 1981; Kumar 1989).

Similar methods were utilised with the observation data collected to ensure trustworthiness. Credibility was established as participation was voluntary and the researcher was able to develop a therapeutic relationship with key informants during the observation period. An iterative process with the researcher and the supervision team was used to analyse data to ensure the findings were plausible and reflected the whole data set. Data collection at two different sites increased transferability, as well as the provision of in-depth information on the method. Dependability was established by in-depth information on the method, which included details on the content and face validity testing and a pilot study of the observation tool prior to use in the clinical setting. Confirmability was also considered; to minimise bias the researcher performing the observation maintained an open and honest approach, maintaining privacy and confidentiality, both in the field and in field notes. The researcher was mindful not to impose personal thoughts or assumptions while in the field, remaining objective.

As with previous phases, a similar process was undertaken to establish trustworthiness in the third phase. Key words were identified through an iterative process with the research team, establishing credibility. Transferability was established due to the multiple respondents from varying settings. Face and content validity testing and a pilot study of the tool ensured dependability. Confirmability was evident, as the survey was anonymous, with no influence from the researcher possible.

3.10.2 Rigour

In quantitative research, study quality is assessed by rigour. Rigour is evaluated by validity and reliability. Validity refers to the accuracy and truth of the data and findings. In this research, content and face validity were used. Face validity refers to the tool measuring or testing what it intended to, while content validity uses experts in the field

to give their opinion in regards to the validity of tool (Schneider et al. 2014). Reliability refers to the consistency and dependability of the tool, and represents the extent to which the tool, used in the same context, with the same methods and participants, would yield similar results (de Vaus 2014).

Rigour of the observation tool was established with face and content validity testing. Initially, two expert emergency nurses, with experience of the WRN role, reviewed the tool to confirm that it measured what it was designed to measure. A pilot study tested the feasibility of using the tool in the clinical setting to identify any ambiguities or misunderstandings associated with it (Schneider et al. 2014).

Validity testing of the survey was performed, with face and content validity tested by two emergency nurses, familiar with WRN roles and with research experience, reviewing the survey to determine whether it addressed the research aims, flowed logically and used clear terminology. Reliability was then tested with six experienced emergency nurses completing the survey: similar results were returned, therefore establishing the tool's reliability.

3.11 Conclusion

In this chapter, the use of a mixed-methods exploratory sequential design, with a priority on qualitative data, was presented. Data were analysed sequentially with findings guiding subsequent phases. Results of key informant interviews guided development of the observation tool for the observations in practice. Findings from this phase guided the survey design for the final phase. The methods relating to each phase of the research were presented along with a justification for selecting and ensuring the quality of the data collected. All ethical considerations and approvals related to the research were outlined. Chapter Four presents the results of the key informant interviews.

CHAPTER FOUR – RESULTS: KEY INFORMANT INTERVIEWS

4.1 Overview

This chapter presents the findings from Phase 1, the key informant interviews, of the research. Key informants were interviewed to explore implementation of WRNs in Australian EDs. The introduction, materials and design is presented, followed by the results, discussion and conclusion.

The findings are presented verbatim from the manuscript published as part of this thesis. The full reference for the paper is:

> Innes, K,. Jackson, D., Plummer, V. & Elliott, D. (2017). Emergency department waiting room nurse role: a key informant perspective. *Australasian Emergency Nursing Journal* 20(1), 6-11. DOI: 10.1016/j.aenj.2016.12.002.

Presented in Word version, the chapter narrative is the accepted version of the manuscript by the Journal, formatted to match the thesis for consistency. Tables have been re-numbered, and references have been re-located from the paper and collated in the reference list at the end of the thesis.

4.2 Emergency Department Waiting Room Nurse Role: A Key Informant Perspective

4.2.1 Introduction

Hospital emergency departments (EDs) continue to face challenges including increasing patient presentations (Di Somma et al. 2015), an aging population (Hwang et

al. 2013) and limited resources (Di Somma et al. 2015). As a result EDs have become overcrowded and waiting times have increased, contributing to poor patient outcomes (Bernstein et al. 2009) and poor patient and family experiences in the ED (Dinh et al. 2013). To decrease waiting times a number of strategies have been introduced including time-based key performance indicators (KPIs) and the introduction of a waiting room nurse role (Crawford et al. 2014).

KPIs relating to waiting times include overall length of stay in ED and time from triage to treatment. The National Emergency Access Target (NEAT) requires that 90% of patients are transferred or discharged from the ED within four hours of arrival (Crawford et al. 2014). Time from triage to treatment is measured against a patient's clinically relevant waiting time, as determined by their triage category. Triage categories indicate urgency of care, based on the patient's presenting condition (Australasian College of Emergency Medicine 2016a). The process of allocating a triage category is referred to as a primary triage decision. Secondary triage decisions relate to initiating patient care and patient disposition, for example providing analgesia or commencing investigations (College of Emergency Nursing Australasia 2015b). In Australia, the five tier ATS is used to allocate triage categories (Australasian College of Emergency Medicine 2016a). The KPI requires a percentage of patients within each category to be seen within the allocated time. For example the Category 3 KPI requires that 75% of patients in this category must be seen within 30 min (Sibbritt, Isbister & Walker 2006).

Decreasing waiting times is a focus of the waiting room nurse role. The nurse in this role provides care for patients in the ED waiting room after triage. Aims of the role are to assess and monitor the condition of patients' in the ED waiting room, commence interventions early, detect clinical deterioration and improve communication between patients, families and staff (Innes et al. 2015).

There is however, a paucity of literature in relation to the impact of waiting room nurse roles on patient outcomes and ED workflow and performance. Existing literature

identified a lack of clarification about the role, and the support required to make the role effective (Innes et al. 2015). The scope of the role has been defined by standing orders, clinical guidelines and pathways (Fry & Jones 2005) which guide decision-making (Considine et al. 2012). Those undertaking the role were reported to need effective interpersonal communication skills with patients and staff (Considine et al. 2012; Fry et al. 2013). While nurses reported that the role improved patient care and outcomes (Fry & Jones 2005; Fry et al. 2012), there was limited evidence to support that the role improved patient outcomes (Innes et al. 2015) as waiting times and patient length of stay (Considine et al. 2012) did not decrease (Fry & Jones 2005). Understanding why the role was first conceived and introduced is an important initial step in the evaluation of the implementation and effectiveness of the role.

4.2.2 Materials and Methods

This paper presents the results of a study exploring why and how the waiting room nurse role was implemented in Australian EDs.

4.2.2.1 Design and sample

An exploratory approach using key informants was used to address the aim. Exploratory designs enable exploration of a phenomenon when little is known about it (Cooper, Porter & Endacott 2011; Creswell & Plano Clark 2011), in this case introduction of waiting room nurse roles. Key informants are individuals with a high level of knowledge and/or engagement with the topic of interest, and are respected as being experts in the field. Purposive sampling was therefore used to recruit key informants (Schneider et al. 2014) relevant to the waiting room nurse role. The authors consulted with emergency nurse leaders in key positions in the College of Emergency Nursing Australasia (CENA), the peak professional body representing emergency nurses in Australia (College of Emergency Nursing Australasia 2016), and reviewed published literature on the phenomenon to identify six key informants. They held positions of authority and had

experience in implementing a waiting room nurse role into an ED, and accordingly could provide an insider view of role need and development, with reflection and in-depth insight into the phenomenon (Kim, Elliott & Hyde 2004; Marshall 1996).

4.2.2.2 Ethical considerations

This study adhered to the National Statement on the Conduct of Human Research by the Australian National Health and Medical Research Council and was approved by the supporting university Human Research and Ethics Committee. Key informants were recruited via publically available email addresses. Written informed consent was obtained.

4.2.2.3 Data collection

Initially six key informants were approached for involvement, and five consented to participate. Data saturation was achieved within this sample and no further interviews were required (Guest, Bunce & Johnson 2006). Interviews were undertaken by the first named author and audio-taped. Three interviews were face to face, in a location convenient to the key informant, while two were conducted by phone. Interview duration ranged from 13-41 min (average 25 min). Participants were asked to clarify meaning of responses during the interview.

Semi-structured interviews were conducted using an interview guide. The interview guide consisted of six open-ended questions used to seek clarification, explore previous answers and ensure that the research aim was met (Schneider et al. 2014). This format allowed for uninterrupted responses from key informants (Taylor & Francis 2013). The trigger questions were: (i) what were the reasons for ED waiting room nurse role being implemented?; (ii) who performs/ed the role; their level of nursing and emergency nursing experience and educational preparation (formal and informal)?; (iii) were there any specific preparations prior to commencing in the role (e.g. orientation)?; (iv) what are/were the responsibilities and skills to be undertaken?; (v) were there any

underpinning protocols/governance?; and (vi) was any evaluation of the role performed? Prompts were used to refocus key informants where necessary.

4.2.2.4 Data analysis

Interviews were transcribed verbatim and responses de-identified. Transcripts were analysed separately using thematic analysis, to systematically classify data into categories and then themes representing similar meanings. Transcripts were repeatedly read as a whole so that researchers immersed themselves in the data. Exact words or phrases were then highlighted and assigned codes, as transcripts were re-read word for word to identify emerging concepts. Categories were identified from the codes as relationships and links were recognised (Hsieh & Shannon 2005; Moretti et al. 2011). This approach enabled a detailed understanding of key informants' perceptions and experiences of implementing the role (Hsieh & Shannon 2005; Polit & Beck 2014). Emerging categories and themes were then discussed by the research team until consensus was achieved (Krefting 1991; Noble & Smith 2015). Each key informant was sent a copy of their own interview transcript and a summary of the results, enabling them to provide feedback, clarify points, question interpretations and present alternate reasons or opinions (Kumar 1989).

4.2.3 Results

The five key informants were experienced emergency nurses who participated in policy development and implementation of an ED waiting room nurse role. Their professional backgrounds varied across education, ED management and hospital management from five metropolitan EDs in two Australian states (Victoria and New South Wales). Key informants all had more than 10 years of ED experience, and held positions as Unit Manager, Clinical Nurse Consultant, Nurse Educator, Practice Development Leader or Practice Development Nurse during implementation of a waiting room nurse role in their ED.

From the interview data, seven categories (Table 4.1) were identified which were then merged into five themes (Table 4.2): Expedite care; Three pillars of introduction; Funding sources; Challenges to implementation; and Evaluating the benefit. These themes are discussed below, with de-identified direct quotes used as exemplars or to clarify issues (for example narrative from the first key informant interview is reported as KI 1).

Table 4.1 Identified categories

	Patient Safety	Scope of Practice	Experience	Preparation for the Role	Funding	Role Conflict	Evaluation
KI 1	✓	✓	✓	✓	✓	✓	✓
KI 2	✓	✓	✓	✓	x	✓	✓
KI 3	✓	✓	✓	✓	x	x	✓
KI 4	✓	✓	✓	✓	✓	✓	✓
KI 5	✓	✓	✓	x	✓	x	✓

KI, key informant

Table 4.2 Identified Themes

	Patient safety	Scope of practice	Experience	Preparation for the role	Funding	Role conflict	Evaluation
Expedite care	✓	x	x	x	x	x	x
Three pillars of introduction	x	✓	✓	✓	x	x	x
Funding sources	x	x	x	x	✓	x	x
Challenges to implementing	x	x	x	x	x	✓	x
Evaluating the benefit	x	x	x	x	x	x	✓

4.2.3.1 Expedite care

Providing a nurse in the waiting room was designed to expedite patient care, in particular decreasing waiting times. Prior to the introduction of the waiting room nurse role, triage nurses performed both primary and secondary triage activities, including initiating analgesia, pathology and radiography requests. These secondary activities contributed to delays as the triage nurse was often "*too busy triaging and actually couldn't* [attend to secondary triage]" (KI 3) requirements. Key informants reported that patients could often spend extended periods in the waiting room, "*at times … waiting 8, 10 or 12 hours … it just seemed unreasonable that any consumer would wait to have a service provided*" (KI 1). The aim of the waiting room nurse was primarily to mitigate against risk, and improve the safety and quality of care delivery. Participants identified that there "*were very unwell patients sitting in the waiting room for an extended period of time*" (KI 2). Extended waiting times were considered to pose the greatest risk to care and safety, so the waiting room nurse role "*was introduced as a strategy to reduce time to investigations and treatment, reduce length of stay and promote a collaborative approach to emergency care*" (KI 3) and to "*assess, monitor*, [and] *intervene if appropriate*" (KI 1).

With the potential for patients' clinical condition to deteriorate, re-assessment of waiting patients was identified as a key component of the role. The waiting room nurse needed to be able to "*come back and reassess to make sure that their interventions had been appropriate*" (KI 1) and "*identify the deteriorating patient*" (KI 2).

Prior to introduction of the role, extended waiting times resulted in some patients being redirected from the ED to seek care at an alternate health care provider, such as a general practitioner. The key informants reflected that on occasions, these patients were not triaged, and likely not assessed. A number of these *"patients were actually quite unwell"* (KI 4) and required care in the ED. Redirecting patients to external services placed the patients at risk of adverse outcomes. Risk mitigation, through preventing adverse patient outcomes, was therefore a focus of the waiting room nurse role.

Risk mitigation was also reflected in time related KPIs. Key informants reported that prior to the role being introduced, ED staff were finding the performance indicators difficult to meet, in particular, the Category 3 KPI. The *"KPI for Category 3 patients was sitting in the 50% [range]"* (KI 4), demonstrating increased waiting times and potentially compromising patient care and safety. Introduction of the role allowed care for Category 3 patients to commence in the waiting room. Waiting room nurses *"start[ed] work on the category 3 [patients], commenced procedures, to speed up the patient journey so [patients] don't have a long wait"* (KI 5). This contributed to Category 3 patients *"being seen within their allotted 30 min"* (KI 5).

4.2.3.2 Three pillars of introduction

Key informants reported that there were three key pillars to enabling the smooth introduction of the waiting room nurse role: defining and supporting the scope of practice, selecting nurses with appropriate experience and expertise, and preparing nurses to fulfil the role. It was imperative that the waiting room nurse role be clearly defined. In defining the waiting room nurse role, key informants described how the role differed from that of the triage nurse and the Nurse Practitioner. Key informants reported that the waiting room nurse was essentially responsible for all secondary triage activities, as well as reassessment of patients in the waiting room, *"it was a role that was about trying to do the secondary assessment, the post-triage assessment, and then try and identify treatment pathways for those patients, which included nurse initiated X-ray, nurse initiated pathology, analgesia, and ideally then to get those second and potentially third reassessments done in the waiting room".* To this end, key informants reported that waiting room nurses required a *"range of extended activities"* (KI 1).

All key informants identified that standing orders underpinned the extended practices performed by the waiting room nurse. In one ED, nurse initiated policies were written in collaboration with a multidisciplinary team including emergency physicians, ED directors, pharmacy and radiology staff. Another ED developed specific *"Category 3 pathways"* (KI 4) for the waiting room nurse to initiate interventions when these patients could not be moved directly into a treatment space. Similarly, another ED adapted a manual of clinical pathways from an interstate hospital to meet the particular needs of their department*; "each pathway had some*

key [patient] history points, assessment features like red flags and guidelines around pathology and potential medications" to be administered (KI 2). In this model *"medications were all nurse-facilitated"* (KI 3), meaning *"the emergency physician still had to order the medications"* (KI 3). Overall, nurse initiated policies included medications such as analgesia and intravenous fluids; procedures including specific pathology and x-ray requests; and management of presenting conditions including chest pain and shortness of breath. The skill set for nurses undertaking the role included basic life support, cannulation, recording and interpreting electrocardiogram, patient assessment and venepuncture.

Preparation for the role varied across sites. A multidisciplinary model of education was introduced in one ED to upskill staff prior to commencing in the role, using an "in-house" approach *"provided by the emergency physicians, [emergency] nurses, educators and other disciplines such as surgeons and radiologists"* (KI 1). Workshops including scenarios to discuss clinical pathways, any potential clinical risk and communication including *"patient satisfaction, effective communication and therapeutic relationships"* (KI 3) were used in another ED. The workshops also covered *"the role, the Clinical Nurse Specialist role, and the Nurse Practitioner role and how they were different"* (KI 3), as well as *"Nurses Board scope of practice guidelines that were in place at the time [and] … the Drugs and Poisons Legislation"* (KI 3). No formal preparation was provided in one ED, based on the premise that nurses undertaking the role were working within *"their [Registered Nurse] current scope of practice"* (KI 5).

There were varied views on the level of experience required by those performing the role, with the only consensus being that the position required a Registered Nurse (RN) skill set. The majority of key informants identified that the role required an experienced RN who did not necessarily need triage preparation; that is *"not really junior, … some experience"* (KI 2*); "didn't necessarily have to be a highly experienced nurse … somebody capable of doing some interventions without requiring assistance"* (KI 5) and *"didn't necessarily have triage experience, but needed to be a senior decision-maker and be able to work autonomously"* (KI 4). One key informant stated that they *"preferred that the waiting room nurse could not triage, so that they*

were not tempted to fall back into that role" (KI 4). Conversely, one setting required a *"postgraduate prepared emergency nurse with the level of decision-making required of triage nurses"* (KI 3).

Level of experience was linked to efficacy of the role. Less experienced nurses *"didn't see as many patients quite as quickly"* (KI 2). Ensuring that the *"right people were in the role"* (KI 5) was also important for effective communication. The role was identified as being *"ideal to facilitate good communication"* with those in the waiting room (KI 5) and the multidisciplinary team in the ED. The waiting room nurse needed to be able to communicate with the "*nurse in charge if they felt that the patient needed to come … into a [treatment] area"* (KI 2) and "*liaise with the triage nurse"* (KI 2) if they felt the patient's condition had changed. Effective communication with medical staff was also identified as a key skill.

4.2.3.3 Funding Sources

Key informants reported that initially, there was no funding to support the waiting room nurse role, and therefore was resourced by *"internal funding"* (KI 5) from existing local hospital and ED budgets, and which *"was not necessarily ongoing funding"* (KI 5). The significance of the role was highlighted in the late 2000s when the New South Wales State Government allocated additional specific funding for the role. One participant noted that the *"initiative was brilliant in providing resources to actually make and sustain the model"* (KI 1). In Victoria, funding for the role did not change and remained the responsibility of the ED and health care networks. Despite a lack of dedicated funding for the waiting room nurse role, it continued in a number of departments due to the leadership and vision of ED managers and advocates.

4.2.3.4 Challenges to implementing

Challenges identified with implementing the role, included role confusion and conflict within both the nursing team and the multidisciplinary team. In one model, despite the expectation that the triage nurse and the waiting room nurse *"would work in synergy with each other"* (KI 5), some conflict was identified. This seemed to arise as a result of a 'waiting room nurse list', which the triage nurse completed to inform the waiting room nurse of any care needs

identified during the triage process. The intention of the list was to improve communication, and therefore patient care and outcomes, however, some waiting room nurses *"felt that the triage nurse was telling them how to do their job"* (KI 4) when using this list.

Role confusion was also identified, in particular, around where triage finished and subsequent emergency care began. There was a perception that *"most emergency nurses [understand] where triage stops and emergency care begins"* (KI 3). Medical staff were identified as often not understanding the role, particularly in relation to the difference between primary and secondary triage activities. Medical staff were reported to direct requests for secondary triage activities to the triage nurse, rather than the waiting room nurse. To address this, one key informant described aspects of work undertaken was to ensure the role was *"acceptable to medical staff"* (KI 1).

4.2.3.5 Evaluating the benefit

Limited evaluation of the role had been undertaken. Monitoring *"as opposed to any formal evaluation"* (KI 5) occurred in three EDs, and it was reported that *"Category 3 patients [were] seen in a more timely manner"* (KI 2). One ED reviewed the number of patients who left before being seen by a medical practitioner (recorded as 'did not wait'), and found *"no reduction"* (KI 4). This was attributed to the fact that *"did not waits traditionally [occurred] later in the night and overnight"* (KI 4) when the waiting room nurse role was not operational. Studies examining nurse initiated diagnostics and treatment, and the waiting room nurse role compared to other advanced practice roles in ED were reportedly undertaken at two sites.

4.2.4 Discussion

This study provided an insight into the introduction of a waiting room nurse role, from the perspective of key informants involved in the initial implementation of the role in five metropolitan EDs across Victoria and New South Wales. Findings demonstrated that the role was introduced to mitigate risk and improve the quality and safety of patient care by expediting care delivery in ED waiting rooms. The use of standing orders to guide practice were common

at each site, although preparation for the role and level of experience varied. Implementation challenges included role conflict and confusion, as well as funding sources.

Unreasonable waiting times, risk of adverse events and meeting ED performance KPIs were reasons identified for implementing the role. While one aim of implementing the role was to expedite care and therefore limit length of stay for patients presenting to the ED, there was no evidence from the key informants that this was formally evaluated. However, it is well documented in the literature that increased waiting times are associated with increased length of stay, patient deterioration and increased mortality (Hong et al. 2013; Pines et al. 2010; Scott, Considine & Botti 2015; Sikka et al. 2010). One group of particular concern, as highlighted by key informants, were Category 3 patients ('urgent'; to be seen within 30 min of arrival, may be clinically unstable with potentially life threatening conditions) (Australasian College of Emergency Medicine 2016a). Category 1 patients (immediately life threatening condition, need to be seen immediately) (Australasian College of Emergency Medicine 2016a) and Category 2 patients (critically ill, need to be seen within 10 min of arrival) (Australasian College of Emergency Medicine 2016a) are generally transferred directly into the treatment areas. During busy periods, this may result in Category 3 patients being left waiting for a treatment space, despite having a potentially life threatening condition. Without frequent re-assessment, deterioration in this group of patients may not be detected until the patient is critically unwell. The waiting room nurse role can potentially identify patient deterioration earlier, playing a role in risk management and risk mitigation in the ED waiting room (Australian Council on Healthcare Standards 2013). Further research is therefore required on the effect the role has on waiting times and risk mitigation.

Variation in experience, preparation, roles and responsibilities were described by key informants at the different sites. This was also found in the wider literature with experience ranging from a minimum two years emergency nursing experience and completion of an orientation program, through to being a postgraduate prepared triage nurse with advanced assessment and conflict resolution skills (Innes et al. 2015). Of note, there was no evidence of a standardised approach for preparing nurses for the role in the literature. Local policy

determined all aspects of the role including title, with some settings referring to the role as the Clinical Initiative Nurse (CIN). These findings were similar to published literature (Innes et al. 2015).

Interestingly, key informants commonly used the terms advanced practice and extended practice when referring to the role. This ambiguity in terminology is also identified in the literature due to the absence of clear and concise definitions (Innes et al. 2015). There is no defined level of experience or educational qualification for the waiting room nurse role. Further research is therefore required to determine the level of experience and preparation required of those undertaking the role to maximise efficacy and risk mitigation.

One of the challenges to the introduction of the waiting room nurse role, was the role conflict generated both between the triage nurse and waiting room nurse, and between disciplines. This was evident prior to implementation, when a key informant identified that the role had to be acceptable to medical staff and did not encroach on their roles and responsibilities. This concept, known as 'territoriality', occurs when individuals, professions or organisations defend their area of responsibility (territory) against a perceived threat (Axelsson & Axelsson 2009; Ferreira, Penteado & da Silva Júnior 2013). Territoriality can result in a power struggle that sees limited resources and energy used to fight against each other, rather than collaborating and working together to achieve a common goal (Axelsson & Axelsson 2009; Ferreira, Penteado & da Silva Júnior 2013).The solution to these conflicts was to ensure the role was developed in collaboration with other members of the ED team. This was evidenced by the use of a multidisciplinary approach to write policy and educate nurses prior to commencing the role.

While evaluation is key to establishing the effect of the role on quality of care and safety for patients in the waiting room, limited formal evaluation had been undertaken. This was also reflected in the published literature where study designs and methods varied (Innes et al. 2015). There is a need for further research evaluating the scope and effect of the waiting room nurse role.

4.2.5 Study strengths and limitations

A number of strengths and limitations are noted. Data saturation was achieved within the sample size. Although duration of the interviews was relatively short, adequate time and use of silence was provided to enable considered responses. Trustworthiness of the research was established through trust value, applicability, consistency and neutrality (Krefting 1991; Noble & Smith 2015). Trust value was undertaken through member checking, specifically obtaining feedback from the key informants, on the findings to ensure that data had been interpreted correctly (Krefting 1991; Noble & Smith 2015). Applicability was achieved as rich, descriptive data is provided allowing for comparison (Krefting 1991; Noble & Smith 2015). Consistency was achieved as all data from key informants was included in the findings, given equal weighting (Kumar 1989) and emerging themes were discussed within the research team (Krefting 1991; Noble & Smith 2015). Finally, neutrality was achieved as bias was considered by the researchers (Krefting 1991; Noble & Smith 2015). Investigator bias was considered; to prevent hypotheses confirmation bias, the interviewer set out to maintain an objective position, and conclusions were drawn from consensus within the research team (Kumar 1989). Consistency and coherence was evident from key informant responses, limiting any risk of bias. To decrease elite bias and concrete bias, responses were re-examined to ensure that an emphasis was not placed on any specific key informant (Kumar 1989). Finally, there was no attempt to compare how the role currently operates or varies across jurisdictions, including title, scope of practice or underlying policy.

4.2.6 Conclusion

Key informants identified the reasons for introducing a waiting room nurse role. Key informants identified that the role was introduced to provide safe, quality care in ED waiting rooms and potentially play an important role in risk mitigation. Standing orders and policies were consistently used to define the scope of the role. However, preparation for the role, and the level of experience required, varied. In implementing the role emergency nursing leaders

faced challenges of role conflict and confusion, and a lack of funding. Key informants reported limited formal evaluation of the role.

Based on these findings and the related literature, further research into this role is needed. Recommended topic areas include the extent to which the role is utilised in the clinical setting, including any variations within or across jurisdictions; patient and relative perspectives on the role; the impact the role has had on patient waiting times; and examination of KPIs and risk mitigation.

4.3 Summary

Findings of the key informant interviews were presented in this chapter. This phase of the research identified that the WRN was introduced into some Australian EDs to improve care and safety for those patients located in the waiting room. Variations were identified in relation to standing orders guiding practice, preparation and experience. In this phase of the research, a number of challenges associated with role were identified including funding issues, role confusion and conflict. The following chapter presents the findings from Phase 2, observation in practice.

CHAPTER FIVE – RESULTS: OBSERVATION IN PRACTICE

5.1 Overview

This chapter presents the findings from Phase 2, observation in practice. The aim of this phase of the research was to identify the activities and behaviours of WRNs in ED settings. The introduction, background and methods are presented, followed by the results, discussion and conclusion.

The findings are presented verbatim from the manuscript published as part of this thesis. The full reference for the paper is:

> Innes, K., Elliott, D., Plummer, V., & Jackson, D. (2017). Emergency department waiting room nurses in practice: An observational study, *Journal of Clinical Nursing*. 27(7-8), ppe1402-1411. DOI: 10.1111/jocn.14240.

Presented in Word version, the chapter is the accepted version of the manuscript by the Journal, formatted to match the thesis for consistency. Tables have been re-numbered, and references have been re-located from the paper and collated in the reference list at the end of the thesis.

5.2 Emergency Department Waiting Room Nurses in Practice: An Observational Study

5.2.1 Introduction

In response to increased waiting times, poor patient outcomes (Bernstein et al. 2009), and patient dissatisfaction (Garling 2008a), some emergency departments (EDs) have expanded care to patients while still in ED waiting rooms, prior to being seen by a doctor. One model of this post-triage waiting room-based care is a waiting room nurse (WRN); the role is separate and distinct from the triage nurse, but acts as an adjunct and in concert with the triage

role. The scope of practice includes post-triage assessments, commence early interventions, re-assessments for waiting patients and to improve communication for patients and families in the waiting room who have yet to be allocated a treatment space in the ED (Innes et al. 2015).

5.2.2 Background

Current literature on the WRN is limited, and has focused on the technical and operational aspects of the waiting room role, including reporting of tasks and activities performed, and their contribution to decreasing waiting times (Cheng et al. 2013; Considine et al. 2012; Fry & Jones 2005; Huang et al. 2013). Despite this emphasis, no clinically significant reductions in overall waiting times, ED length of stay, or number of patients leaving without being seen by a medical officer were found (Cheng et al. 2013; Considine et al. 2012; Fry et al. 2012; Huang et al. 2013).

There is also a paucity of literature relating to other aspects of WRN role, including the reasons for implementation (Innes et al. 2017), and the nurses' skills, knowledge and experience required to effectively and efficiently perform the role. With no exploration of the activities undertaken or the behaviours demonstrated by nurses in this challenging environment to care for patients and families, we sought to address this limitation, by identifying the activities and behaviours of WRNs in ED settings.

5.2.3 Methods

5.2.3.1 Design

This non-participant observational study is drawn from a larger exploratory sequential mixed-methods doctoral study examining the nursing role in ED waiting rooms. Mixed-methods research combines two or more different approaches to data collection and analysis in a single study (Tashakkori & Teddlie 1998b), and uses the strengths while counteracting the weaknesses of the different approaches (Creswell 2009). Exploratory sequential design is used when little is known about a topic, and places an emphasis on qualitative data followed by the collection of quantitative data to explain and quantify the results (Creswell 2009).

Using mixed methods, data collected in earlier phases inform each progressive phase. The sequential design used in this study enabled data collected from an integrative literature review and Phase 1 to inform data collection in this current observational phase (Creswell 2009; Creswell & Plano Clark 2011). The results from the integrative review (Innes et al. 2015) and Phase 1 (Innes et al. 2017) have been reported elsewhere. The aim of this phase of the research was to identify the activities and behaviours of WRNs in ED settings.

5.2.3.2 Study setting

The setting for the study was two Australian EDs. Details of both EDs are presented in Table 5.1. Both settings had a private, dedicated space for use by participants, close to triage and the waiting room. This space consisted of a desk with a computer and a patient assessment space, one ED had a trolley, while the other had a reclining chair. Both spaces also contained oxygen and suction supplies, emergency airway equipment, blood glucose machines and trolleys with equipment for venepuncture and cannulation. An electrocardiography (ECG) machine and weight scales were located in close proximity in both settings. Standing orders were in place in both settings, in the form of nurse initiated policies. Authorised by medical officers, standing orders provide a guide for appropriate assessment and interventions for a variety of patient presentations (Considine 2011). In both settings, nurse-initiated analgesia administration and x-ray ordering were in use, one ED also had nurse-initiated pathology ordering. Nurses were not directly supervised and determined their own priorities for work.

Table 5.1 Description of ED settings

Study setting characteristics	Setting 1	Setting 2
Hospital		
Type	Secondary referral	Tertiary referral
Location	Metropolitan hospital, major Australian city	Regional hospital, Victoria (Australia)
ED Presentations (2015-16)[1]	69 289	53 307
ED Structure (n=bed spaces)	59	28
Resuscitation	4	3
Cardiac monitored	20	10
Non-monitored	0	8
Fast Track	9	5
Short stay	18	8
Nurse Staffing (per shift)		
Morning (0700-1530hr)	18	18
Afternoon (1300-2130hr)	19	20
Night (2100-0730hr)	14	16
Varied shift hours[2]	3	1

[1] Australian Institute of Health and Welfare (2016); [2] Includes WRN role

5.2.3.3 Sample and recruitment

The samples were Registered Nurses working in the WRN role. Purposive sampling was used to recruit participants. Nurse Unit Managers (NUM) from both settings identified Registered Nurses who worked as WRN, and sent an email informing them of the project. The observer gained permission from the NUM to enter the setting to perform the observation on pre-determined dates and times. At the commencement of each observation session was the first time the observer had contact with participants. At this time, the observer spoke with the nurse who had been allocated to the WRN role to identify if they were willing to participate in the research and gained consent.

5.2.3.4 Data collection

Participant observation was identified as the most appropriate method as it allowed for the WRN to be observed first hand, undertaking their normal responsibilities in their normal setting. This allowed the researcher to see how participants worked within, and related, to the environment in real time (Mulhall 2003). Referred to as the 'gold standard' in qualitative research (Murphy & Dingwall 2007), observation is a systematic approach to data collection, whereby the researcher gathers information by seeing what people actually do, rather than

what they report they do (Gold 1958; Mulhall 2003). In observation, data are collected through observing practices, responses, behaviours, and through listening and enquiring (Borbasi, Jackson & Wilkes 2005; Jackson et al. 2016). Observation is therefore an ideal method for exploring the activities and behaviours of WRN in the clinical setting, as in-depth insights and understandings could be gained (Morse 2003).

Data collection was performed by the first named author. Gold (1958) identifies two approaches to the non-participant observer role. In this study 'observer as participant' was the non-participant observer method adopted by the researcher, as, unlike the 'complete observer', it enables social interaction with participants (Gold 1958). As a non-participant observer, the observer was an independent and non-judgemental outsider to the group. Although not part of the group and only having brief interactions with participants, the observer was able to interact and converse with participants and could step in and out of the group as needed (Schneider et al. 2014). This was due to the observer being an experienced, triage prepared ED nurse, familiar with, and having knowledge and experience of the ED setting and activities (Turnock & Gibson 2001), enabling the observer to be accepted in to the setting (Bonner & Tolhurst 2002) and draw on their expertise and experience to interpret the activities and behaviours of participants. Observation was overt, with participants being aware of the aim of the study and that they were being observed (Turnock & Gibson 2001).

Observational data were recorded regarding participant interactions, processes and practices with patients, family and staff. In-the-moment clarifying conversations with participants were also used. Conversations allowed the observer to validate their observations to ensure situations were interpreted fairly and appropriately, and to clarify and elaborate on responses from participants (Schneider et al. 2014). The conversations occurred in areas of the ED free of patients, predominantly in the WRN space or the triage area, after the participant had attended to all patient care needs, and prior to commencing an interaction with another patient. Conversations occurred over periods 5-10 min at a time on multiple occasions during each observation session. Conversations were recorded in field notes and were not audio recorded.

Observation and conversations occurred over the period the WRN were in operation, limited in both EDs to 12:00-20:00hr and 10:00-19:00hr, to coincide with local peak patient presentations. No observations therefore occurred between 20:00–10:00hr. In total, observations and conversations occurred with eight nurses over 13 episodes between June - November 2016 (Table 5.2). Data saturation was reached during these observation periods, with no new activities or interactions observed and repetition of field note entries (Boddy 2016).

Table 5.2 Description of observations

Observations	**Site**	
	A	**B**
Observation period	June-July 2016	November 2016
Number of observations	8	5
Number of nurses	6	2
Observation times	12.00 – 20.00 hours	10.00 – 19.00 hours
Duration of observations	4:00h – 5h:25m	3h:30m – 6h:25m
Average length of observations	4h:40m	5h:41m
Total observation time	37h:25m	28h:25m

A combination of structured and unstructured observations were used to examine participant activities and behaviours. Structured observation used a systematic approach to collect data on specific aspects of the role, including medication administration, interventions and diagnostics. Unstructured observation allowed the observer to use free text to record notes on observations of participant interactions with staff and those in the waiting room, quotes from participants during the conversations and the observer's reflections while in the setting in real time (Turnock & Gibson 2001). Further reflections on observations were also entered into a field diary at the end of each session (Mulhall 2003).

To allow for the recording of structured and unstructured data, an observation tool, informed by critical appraisal of the literature and results from key informant interviews, was developed. Two expert emergency nurses, who had experience with the WRN operating in their ED, reviewed the observation tool to determine face validity (Schneider et al. 2014). A pilot study, comprising of a four-hour observation period in the clinical setting, was used to test feasibility, to identify any ambiguities and misunderstandings associated with the observation

tool (Schneider et al. 2014). Based on feedback, the observation tool was revised to improve flow and terminology was changed to ensure clarity.

The observation tool contained four sections for recording data: i) episodes of communication with patients, triage nurses, nurse-in-charge, allied health, medical officers, attendants and family/carers; ii) documentation performed by WRN including with patients, medication charts, triage nurse, nurse-in-charge, allied health, medical officer and information technology systems, as well as episodes of WRN performing triage; iii) interventions and diagnostics completed by the WRN [eight medications with a space for 'Medication – other' and 18 interventions/diagnostics were listed]; and iv) free notes and reflections throughout the observation. Space was also available in each of the first three sections for free notes (Appendix B). A separate observation tool was completed for each observation period.

5.2.3.5 Data analysis

Data collected from the observation tool and diary were analysed using descriptive statistics and thematic analysis. Descriptive statistics, reported as frequencies and percentages, were initially used to summarise observable activities such as medications administered and interventions and diagnostics performed by participants. All qualitative data from observation, reflections and conversations, including direct quotes, were viewed as one data set for analysis. Hand written notes were typed and then analysed using a six-phase thematic analysis framework outlined by Braun & Clarke (2006). Initially, familiarity was established by reading and re-reading the data set. Data were then coded by identifying similar phrases or words. Themes were then formed by collating codes and re-checked across the entire data set for relevance to the research aim. Finally, themes were refined and named before being written up. Themes were identified through an iterative process, with initial analysis conducted by the first named author. Co-authors then independently reviewed the data set and collectively agreed on the identified codes and themes (Braun & Clarke 2006).

5.2.3.6 Ethical considerations

The study was approved by the Human Research Ethics Committee (HREC) of both health services and the supporting university as low risk, in accordance with the requirements of the National Standard on Ethical Conduct in Human Research 2007 (National Health and Medical Research Council 2007). In line with HREC approval, an email was sent from NUMs to participants with a participant information form attached outlining the purpose, potential risks and benefits of the research and that participation was voluntary with no repercussions if they chose not to participate. Contact details of the research team and HREC complaints officer were also included. The NUM had no further involvement in the research and were not aware of which nurses participated or did not participate; therefore, there was no potential for coercion or perceptions of constraint by potential participants.

Given the low level of risk for participants (National Health and Medical Research Council 2007, Guideline 2.2.5a), and in line with HREC approval, informed verbal consent was obtained from each participant at the beginning of each observation session. In a private location, a conversation took place between the observer and the participant. Participants were reminded of the aim of the research, offered a printed copy of the participant information form to keep, advised that participation was voluntary and the session could end at any time they requested. Participants were informed that the observer would be taking notes using an observation tool to record interactions, processes and practices with patients, family members and staff, and from clarifying conversations. One WRN declined to participate, and no complaints were received. Patients were considered part of the environment for this project; therefore, consent from patients was not required.

5.2.4 Results

Through conversation, it was ascertained that emergency nursing experience of the participants varied from three years to greater than 15 years, with six participants having completed or currently undertaking postgraduate emergency nursing qualifications. All participants were triage prepared. Two participants worked only as a WRN, while the remaining

six participants rotated through the position. Two participants had limited experience in the role, with one participant observed in their first shift as the WRN and another having less than two months' experience. All participants were female.

Results of descriptive statistics showed that various forms of analgesia, paracetamol (n = 31), non-steroidal anti-inflammatory medications (n = 18) and oral opioids (n = 10), were the most common medications administered (Table 5.3).

Table 5.3 Oral medications administered

Medication	Frequency
Paracetamol	31
Non-steroidal anti-inflammatory	18
Opioids (Endone)	10
Ondansetron	4
Panadeine or Panadeine Forte	4
Bronchodilator	2
Antihistamine	1
Aspirin	1
Diazepam	1
Prednisolone	1

The most common interventions and diagnostics performed were intravenous (IV) cannulation (n = 34), recording an ECG (n = 26) and urinalysis (n = 14) (Table 5.4).

Table 5.4 Interventions and diagnostics performed

Intervention	Frequency
Intravenous cannulation (including pathology)	34
Electrocardiogram	26
Urinalysis	14
Venepuncture (including pathology)	7
Wound care	4
Commence oral rehydration therapy	3
Rest, Ice, Compression and Elevation (RICE) of injury	3
Blood cultures	1
Application of a sling	1
Venous blood gas sample	1
Wound swab	1

Results of the thematic analysis are presented under four identified themes: Experience of nurse positively affected patient care; Unpredictable workload coupled with

diverse patient care needs; Delivering patient-centred care; and Identified delays and resource limitations. These themes are discussed in detail below.

5.2.4.1 Experience of nurse positively affected patient care

Although all participants were considered to be experienced emergency nurses, they were not all experienced in the WRN role. The two least experienced WRN, as outlined above, were observed to be less confident in prioritising care and were unsure of underpinning policy and processes, seeking clarification from other staff within the ED. This potentially contributed to them being less efficient in the role. During conversation, two participants discussed their view that efficiency of the role was impacted by the experience of the WRN.

During a further conversation, one participant expressed their perception that triage prepared nurses were more effective in the role, stating they had "*better decision-making skills and do not need to be delegated tasks by the triage nurse*" (P4). Additionally, during the conversation, the participant also expressed that they felt triage prepared nurses in the WRN role were a resource for less experienced triage nurses, such as confirming a triage category and appropriate management of patients. Assisting as a resource to triage was observed on two occasions. An observed example was when one participant, after being asked to administer analgesia to a patient, identified that a trauma patient had been allocated a triage category that did not reflect their urgency of care. The participant worked with the triage nurse to identify clinical descriptors and an appropriate triage category as per the Australasian Triage Scale (Australasian College for Emergency Medicine 2013), as well as analgesia options for optimal patient outcomes. This intervention resulted in the triage nurse escalating patient care and communicating with the nurse-in-charge to arrange an appropriate cubicle for the patient to be transferred due to their risk of clinical deterioration. In one ED however this ability to triage was a challenge, with one participant noting that WRNs were "*not meant to triage*" (P2). On occasions, this conflicted with patient needs, especially when patients experienced delays being triaged. Despite triage not being a formal, sanctioned part of the role in one setting, it was observed that participants in both settings assisted with triage when available to do so.

Clear evidence of clinical decision-making was observed; the nurses with experience in the WRN role (n = 6) independently anticipated and prioritised care needs and interventions for patients in the waiting room, including paediatric patients and families. Importantly, these participants were observed to implement a holistic approach to patient care, anticipating patient care needs including care that fell outside nurse-initiated policies. Examples of this included having requests for venous blood gases and blood cultures added when other pathology was being taken and making referrals early to allied health services.

5.2.4.2 Unpredictable workload coupled with diverse patient care needs

Workload for participants was observed to be variable and unpredictable; at times, there were no patient care needs in the waiting room, while on other occasions, care demands exceeded the capacity for a single WRN. On one occasion when the waiting room became overcrowded, a second nurse was sent to assist the allocated WRN to manage the workload.

Care needs for patients in the waiting room were diverse and variable. Focused patient assessments relating to their presenting condition were frequently observed. It was noted that participants had longer time to assess and gather information on the presenting condition and history compared to triage nurses. On one observed occasion, this additional information resulted in a change to a patient's clinical urgency and re-allocation of triage category.

Reassessing and monitoring patients was an important aspect of the role and contributed to ensuring patient safety in the waiting room. This was highlighted when participants were observed to detect six episodes of patient deterioration. These patients were immediately reassessed and prioritised with appropriate escalation of care implemented. Deterioration was detected in patients brought into WRN space as well as those in the waiting room. On one occasion, a participant identified and prioritised care of a patient 'slumped' in a chair in the waiting room.

In both settings, participants reported they could only administer IV fluid or nitrates to patients in the waiting room if they had permission from the nurse-in-charge as a "*last resort with the preference to find a cubicle in the department*" (P1), due to safety concerns, need for

close patient monitoring and risk of patient deterioration. It was observed on one occasion that IV fluids were administered to a patient allocated to the waiting room. After initially assessing the patient, the WRN requested a medical review where the decision was made to commence IV fluids. As there were no cubicles available in the ED, the participant commenced the fluids in the corridor within close proximity to WRN space. After this episode of care, a conversation with the participant revealed the decision to care for the patient in the corridor was made on an assessment that there were low patient safety risks and concerns, and this would keep the WRN space free to continue seeing patients.

It was observed that nurses in both settings assisted with the allocation and flow of patients from the waiting room into a cubicle, effectively acting as an 'intake' nurse. Participants in conversation stated this occurred to circumvent normal channels of calling for attendants, who may not be available, or directing patients to find cubicles, which can be challenging due to the layout of the ED or language barriers. On several occasions, participants actually commenced assessment of patients once in the cubicle; in particular, patients with time-critical conditions such as chest pain, if another nurse was not immediately available. After seeking further clarity, participants stated they saw this as an appropriate aspect of their workload as it meant that essential care was not delayed.

5.2.4.3 Delivering patient-centred care

A holistic patient-centred care approach to patient care was observed. This was evidenced through all participants, experienced triage prepared emergency nurses, meeting the physical, emotional, social and spiritual needs of patients and their families. Patients' physical needs were met through assessing and commencing interventions to manage their presenting condition such as administering analgesia for pain or antiemetic for nausea.

Central to the emotional care of patients and families was the development of therapeutic relationships and communication. Participants were observed to make eye contact, introduce themselves and explain their role to patients and families. Patient-centred care was delivered by participants being respectful, empathetic and sincere when listening to patient

histories. Participants ensured that patients and families were involved with all discussions and decisions relating to their presentation and plan. Participants were observed to clarify unclear points and used language and terminology appropriate for specific patients. This ensured that rapport was established quickly with patients and families, across all age groups.

Participants also explained the WRN role and informed patients and families of ED processes, which contributed to addressing issues such as uncertainty and distress. During one conversation, a participant explained to a patient and their family that she "*was going to get things started and hopefully results would be back by the time they saw a medical officer*" (P7). The participant stated that she "*gets no backlash from patients*" (P7), as she clearly communicates the role and advises "*people of delays*" (P7). Alleviating uncertainty and distress was also observed through participants requesting that patient and families let them know if they became more unwell or had concerns while waiting.

Another observed example of meeting the emotional needs of patients was when a participant identified a patient experiencing mental health difficulties who had become restless and agitated in the waiting room. The participant engaged with the patient to assess and assist them with managing their distress and anxiety, effectively demonstrating de-escalation as a therapeutic communication technique.

Spiritual needs of patients and families were observed to be met through the delivery of culturally competent care. The WRN was observed to make referrals and collaborate with health care workers in their organisation who could ensure that social, cultural and linguistic needs of patients were met. An example of this was participants referring patients to the Indigenous liaison worker.

Disseminating information and discussing management of illness or injuries at home was observed. For example, a patient had returned to the ED to have his burns reviewed as he was unsure about their ongoing management. The participant reassessed the burns and reassured the patient that there were no complications and then proceeded to discuss the application of the cream, specifically addressing patient questions and concerns.

A high level of collaboration with triage nurses was also evident and helped ensure appropriate and timely care was delivered to patients in the waiting room. Frequent handover and updates were observed, with a focus on ascertaining if there were any urgent care needs for recently triaged patients. During a busy period, one participant was observed to start a written list of patient care needs that the triage nurse added to. Other forms of written communication observed were documenting in patient ED charts, medication charts and electronic medical records. Participants were also observed to collaborate with midwives, medical staff, allied health, pharmacy, security, ambulance, mental health liaison, pathology and clerks to deliver patient-centred care in ED waiting rooms.

An observed challenge to communication was the noisy environment. In one ED, it was observed that the triage, waiting room and WRN space was a relatively open space, with clerks, doctors and security present. Multiple conversations therefore made it difficult for participants, patients and families, to concentrate and hear when interacting.

5.2.4.4 Identified delays and resource limitations

Participants were observed to experience a number of delays and time away from the waiting room area. One observed factor contributing to delays was medical officers often being difficult to locate and not immediately accessible to review an ECG or discuss management plans for example. Not having nurse-initiated pathology ordering caused additional delays and frustration for participants in one ED. Despite having identified which bloods tests were required, participants had to locate a medical officer to order the pathology. On an ad hoc basis, a rapid assessment medical officer was allocated in one of the EDs, which improved access and efficiency.

Conversely, medical officers occasionally experienced delays accessing the WRN, also leading to delays and potentially compromising safety for patients in the waiting room. It was observed that intermittently during busy periods, both participants and medical officers were assessing and commencing management for patients in separate spaces. If the WRN was unavailable the medical officer would return patients to the waiting room with no handover,

resulting in participants "*needing to be a detective*" (P4) to locate paperwork and determine management plans.

Environment and other staff practices also contributed to delays. Although some patient assessment and interventions could be undertaken in the waiting room, privacy issues and access to appropriate equipment resulted in the majority of patients being taken into the WRN space. Although, as previously presented, the WRN space was often used by medical officers, without consultation with the WRN, to assess and manage patients when the department was busy and overcrowded. Use of this space, often for extended periods of time prevented the nurses from continuing to assess, commence interventions and review some patients.

5.2.5 Discussion

Key findings from the study was the perception that experienced, triage prepared emergency nurses had the requisite knowledge and skills to effectively perform the WRN role. Therapeutic engagement allowed WRN to deliver a holistic, patient-centred approach to care, support and inform patients and families in ED waiting rooms. WRN facilitated the flow of patients from the waiting room into the ED, and through close engagement and assessment provided an important clinical safety net for these patients.

There was a sense from three participants that professional experience potentially influenced the ability of nurses to optimally perform the role. The ED waiting room is often a challenging environment to provide safe, effective care to patients and families (Garling 2008a). It is therefore not unexpected that the perception was that experienced emergency nurses were better equipped to perform the role. With all participants being considered experienced emergency nurses, they were more likely able to deal with the rapidly changing, busy and often stressful environment (Smyth & McCabe 2016). Experienced nurses are likely to have greater in-depth knowledge, possess critical thinking skills and are able to assimilate all aspects of assessment, evidence-based practice and past experience in clinical making decisions (Odell 2015). In our study, participants with more experience in the WRN role were observed to be flexible, proactive and demonstrated their initiative by identifying and anticipating patient care

needs that fell outside nurse-initiated policies. As such, these participants demonstrated an ability to take control, seize opportunities and anticipate problems (Rehnström & Dahlborg-Lyckhage 2016); clearly valuable attributes when providing care in the unpredictable environment of the ED waiting room.

It was evident in our study that participants brought a patient-centred and holistic approach to their caring practice for patients and families in ED waiting rooms. The ability to develop therapeutic nurse-patient relationships allowed WRN to deliver responsive and compassionate nursing care. An aspect of developing therapeutic relationships was that participants were engaged, present and available, and demonstrated care in their actions and interactions (Luck, Jackson & Usher 2009) and were empathic to the perceived needs and concerns of patients and families (Cecil & Glass 2015). This approach allowed participants to offer comfort and information, to calm and reassure patients and families (Luck, Jackson & Usher 2009). Respect and trust was established by participants through their interactions with patients and families, which were adapted to best meet the needs of individual patients and families.

Participants used appropriate language and nonverbal communication, and remained calm and positive, therefore providing reassurance to patients and families and contributed to the creation of safe and secure therapeutic environment (Luck, Jackson & Usher 2009). Their skill in doing this was valuable, as establishing therapeutic relationships can be challenging in this context, where patients and families are often stressed, distressed and anxious due to illness, long waiting times and lack of communication while waiting, as well as the hectic, noisy environment in which they find themselves (Kamali et al. 2013; Luck, Jackson & Usher 2009; Welch 2010). Findings of this study are supported by Fry et al. (2013) who found that delivery of compassionate care was central to the effective implementation of the Clinical Initiative Nurse practice, one model of a WRN role.

Waiting room nurses can play an important role in patient safety by contributing to the delivery of safe, quality health care. It is widely documented that long waiting times and delays in receiving treatment in EDs negatively impacts patient safety and outcomes (Burke et al.

2017). For EDs that allocate a WRN, a patient's episode of care shifts from commencing once in a cubicle, which may not occur for many hours, to effectively commencing on their arrival to the ED (aside from the triage process). Therefore, potentially improving the quality and safety of the waiting experience for patients and families in the waiting room, compared to EDs that do not have an equivalent role.

Involving patients and families in discussions and decisions on their health also contributed to WRN influencing patient safety (Australian Commission on Safety and Quality in Health Care 2012) and by co-operating and interacting with the interprofessional health care workforce (Australian Commission on Safety and Quality in Health Care 2012). Successful interactions in this context require mutual understanding, respect and trust between team members (Clark 2009). This can be challenging in the ED due to the unpredictable nature of the work and patient presentations, the time-constrained environment and frequently changing team members (Friberg et al. 2016).

Ongoing assessment and monitoring of health status of waiting patients also contributed to patient safety. One study found that deterioration and response to interventions could be detected if patients were monitored in ED waiting rooms. It must be noted that the study used a wireless vital sign monitoring device on patients in the waiting room (Hubner et al. 2015). In this study, two factors were identified that affected WRN ability to monitor patients: first, the re-allocation of WRN to assist with other patient care needs in the ED. We assert that during busy periods, when waiting times are extended, the WRN is most needed in the waiting room due to greater numbers of patients, longer waits and increased risk of unnoticed patient deterioration (Garling 2008a). Second, the limited hours of operation of WRN, means there is no allocation overnight. Patient safety in the waiting room during the hours that the WRN is not in operation needs to be considered, especially during periods when there is decreased flow due to access block and boarding issues as a result of limited access to hospital beds (Mason, Knowles & Boyle 2017). This, coupled with decreased resources on night duty (Australasian College for Emergency Medicine 2016), may result in an increased risk to patient safety.

Notwithstanding this, decreased patient presentations overnight may mitigate some risk to patient safety. Further evidence evaluating the impact of WRN on patient safety is needed.

Patient safety was also influenced by participants who were observed to contribute to enhanced health literacy, through informing patients about strategies for managing their health, once discharged. Health literacy is how people understand and apply information and use it to make decisions about their health and health care.

Assisting with flow of patients out of the waiting room into ED cubicles was a previously unreported aspect of workload for our participants. The observed practice was aimed at limiting or decreasing length of stay during patients' transitions through the ED (Asplin et al. 2003). On face value, the use of the WRN to transfer patients from the waiting room could be considered as being contributory to improving the overall efficiency of the ED; in that time is not lost waiting for others to assist with transferring or explaining to patients how to find their allocated cubicle. Conversely though, this may not be an effective use of resources and may actually contribute to inefficiencies in the system, particularly during busy periods (Yang et al. 2016). The same could be said for WRN commencing care in cubicles rather than returning immediately to the waiting room. Greater efficiency could potentially be achieved by having the WRNs remain in their allocated space, and continuing to assess and commence interventions early.

5.2.5.1 Methodological strengths and limitations

Trustworthiness was established. Truth value was established through auditing, confirmation and iteration of the data by the research team to identify codes and then themes to ensure the findings were plausible and reflected the data collected. Collecting data at two different sites increased the applicability of the results. Consistency of the data collection was established through face validity testing and pilot study of the observation tool. Potential for observer bias was considered, with the observer adopting an open and honest approach, maintaining confidentiality and privacy both in the setting and in field notes. The observer was conscious and mindful not to impose personal thoughts or assumptions while collecting and analysing data (Guba 1981; Guest, Bunce & Johnson 2006). Over-identification is another

potential risk. Becoming too familiar and over-identifying with participants may limit or distort the collected data. In this study, data were collected on different days, limiting the time of the sessions and leaving the ED for breaks to minimise this risk (Groenkjaer 2002).

Two further potential limitations, associated with all observational work are social desirability and observer effect. Social desirability occurs when participants respond in conversations, or their behaviour is influenced during the observation period to ensure they or their performance is viewed favourably by the observer (Schneider et al. 2014). The observer effect transpires when the presence of the observer influences behaviours or activities of participants. This observer effect can be decreased with the development of close relationships with participants and ensuring data are analysed “in light of the context in which they were generated” (Monahan & Fisher 2010, p. 363). In this study, these limitations were minimised by the development of meaningful relationships with participants and ensuring that initial periods of observations were passive, focusing on getting to know participants and allowing them to become relaxed in the presence of the observer; the remainder of the observation period then allowed rich data to be collected (Groenkjaer 2002).

5.2.6 Conclusion

The workload of WRN was observed to be variable and unpredictable, with therapeutic communication and ongoing assessment central to the role. A number of participants perceived experienced, triage prepared emergency nurses as being more efficient in the role, being able to identify and respond to patient and family care needs outside standing orders. It was observed that participants provided holistic, patient-centred care to patients and families in the waiting room, primarily through establishing therapeutic relationships and effective communication. The WRN contributed to patient safety in the waiting room by commencing episode of care in the waiting room, performing ongoing assessment and management of patients decreasing delays to care and detecting patient deterioration, involved patients and families in discussions and worked effectively with interprofessional teams to facilitate care. Some aspects for further consideration in regard to the WRN role include delays in accessing

medical officers and appropriate space, re-allocation from the waiting room and limited hours of operation.

5.3 Summary

In this chapter findings from the observation in practice phase of the research were presented. Key findings were that experienced emergency nurses had the skills and knowledge to perform the role. The WRNs delivered holistic, patient-centred care, facilitated patient flow and provided a safety net for those in the waiting room. Results of the practice survey, Phase 3, are presented in Chapter Six.

CHAPTER SIX – RESULTS: PRACTICE SURVEY

6.1 Overview

This chapter presents the findings from Phase 3, practice survey, of the research. The aim of this phase of the research was to explore the implementation of a WRN role in Australian EDs and emergency nurses' perceptions. The introduction, background and methods are presented, followed by the results, discussion and conclusion.

The findings are presented verbatim from the manuscript published from this phase as part of this thesis. The full reference for the paper is:

> Innes, K., Jackson, D., Plummer, V., Elliott, D. (Article In Press). A profile of the waiting room nurse in emergency departments: an online survey of Australian nurses exploring implementation and perceptions. *International Emergency Nursing*. DOI: 10.1016/j.ienj.2018.10.003.

Presented in Word version, the chapter is the accepted version of the manuscript by the Journal, formatted to match the thesis for consistency. Tables have been re-numbered, and references have been re-located from the paper and collated in the reference list at the end of the thesis.

6.2 A Profile of the Waiting Room Nurse in Emergency Departments: An Online Survey of Australian Nurses Exploring Implementation and Perceptions

6.2.1 Introduction

On presentation to an emergency department (ED), patients are rapidly assessed by a triage nurse and allocated a category based on clinical urgency. Patients are then assessed and management commenced by a Medical Officer or Nurse Practitioner based on their

allocated category, ensuring the most unwell are treated first (College of Emergency Nursing Australasia 2015b). Patients are allocated to an appropriate treatment cubicle when available, where emergency care commences (Australasian College for Emergency Medicine 2016). If a cubicle is not required or is unavailable, they are seated in the waiting room. Some departments have a waiting room nurse (WRN) dedicated to care for these patients (Crawford et al. 2014).

6.2.2 Background

The WRN role was introduced to address issues relating to increased demands and long wait times in the ED, including poor patient outcomes and experiences, and key performance indicators not being met. The presence of a WRN enables patients' episodes of care to commence in the waiting room (Innes et al. 2015). Key responsibilities involve monitoring, communication and safety (including detecting clinical deterioration), implementing interventions early, and patient advocacy (Innes et al. 2017).

WRN practice is often underpinned by standing orders or clinical pathways (Considine et al. 2012; Fry & Jones 2005). Standing orders, referred to as nurse-initiated protocols, allow nurses to initiate interventions and/or diagnostic investigations according to pre-determined protocols (Sturesson et al. 2018), including administration of analgesia (Van Woerden et al. 2016) and ordering x-rays (Thompson et al. 2016). In comparison, clinical pathways ensure a uniform approach to patient management by integrating guidelines and protocols into a coordinated and sequential plan of care (van der Kolk et al. 2017).

Despite varying degrees of implementation into practice, there remains limited literature on the WRN role internationally. Of note, there is a dearth of literature describing current WRN practice in the clinical setting and perceptions of the role. The aim of the research was to explore nurses perception of the implementation of a WRN role in Australian EDs and emergency nurses' perceptions.

6.2.3 Methods

6.2.3.1 Design

This survey design research is the final phase of a larger multiphase exploratory sequential mixed-methods study exploring the nursing role in ED waiting rooms. Mixed methods allows for multiple research methods to be used in a single study (Tashakkori & Teddlie 1998b). An exploratory sequential design allows for exploration of topics about which little is known. An initial qualitative (exploratory) phase is followed by a quantitative phase to explain and evaluate results (Creswell 2009). A key aspect of sequential mixed-methods research is that data from previous phases informs subsequent phases (Creswell & Plano Clark 2011). In this project, findings from key informant interviews (Innes et al. 2017) informed data collection and analysis in the observational phase (Innes et al. 2018) which subsequently informed data collection for this phase.

This paper reports findings from a web-based survey which allowed for systematic collection of data from a large sample enabling direct comparisons (de Vaus 2014). Advantages of using a web-based survey design include: ease of distribution, convenience for respondent completion, faster response times, cheap to administer (Roberts & Bailey 2013) and elimination of data entry errors (Jansen, Corley & Jansen 2007).

6.2.3.2 Sample/participants

Purposive sampling was used to identify respondents; Registered Nurses (RNs) who were members of the College of Emergency Nursing Australasia (CENA), the peak national emergency nursing professional body (CENA, 2016). CENA members were deemed broadly representative of all emergency nurses, had relevant professional knowledge and insights, and were able to reflect on and explore their experiences of the role. Recruitment was undertaken via the CENA secretariat who emailed members inviting participation.

6.2.3.3 Data collection

A literature search revealed no surveys that would address the research aims. A survey was designed using four stages described by de Vaus (2014) – (i) identify data for collection, (ii) draft questions, (iii) establish survey validity, and (iv) pilot the survey.

First, broad concepts from the literature and findings from previous study phases were identified (de Vaus 2014). Next, questions were drafted and ordered so concepts could be measured. An important consideration was how data would be analysed, as this may affect how questions were constructed (de Vaus 2014). The research team reviewed and refined drafts of the survey for interpretation, clarity, and functionality. Multi option lists and greater use of open ended questions were added through these processes to lessen participant burden (de Vaus 2014).

The final version of the survey included 43 items across five sections: i) participant demographics (seven items); ii) WRN role including title; responsibilities; experience and preparation (13 items), (iii) supporting policies (19 items); (iv) communication and documentation (two items); and v) general comments (two items).

Items were entered into SurveyMonkey®, enabling skip logic to ensure respondents were not asked irrelevant questions. For example, if a respondent indicated there were no WRN in their department, then a skip logic function directed respondents to the end of the survey (de Vaus 2014; Roberts 2007). The range of items a respondent could answer was between 11 and 40.

After approval by CENA, an email containing a brief research information statement, copy of the Participant Information Form, researcher's contact details and a link to the survey was sent by the College secretariat to members. The survey period was open for four-weeks in June 2017, with a reminder email sent one week prior to the survey closing. The survey was for completion in one visit. No incentives were provided.

6.2.3.4 Validity and reliability

To establish face and content validity, the survey was completed by two experienced emergency nurses with familiarity of the role and research knowledge. Feedback was provided on wording and flow of questions to ensure they were appropriate and clearly written, contributed to meeting the study aim, and flowed logically. Suggestions were made for skip logic.

A pilot study was then implemented to confirm reliability. Six experienced emergency nurses, not involved in the validity check, with backgrounds in clinical management and education completed the survey. It was deemed that these nurses were able to interpret and answer the questions appropriately and were able to provide feedback. Two of the respondents were not familiar with the role, ensuring that all aspects of the survey, including skip logic, were tested. Pilot respondents completed the survey and provided feedback on the questions for clarity, flow and if questions addressed the aim of the research. Findings from the pilot study found similar responses, establishing reliability. All nurses involved in survey development were excluded from the sample.

6.2.3.5 Ethical Considerations

Following Human Research and Ethics Committee approval from the supporting university, CENA granted permission to survey their members. Survey responses were anonymous, with consent implied by respondents' completing the survey.

6.2.3.6 Data analysis

Data were downloaded from SurveyMonkey® in a Microsoft Excel© spreadsheet, cleaned and coded prior to being transferred to an IBM SPSS Statistics (IBM 2015) V.24 data file for analysis. Each respondent's dataset was entered as a single observation. Continuous data were assessed using the Kolmogorov-Smirnov test, significance set at <0.001 for violating the assumption of normality. Based on the non-normal distribution of all data variables, nonparametric tests were used for analyses (Pallant 2013). Frequencies, percentages, median and interquartile range were used to describe characteristics of respondents and the WRN

including presence of the role, title, experience and/or preparation of the nurse, medication administration and interventions performed. For missing values in the dataset from non-applicable items, the frequency of responses is presented.

Open-ended responses were analysed using Hsieh and Shannon's (2005) quantitative content analysis framework. Keywords were initially identified from the literature and previous study phases. Responses were then reviewed with keywords identified. The research team independently reviewed the dataset and collectively agreed on keywords. Additional keywords were identified during analysis.

Words or phrases that had similar meaning to keywords were identified to ensure correct context of the data. An example of this was Item 10, 'Discuss the aim or purpose of the WRN in your ED' where the keyword 'observation' was identified and counted. Responses were then re-read to identify similar terms, such as 'reassessment' and 'monitor'. All terms were then counted together and presented as a frequency. De-identified quotes were used as exemplars and to clarify issues, using the respondent's unique identifier, a quote from respondent 1 would be reported as ID1.

6.2.4 Results

Survey results are described in the following sections that broadly reflect the survey structure: respondent demographics, WRN role and characteristics, experience and preparation; supporting policies; and perceptions and challenges.

6.2.4.1 Respondent demographics

Survey links were available to 1242 CENA members, and 197 surveys were completed (response rate 15.9%). Respondents were from 86 separate EDs, of which 59.3% (n=51) allocated a WRN. Of the total respondents, 18.3% (n=36) did not identify their hospital. Respondents had a median of 11 years' emergency nursing experience, the most common highest educational qualification was Master level, and the majority worked at triage. Almost half of the respondents were located in New South Wales and Victoria. Table 6.1 presents respondents' demographic characteristics.

Table 6.1 Respondents demographic characteristics

Characteristic	
State/Territory (n=197)	**n (%)**
New South Wales	48 (24.4)
Victoria	48 (24.4)
Queensland	35 (17.8)
South Australia	33 (16.8)
Western Australia	17 (8.6)
Tasmania	9 (4.6)
Northern Territory	6 (3.0)
Australian Capital Territory	1 (0.5)
Role/title (n=197)	**n (%)**
Registered Nurse	87 (44.2)
Clinical Nurse Specialist	47 (23.9)
Educator	15 (7.6)
Clinical Nurse Consultant	11 (5.6)
Nurse Practitioner	10 (5.1)
Nurse Unit Manager	10 (5.1)
Associate Nurse Unit Manager	8 (4.1)
Enrolled Nurse	3 (1.5)
Coordinator	6 (3)
Highest educational qualification (n=196)	**n (%)**
Master	67 (34.2)
Graduate Certificate	48 (24.5)
Bachelor of Nursing	37 (18.9)
Graduate Diploma	36 (18.4)
Doctor of Philosophy	5 (2.6)
Certificate or Diploma in Nursing	3 (1.5)
Years of experience	**Median (IQR)**
Years of nursing experience (n=197)	16 (2-45)
Years of emergency nursing experience (n=196)	11 (0.3-38)
Work in triage role (n=197)	**n (%)**
Yes	174 (88.3)
No	23 (11.7)

6.2.4.2 WRN role and characteristics

Most respondents (n=119, 61%) reported that their ED allocated a nurse, other than the triage nurse, to care for patients in the waiting room. The most common titles for the role were Clinical Initiative Nurse (CIN) (n=37, 39.4%), WRN (n=31, 32.9%) and triage assist/assessment (n=26, 27.7%).

Five key areas of responsibility were identified from survey responses: patient care, patient safety, escalation of care, triage responsibilities, and communication.

6.2.4.2.1 Patient care

A key WRN responsibly was to expedite care (n=44); “to ensure that all patients in the waiting room are cared for throughout their journey” (ID162), and to assist with meeting patients’ “immediate needs where possible” (ID41) including basic care needs such as assisting with toileting (ID38). The WRN was therefore responsible for commencing early management of a patient’s presenting condition (n=136); by providing “meaningful treatment within the time allocated by the [patients’] triage category” (ID30), commencing “treatment according to pathways prior to medical review” (ID180), and “ultimately [facilitated] decreasing wait times” (ID85).

Patient assessment and monitoring was a common patient care (n=91) activity. Assessments varied, as the focus “depended on the reason for presenting” (ID42) and “what the nurse thinks is appropriate to get a better understanding of the patients’ presentation” (ID38). Primary assessment was the most frequently reported assessment undertaken (n=50) (Table 6.2).

Patient reassessment was a key process during the waiting period, with the WRN responsible for “early reassessment of patients waiting post-triage” (ID33). There were a variety of timeframes and indicators for reassessing patients but these commonly reflected the patients’ allocated triage category; as one respondent noted, “100% of patients are reassessed according to their triage category, while waiting to see a doctor or be allocated a cubicle” (ID136) (Table 6.2).

Table 6.2 Patient assessment

Characteristic	Keywords (n)
Type of assessment	
Primary	50
Focused	33
Secondary	13
Type of focused assessment	
Respiratory/chest auscultation	38
Pain	11
Neurovascular/limb/musculoskeletal	9
Neurological/Glasgow Coma Scale	8
Abdominal	5
Wound	2
Frequency for reassessment	
As per Australasian Triage Scale allocated category/acuity	34
Every 60 minutes	20
Post medication/intervention	10
Every 30 minutes	7
As time permits	2

A range of medications administered and interventions performed by the WRN were identified. Medications were either administered orally, topically or inhaled, with Paracetamol being the most common medication administered, and inhaled adrenaline the least common (Table 6.3). A wide variety of interventions performed were also reported, with basic first aid/minor injury management the most common and writing referrals and plaster checks/splitting the least. Diagnostic activities performed included blood glucose monitoring and electrocardiograms (Table 6.4).

Table 6.3 Medications administered (oral, topical and nebulised)

Medications (n=119)	n (%)
Paracetamol	98 (82.4)
Nonsteroidal anti-inflammatory drugs	86 (72.3)
Endone	64(53.8)
Ondansetron	63 (52.9)
Metoclopramide	60 (50.4)
Local anaesthetic creams	58 (48.7)
Panadeine	56 (47.1)
Panadeine Forte	53 (44.5)
Inhaled salbutamol	50 (42)
Anti-histamine	44 (37)
Aspirin	44 (37)
Prednisolone	33 (27.7)
Dexamethasone	24 (20.2)
Nitrates	18 (15.1)
Hydrocortisone	15 (12.6)
Inhaled steroids	12 (10.1)
Inhaled adrenaline	3 (2.5)

Table 6.4 Interventions performed

Interventions (n=119)	n (%)
Basic first aid/minor injury management	98 (82.4)
Blood glucose monitoring	93 (78.2)
Urinalysis	89 (74.8)
Collect mid-stream urine	87 (73.1)
Commence oral hydration	84 (70.6)
Urine pregnancy test	79 (66.4)
Wound care/dressings	78 (65.5)
Electrocardiogram	77 (64.7)
Distribute food and drinks	73 (61.3)
Venepuncture (including pathology)	73 (61.3)
Cannulation (including pathology)	72 (60.5)
Take wound swabs	71 (59.7)
Venous blood gases	53 (44.5)
Bladder scan	2 (100)
Make referrals	1 (100)
Plaster check/splinting	1 (100)

The most common factor preventing medications and interventions being administered or performed in the waiting room related to patient safety (n=65); potential for patient deterioration and adverse effects. Other factors included privacy concerns (n=11), lack of space (n=8), unsuitable skill mix/experience of WRN (n=6), need for a medical order (n=1) and infection control (n=2).

6.2.4.2.2 Patient Safety

Patient safety (n=55) was highlighted as a key responsibility, particularly ensuring that patients were safe to wait or remain waiting in the waiting room. As respondents stated, “patient safety is by far the most important reason for a WRN” (ID7). Thus, the WRN “provided a safety net to those in the waiting room” (ID34) by “ensuring patients were safe to wait [in the waiting room]” (ID112).

Patient reassessment, as noted earlier, was a vital aspect of patient safety. The WRN “monitored waiting room patients for signs of deterioration” (ID192), and, if detected, responded to “escalate care as appropriate” (ID38). The WRN was therefore an “advocate for patients in the waiting room” (ID61) ensuring they received appropriate and timely management.

A subset to patient safety was flow of patients from the waiting room into the department treatment areas (n=23). The WRN assisted with patient flow by allocating and “taking patients through to available cubicles” (ID103), reducing wait times and improving patient safety.

6.2.4.2.3 Escalation of care

If patient deterioration was detected, a number of pathways were reported for the WRN to escalate care. Commonly this was for the WRN or triage nurse to re-triage (n=35) the patient, and in some cases notify the nurse in charge (ID22) or collaborate with senior staff to prioritise care needs and move the “patient to the most appropriate clinical space” (ID195) for further assessment and management. Other escalation pathways varied based on the structure and processes within each department, focusing on notifying a specific staff member: triage nurse (n=49); nurse in charge/coordinator (n=57); senior medical officer/treating doctor (n=27); team leader (n=9); Clinical Nurse Consultant/Clinical Nurse Specialist (n=4); or activation of a response team e.g. Medical Emergency Team or Critical Response Team (n=5).

6.2.4.2.4 Triage responsibilities

Approximately two-thirds of respondents indicated that the WRN was permitted to assist with the triage process (n=73, 61.3%), although variability was noted. Triage assistance

was permitted when the triage nurse's workload was excessive (n=62), to cover the triage nurse for breaks (n=41) and triage ambulance arrivals (n=12). As well as assisting with the triage process (ID48), the WRN collaborated (n=43) with the triage nurse through support (ID109), and "liaised with [the] triage nurse" (ID61) to identify and prioritise patient care needs (ID41, ID196).

Conversely, in some departments, the WRN was not permitted to triage. Reasons included non-triage prepared nurses performing the role in some departments (n=9), potential for "role confusion" (ID143) and loss of "clear role delineation" (ID70) between the triage role and WRN. Another concern was if the WRN performed triage, they could become distracted, not prioritising waiting room patient care needs (ID65), resulting in increased waiting times, delays in interventions commencing and potential for care to be missed. As noted, "the WRN is not permitted to triage patients even if they are qualified, as [if they do] patients in the waiting room are not being assessed and re-assessed, [and] meaningful treatment is not occurring" (ID30).

6.2.4.2.5 Communication

Communication was a key WRN responsibility (n=46); providing "communication and support to visitors and patients in the waiting room" (ID108), and keeping "patients informed of their progress, wait times [and] cause of delays in treatment" (ID41). Effective communication skills were required to develop therapeutic relationships with patients and families which contributed to the WRN "providing comfort and reassurance" (ID197), de-escalating anxious patients and families (ID36, ID43) and "alleviating stress" (ID120). A crucial feature of patient communication was "to make sure patients felt cared for even though they are in the waiting room" (ID25). Respondents felt the development of an effective nurse-patient relationship improved the patient experience, improving consumer relations (ID71), patient satisfaction (ID165) and decreasing complaints (ID71).

Documentation was central to effective communication and was acknowledged by respondents as vital for safe, effective patient care. As noted, "contemporaneous

documentation is important to ensure continuity of patient care" (ID40). One respondent acknowledged however that documentation "was not done very well" (ID23).

6.2.4.3 Experience and preparation

Experience and preparation required prior to commencing in the role varied (Table 6.5). In terms of emergency nursing experience, two years was the median. Of 64 responses for this item, approximately one-third (n=21, 32.8%) identified no minimum duration of time required prior to commencing in the role, but rather a minimum set of skills and knowledge, which took varied time for each nurse to develop. One respondent reported, "not specified in years rather in skill, experience and communication abilities" (ID157).

Two-thirds of respondents indicated that triage-preparation was not a role requirement. The majority of respondents also indicated that postgraduate qualifications were not a prerequisite. Of the four respondents who identified postgraduate qualifications as necessary, all agreed that a Graduate Certificate was the minimum.

Approximately half of the respondents identified that additional preparation was required prior to commencing the role. Preparation was wide-ranging including in-house courses, workbooks/packages, and preceptorship, either as stand-alone activities or in combination. Two day courses (n=6) were most common, with one day (n=5) and three day courses (n=1) also completed. The CIN workbook (n=7) was most frequently utilised, followed by workbooks relating to: pathology (n=6), triage (n=5), x-ray (n=4), medication/analgesia administration (n=3), patient assessment (n=3), cannulation (n=3) and communication (n=1). An orientation (n=9) or preceptorship/supernumerary period (n=14) were also included as preparation in some departments.

Some respondents felt that no additional preparation was required, instead reporting that experienced emergency nurses possessed sufficient skills and knowledge to work in the role. One respondent stated that the "level of expertise gained as an emergency nurse, and prior nursing experience should be taken into account" (ID76).

Table 6.5 Experience and preparation prior to commencing as Waiting Room Nurse

Prior to commencing in the role	n (%)
Minimum years of emergency nursing experience (n=64)	
Graduate (<1 year)	5 (7.8)
1 year	12 (18.5)
2 years	14 (21.9)
3 years	9 (14.1)
4 years	0 (0)
5 years	3 (4.7)
Be triage prepared (n=106)	
No	64 (60.4)
Yes	42 (39.6)
Require postgraduate qualifications (n=106)	
No	102 (96.2)
Yes	4 (3.8)
Any additional preparation (n=105)	
No	56 (53.3)
Yes	49 (46.7)

6.2.4.4 Supporting policies

Variation in policies underpinning practice was evident. The main policies identified were standing orders and clinical pathways. There were mixed views on whether current policies adequately supported the WRN; 13 respondents agreed while 24 disagreed, suggesting a broadening of the range of medications and skills was needed. Standing orders were identified (n=106) as guiding practice, with nurse initiated analgesia the most common (Table 6.6). Clinical pathways were identified (n=39), for clinical states ranging from pain management to sepsis and shortness of breath, with chest pain the most common (Table 6.6).

Table 6.6 Policies and protocols

Policy and Protocols	n (%)
Standing orders (n=106)	
Nurse initiated analgesia	62 (58.5)
Nurse initiated x-ray	41 (38.7)
Nurse initiated pathology	41 (38.7)
Clinical pathways	39 (36.8)
Clinical pathways (n=39)	
Chest pain	30 (76.9)
Nausea/vomiting/diarrhoea	28 (70)
Abdominal pain	13 (33.3)
Falls/soft tissue injury	12 (30.8)
Shortness of breath/asthma	12 (30.8)
Headache/head injury	11 (28.2)
Obstetrics	8 (20.5)
Pain management	7 (17.9)
Fever	6 (15.4)
Sepsis	6 (15.4)
Stroke	4 (10.3)
Renal colic	3 (7.7)
Fractured neck of femur	1 (2.6)

Other than standing orders and clinical pathways, variations in policy were also noted (Table 6.7), ranging from medication administration to management of particular health concerns and the use of 'My Card' (used in one department for patients to record medications administered, investigations ordered and reasons for waiting).

Suggested policies to further support the role included broadening of the range of medications that could be administered, support for specific skills such as plastering and wound closure, and to cover the paediatric population (Table 6.7). Respondents working in departments that did not have nurse initiated pathology (n=3) and nurse initiated x-ray (n=6) policies acknowledged these would also be beneficial.

Table 6.7 Additional policies

Policies	Existing policy Keywords (n)	Suggested policies in other departments Keywords (n)
Detecting deterioration and clinical escalation	2	-
Administration of medications:	-	-
ADT	1	1
Antiemetics	-	1
anti-histamine	-	1
bronchodilator	1	1
Steroids	-	1
Administration of intravenous fluids	1	1
Cannulation	1	1
De-escalation	1	-
Hourly rounding	1	-
Care of patients with mental health presentations	1	-
Paediatric population	-	3
Process for nurse referral to other services/specialities	1	1
Plastering	1	1
Trial of fluids	1	-
Use of 'My Card' information slip	1	-
Wound closure (including suturing and gluing)	2	1

ADT, Diphtheria and Tetanus vaccine

6.2.4.5 Challenges and perceptions

Multiple challenges associated with the role were identified, including workload, resources, hours of operation, workplace re-allocation, skill mix, personal safety, unclear expectations and supporting policies. The most recurrent concern was the high nurse-patient ratios/workload (n=23) when departments became busy. As noted by one respondent, "only one nurse is available for the role with up to 30 patients in the waiting room at a time" (ID22). This had implications for patient safety as "large volumes of patients make it difficult at times to re-assess [patients]" (ID25) and made it "very difficult to keep track of who needs assessing/reassessing and when" (ID109).

Access to appropriate resources (n=18) included difficulty accessing medical staff to write orders and prescribe medications, and lack of appropriate space to assess patients and perform interventions. Lack of available beds resulted in high acuity patients (n=3) remaining in the waiting room (ID129), posing a risk to patient safety and increasing workload.

Limited hours of operation for the role were reported (n=7). Respondents stated “shifts are only 10am-8pm, so there are busy times when there is no WRN” (ID159), and this “leaves the triage nurse alone in the waiting room to attend to triage as well as reviews and CIN protocols” (ID36) potentially affecting patient care. As also noted, “restrictions on staffing in peak times is detrimental to the care that can be given to patients” (ID22). Other staffing issues included re-allocation (n=7), with the WRN “pulled to other areas when the department was busy” (ID42). When under-staffed the role was given low priority and was “often the last thought” (ID117) with allocations, potentially being “left vacant” in these circumstances (ID84).

A final staffing issue was skill mix of staff performing the role (n=7). In some departments, where the WRN was “mostly a junior role … and the department is busy, [the junior WRN] can be a liability as things are missed or not assessed properly due to inexperience, or treatment is unable to be commenced early as [WRN] is incompetent at interventions” (ID197). One respondent felt that the shift ran more smoothly if the WRN was triage prepared (ID160). Enrolled nurses performing the role (n=1) was another limitation as initiation of standing orders or clinical pathways was not within their scope of practice.

Personal safety of the WRN was also identified as a challenge (n=6), as reflected by one respondent, “the waiting room can be an unsafe area” (ID193), particularly if there were aggressive or violent people present. The nurse is “very exposed” (ID85) and particularly at “risk of assault from mental health and substance abuse clients” (ID122). Long wait times (n=8) also influence nurse safety, as patients and families become anxious and agitated (ID36, ID110), and develop “hostility” (ID109) towards staff.

Finally, unclear expectations (n=4) and limited supporting policies (n=3) were identified as challenges. Unclear expectations were generally associated with medical staff who, for example, “order a whole lot of stuff that can't be done in the waiting room” (ID174), while “lack of protocols and restriction on ordering pathology and imaging limits the role and benefits for patients” (ID22).

Consideration must also be given to negative aspects of the role identified by respondents. The effect of the often relentless and busy nature of the waiting room (ID85), made the role “very stressful and lonely” (ID163), and “may be confronting” (ID16), with potential exposure to continual negative experiences such as “constantly being given complaints regarding wait times” (ID85). These factors can result in the role being “generally the least satisfying role in the whole department” (ID164), with “some RNs refusing to do it” (ID80). Another contributing factor to the role being unpopular was that, as noted above, the position was not clearly defined (ID53) with a vague role description (ID187), requiring as one respondent suggested, “a nationally agreed scope of practice similar to that of triage” (ID53).

Overall, respondents’ perceptions of the role were positive; an essential role that all EDs should have (n=19) as “a mandated role” (ID123), and be “utilised by more EDs in order to improve patient safety and their [patient] journey” (ID51), especially during busy periods (n=4). The role was viewed as “vital and allows for superior care to waiting room patients as well as avoiding any deterioration that may otherwise be missed” (ID25). The WRN was identified as being particularly important when demand on emergency services increased, potentially resulting in unwell patients waiting for an extended period. As reported, the WRN is a “process to protect the patient, protect the triage nurse and ensure waiting times to definitive care are minimised” (ID80), although funding and staffing affect the ability of departments to implement the role (ID3). The WRN role could also play an important part in professional development, especially triage preparation, as it “is a great role for nurses coming to triage” (ID117).

6.2.5 Discussion

This survey of emergency nurses working in 86 separate EDS across all Australian States and Territories generated some commonalities and clear variations in perceptions of WRN responsibilities. Key findings were that patient safety is potentially the most important responsibility of the role; ensuring patients are safe to wait, a safe environment is provided, and safe care is initiated. These safety aspects are explored below in the context of expediting

care, assessing and reassessing for clinical deterioration, establishing therapeutic relationships and effectively communicating with those in the waiting room. Variations in practice were also evident for experience, preparation and supporting policies. Despite the role being perceived as positive, a number of challenges were identified, primarily related to workload and resources, and potential for the role to have a negative impact on nurses.

Expediting patient care was identified as a key aspect. By commencing interventions, diagnostics and management early, delays to treatment could be minimised. This is important as increased waiting times have a detrimental impact on patient outcomes, including a 40% increase in mortality (Morris et al. 2012), as well as influencing patient satisfaction and perceptions of care (Holden & Smart 1999; Swancutt et al. 2017).

Assessment and reassessment was viewed as a core WRN responsibility, as a patient's clinical condition can deteriorate while waiting, resulting in adverse outcomes (Scott, Considine & Botti 2015). Through close monitoring the WRN can ensure patients are safe to wait, or detect deterioration early and escalate care needs accordingly. Reassessment facilitates early interventions, for example administration of analgesia, and monitor for adverse outcomes and effectiveness, ensuring safe, quality care (Smith, Bouchoucha & Watt 2016). Reassessment also enables inequitable access to care for self-presenting patients allocated to the waiting room compared to patients presenting via ambulance (Smith, Bouchoucha & Watt 2016).

In high-risk patient areas such as the waiting room, effective communication is fundamental to the provision of safe, quality care (Pun et al. 2017), while failed communication leads to poor ED patient outcomes (Källberg et al. 2017). A crucial aspect of effective communication is therapeutic nurse-patient relationships. The waiting room is a challenging environment for the WRN to have meaningful engagement with patients and families who are often stressed and distressed due to illness and waiting (Kamali et al. 2013; Luck, Jackson & Usher 2009). Compounding this is the noisy, chaotic nature of this environment (Welch 2010), the unpredictable workload, and multiple interruptions experienced by emergency nurses during care provision (Coughlan et al. 2017). Despite these challenges, it is possible for the

WRN to develop therapeutic relationships and effective communication which can develop from simple interactions, over short periods by asking straightforward questions and actively listening to responses or questions (Chau et al. 2017).

Patients and families often find emergency processes difficult to follow and the waiting room frightening and unsafe (Kamali et al. 2013), with a perception that care is not provided as needed (Lovato et al. 2012). The presence and availability of the WRN contributes to the perception of a safe environment where patients are being cared for (Luck, Jackson & Usher 2009). Providing updates on any delays also contributes to providing a safe environment, as patients and families often have limited insight into potential reasons for delays (Swancutt et al. 2017), contributing to increased stress and poor perception of care.

Disparities in experience and preparation for the role were clear, reflecting wider, limited literature (Innes et al. 2017). Supporting policies varied broadly with both standing orders and clinical pathways underpinning practice, similar to other findings (Considine et al. 2012).

Challenges identified with the role need to be considered by clinicians, managers, policy makers and educators. Exposure to high levels of occupational stressors, including increased workloads, skill mix and exposure to violence and aggression, culminated in the role being stressful and unsatisfying according to survey respondents. Exposure to frequent and ongoing stressors can affect emergency nurses both physically and emotionally, resulting in increased risk of injury, poor job satisfaction and increased absenteeism and attrition (Li, Cheng & Zhu 2018). Quality of care delivered to patients can be negatively impacted as concentration, decision-making skills, communication and ability to establish therapeutic relationships may be affected (Allen & Palk 2018; Li, Cheng & Zhu 2018).

6.2.5.1 Strengths and limitations

These findings need to be considered within the context of the strengths and limitations of the study methods. Use of an exploratory sequential mixed-method design ensured that findings from previous phases of the larger study informed survey development. Use of a clear

structured approach in developing the survey, including establishing content and face validity (de Vaus 2014), and subsequent reliability testing through a pilot study (Schneider et al. 2014) were also strengths.

A potential limitation was response bias, as the survey was self-reporting and responses may have been influenced by the format, construct or interpretation of questions. A risk of sampling error is noted; although the sample was a sizeable portion (15.9%) of CENA members and was perceived to be homogeneous, findings may not be representative of all Australian emergency nurses (de Vaus 2014). As the sample is from a single country and public health system, findings may only be applicable to Australian EDs and not generalisable to other practice settings.

6.2.6 Conclusion

Clear variations in practice with the WRN in Australian EDs were identified, relating to education, preparation, responsibilities and triage. Despite these differences, respondents viewed the role as important for ensuring patient safety, including detecting deterioration and escalating care. Communication and development of therapeutic relationships were key to the role. Several challenges were identified that have implications for the welfare of nurses performing the role, including personal safety and burnout.

6.3 Summary

Findings from the practice survey, Phase 3, were presented in this chapter. This phase of the research found that key responsibilities of the WRN were patient safety, expediting care, reassessing patients for clinical deterioration and improving communication with those in the waiting room and ED staff. Similar to findings from key informant interviews, variation in experience, preparation and supporting policies were identified with a number of challenges including workload and resources. In the following chapter an integrated discussion of the findings from the three phases of the research is presented.

CHAPTER SEVEN – INTEGRATED DISCUSSION

7.1 Introduction

Some Australian EDs introduced a WRN role to expedite care and improve quality of care and enhanced safety for patients in the waiting room. The primary aim of this chapter is to integrate the findings from the three study phases reported earlier, to address the overall study aim: to explore nurses' perceptions of the implementation of a nurse role allocated to care for patients in ED waiting rooms. A mixed-methods exploratory sequential design, underpinned by pragmatism, enabled the nurse role to be rigorously explored, allowing for a detailed analysis and in-depth understanding. Integration of data was a feature of both the method and interpretation levels. In method, integration occurred through building from one dataset to the next; data collected in one phase informed data collection in the subsequent phase (Fetters, Curry & Creswell 2013). During the interpretation and reporting stage, integration occurred by synthesising the findings from the various phases and methods into a single narrative. In this chapter, concepts relating to the WRN were identified by weaving the qualitative and quantitative findings together (Fetters, Curry & Creswell 2013).

Section 7.3 presents the integration of results using the Logic Model (W. K. Kellogg Foundation 2004; Weiss 1972) discussed in Chapter Three. Use of the Logic Model allows for a description of the resources required to implement the role, discussed in Section 7.4; the activities (process) performed by the WRN are described in Section 5, including the key elements of assessment, secondary triage interventions, communication and patient flow. Finally, Sections 7.6-7.8 present the outcomes of the WRN role, the final component of the Logic Model, with a focus on care quality, patient safety and patient centred-care, prior to the chapter conclusion.

7.2 Statement of key findings

Overall, this research identified five key findings in relation to implementation of WRNs into Australian EDs:

- Characteristics and attributes of nurses performing the role were identified as: being competent, confident, and knowledgeable; having proficient assessment skills; being autonomous, and a clinical decision-maker; having highly developed communication skills; being a patient advocate, and being focused on patient safety, care quality and patient-centred care.
- Organisational resources required to implement the role were identified as: funding; operational hours; re-allocation; standardised policies, and provision of a safe working environment.
- Key activities of the WRN role were identified as: assessment; secondary triage interventions, communication, and facilitation of patient flow.
- The outcomes of implementing the role were: expediting care; being a patient advocate; development of therapeutic relationships; de-escalation, and patient empowerment.
- The WRN plays a major role in care quality and patient safety in the waiting room.
- The WRN delivers patient-centred care by incorporating patient and family in decisions and outcomes.

7.3 Integration using adapted Logic Model

Findings from the three study phases were integrated using an adapted version of the Logic Model (W. K. Kellogg Foundation 2004; Weiss 1972). As discussed in Chapter One, the Logic Model is used to collect input data and present outcomes from programs, or, in the case of this research, the WRN role. The Logic Model identifies resources/inputs, activities, outputs, outcomes and impact of the program (W. K. Kellogg Foundation 2004; Weiss 1972). To integrate these research findings, the Logic Model was adapted to present the inputs, activities (processes) and outcomes of the role (Figure 7.1).

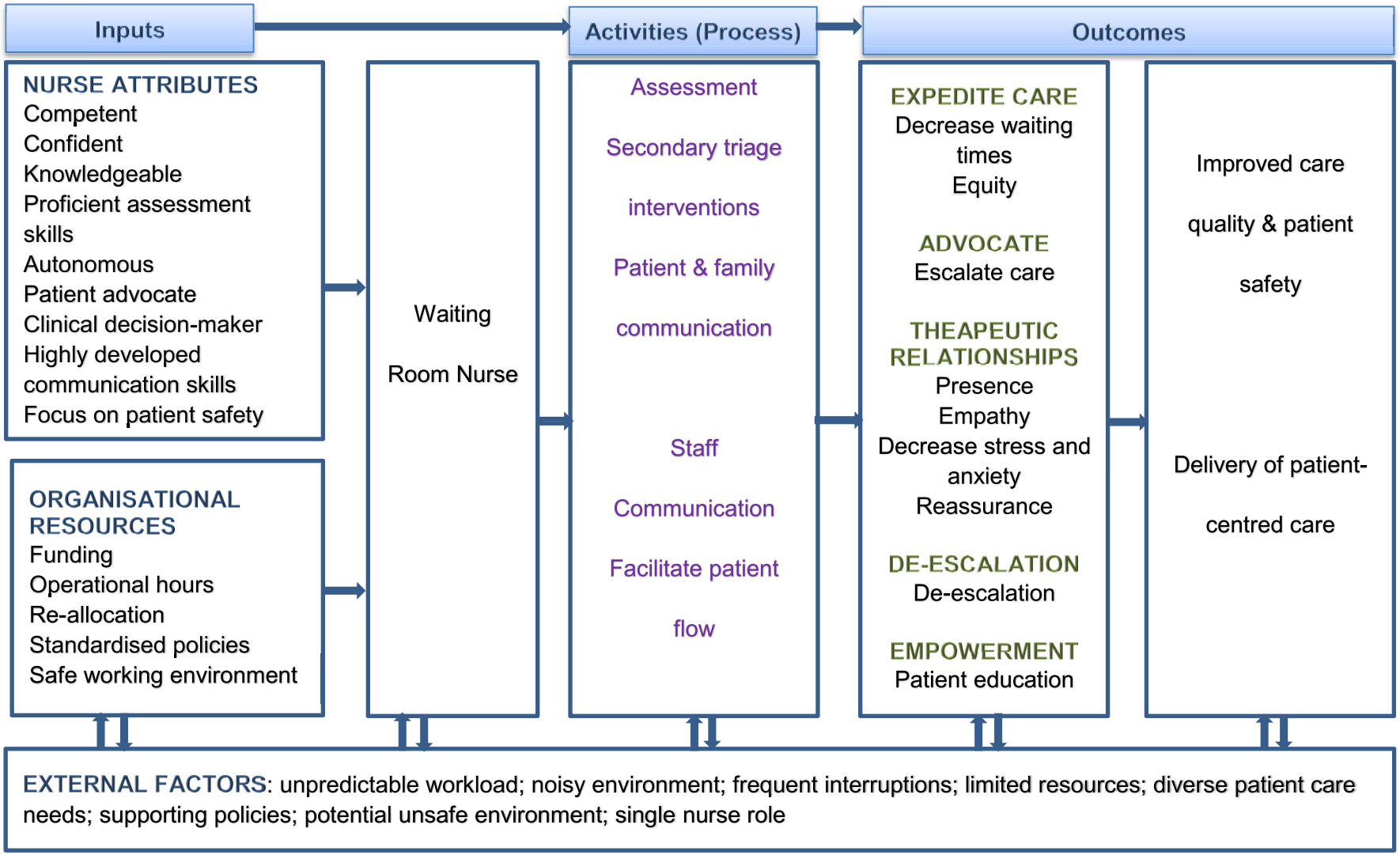


Figure 7.1 Model of WRN (Adapted from W. K. Kellogg Foundation 2004)

The inputs represent nurse characteristics and attributes and organisational resources required to implement the role. Activities (processes) identify the activities a WRN performs in the clinical setting, while outcomes are the consequences of the role. External factors, which can influence the role, have also been included in the model. Each of the components presented in the adapted Logic Model are discussed further in this chapter.

In Section 7.4 the resources to implement the role, which includes nurse characteristics and attributes and organisational resources, are presented. The activities of the WRN (assessment; secondary triage interventions; communication, and facilitation of patient flow) are discussed in Section 7.5. Section 7.6 presents the outcomes of the role (expediting care; patient advocacy; therapeutic relationship; de-escalation, and empowerment). A further discussion on outcomes of the WRN in relation to improving care quality and patient safety and delivery of patient-centred care is presented in Sections 7.8 and 7.9.

7.3.1. External factors

External factors are elements already known in the literature that may influence WRN inputs, activities and outcomes at any given point in time. As discussed in Chapter One, these factors relate to the stressful and challenging environment of the ED. In summary, these factors include the busy, at times erratic nature of the workload, unpredictable patient presentations and acuity, and multiple interruptions when delivering care (Lowthian, Curtis, et al. 2012). In the ED, patients and families report feeling stressed and vulnerable, and often lack understanding of ED processes. These factors may influence safety, as patients and families may become frustrated and agitated (Cashin et al. 2007; Philip et al. 2018). External factors are summarised in Figure 7.1 and their influences on the role are referred to throughout the chapter.

7.4 Resources to implement the role

This section presents the resources identified in this research required to implement the WRN role in EDs. This discussion will be presented in two sections – nurse attributes and organisational resources.

7.4.1 Nurse characteristics and attributes

This study identified essential characteristics that WRN should possess to effectively perform the role. These characteristics have been summarised into five categories, as presented in Figure 7.2:

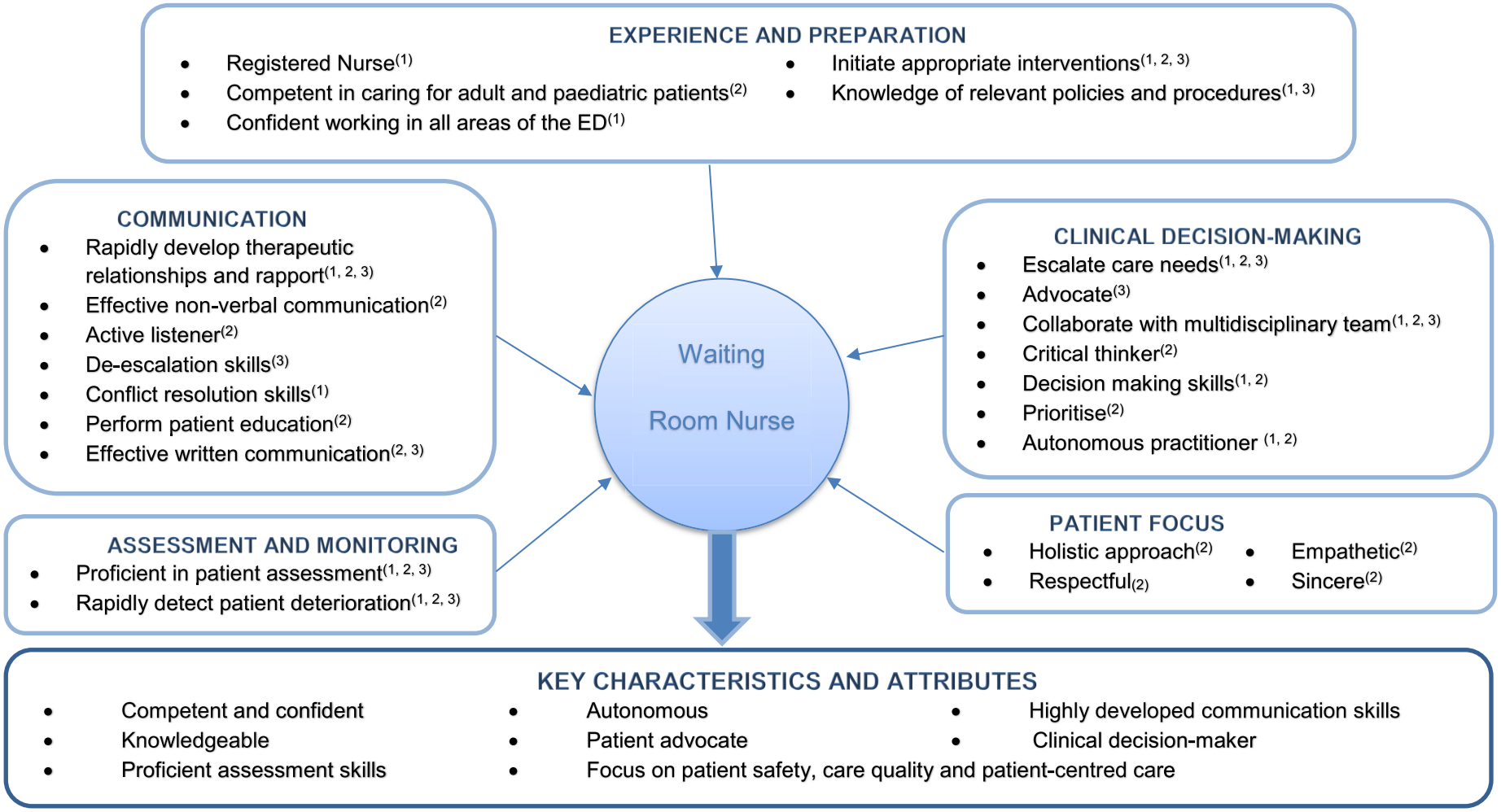
1. Experience and preparation
2. Communication
3. Assessment and monitoring
4. Being a clinical decision-maker
5. Patient focus.

From these characteristics, nine key attributes (Figure 7.2) were recognised as being important for the WRN to be effective and efficient in the role:

1. Competent
2. Confident
3. Knowledgeable
4. Proficient assessment skills
5. Autonomous
6. Patient advocate
7. Clinical decision-maker
8. Highly developed communication skills
9. Focus on patient safety, care quality and patient-centred care.

These categories and attributes are discussed further in the chapter. Sections 7.4.1.1 and 7.4.1.2 present a discussion on experience and preparation. Communication is

presented in Section 7.4.1.3, assessment and monitoring in Section 7.4.1.4, with clinical decision-making presented in 7.4.1.5. Finally, the characteristic of being patient-focused in presented in Section 7.4.1.6. Note Figure 7.2 highlights the study phases from which findings were drawn from (1, key informant interviews; 2, observation in practice; 3, practice survey).



1, key informant interview; 2, observation in practice; 3, practice survey

Figure 7.2 Key characteristics and attributes of WRN

7.4.1.1 Experience

Diversity in the level of experience of the nurses performing the role was identified, ranging from graduate nurses through to postgraduate prepared emergency nurses. Importantly, there was no consensus from either key informants or survey participants as to what 'experienced' meant, with a range of years of experience described. A lack of consensus on experience is also evident in the wider literature. In her seminal work, Benner (1982) concluded that experience is not linked to a specific period of time, but rather relates to nurses learning in the clinical environment to refine personal beliefs, judgements and knowledge. A purely clinical focus, when defining experience, did not account for personal experiences that may have influenced practice (Arbon 2004). Despite being separate entities, experience and expertise were identified as being related in the literature (McHugh & Lake 2010). Expertise is based on experience and education, and in the clinical setting it occurs when nurses can respond to unexpected situations and anticipate issues before they occur (Benner 1982; McHugh & Lake 2010). Benner (1982) identified that to be an expert, nurses' use previous experiences and view situations holistically, with the ability to prioritise aspects of care, rather than a collection of individual needs that must be addressed.

Despite not establishing an agreement on experience, this research did identify the key characteristics, attributes, skills and knowledge required by nurses performing the role, described as: confidence and competence caring for adult and paediatric patients, ability to work across all areas of the ED, ability to initiate appropriate interventions, and being knowledgeable on relevant policies and procedures supporting the role. In part, these findings reflect guidelines for the NSW CIN model, in which the RN is required to have experience in a variety of ED roles (NSW Government 2011a).

The question of experience is important, as there was a sense from the findings that professional experience influenced the ability of nurses to optimally perform the role. Findings from key informants and observation in practice identified that nurses with less experience in the role were not as confident, efficient or effective. Less experienced

WRNs managed fewer patients, and were unsure of supporting policies and processes. In contrast, experienced nurses, including as a WRN, were observed to be flexible, proactive, and demonstrated initiative by identifying and anticipating patient care needs, including those that fell outside nurse-initiated policies. Experienced emergency nurses were also more likely to be triage-prepared, although the value of the WRN holding this skill-set varied in the study findings. While results from the practice survey and key informant interviews found that being able to triage was not a role requirement, observation in practice identified that those who could triage were more versatile and effective in the role.

It is not unexpected that experienced emergency nurses would be better equipped to perform the role, as they are more likely to deal with external factors such as a rapidly changing, busy, and often stressful waiting room environment (Smyth & McCabe 2016). Nurses with clinical experience, who possess greater in-depth knowledge and critical thinking skills, are also able to assimilate all aspects of assessment, evidence-based practice and past experiences into their clinical decision-making, and anticipate potential patient problems (Odell 2015; Rehnström & Dahlborg-Lyckhage 2016; Smyth & McCabe 2016). These are clearly valuable attributes when providing care in the unpredictable environment of an ED waiting room.

A low-skill mix, where less experienced nurses undertake the role, may create stress for experienced nurses, in particular triage nurses. Experienced nurses may feel responsible for ensuring that patient care is not compromised when a less experienced nurse performs the role. According to Wolf et al. (2017) this can effectively increase workload of experienced nurses who provide increased supervision and guidance. Arguably though, this could be viewed as clinical leadership, which incorporates providing support and direction for staff to ensure safe patient care is delivered (Patrick et al. 2011). Therefore, all nurses, irrespective of experience or role, are required, and have a responsibility, to be clinical leaders (Connolly, Jacobs & Scott 2018; Wong, Cummings & Ducharme 2013). Connolly, Jacobs & Scott (2018), in their study of 33

emergency nurses, found that the majority demonstrated clinical leadership behaviours. Experience is also linked to competence and confidence. Confidence is discussed later in Section 7.4.1.5.

Competence in emergency nursing is defined by CENA as acquiring clinical experience, holding postgraduate emergency nursing qualifications and utilising research to develop a comprehensive and unique body of knowledge with a diverse range of skills to deliver timely, quality, safe patient care in the ED (College of Emergency Nursing Australasia 2013).

In terms of experience, Beilock et al. (2002) discussed the concept of cognitive resilience. Cognitive resilience occurs when skills that have been repeated can be performed from memory with minimal cognitive processing, meaning cognitive load can be directed to other knowledge or tasks being undertaken simultaneously. When experienced emergency nurses perform the WRN role, they likely exhibit cognitive resilience in relation to many activities they perform. This means they have the ability to multitask to meet patient care needs and time demands, and are less susceptible to the effects that external factors can have on performance (Beilock et al. 2002; Gates, Gillespie & Succop 2011). Experienced nurses also display greater confidence and are more comfortable determining and implementing individualised care (Rathert, Wyrwich & Boren 2013; Sexton & Orchard 2016). These are all important characteristics for a WRN.

7.4.1.2 Preparation

Variations in educational preparation for the role were also identified from study findings. Key informant and practice survey results acknowledged that some EDs required additional educational preparation for the role, but this was not consistent. The only consistent preparation was in NSW with completion of the CIN workbook, as discussed in Chapter One, which had the aim of preparing nurses to work confidently and competently in the role by developing a core knowledge base and skill set (NSW

Department of Health 2011). Although the CIN education program provided core content, there is still a need for local ED development in regards to supporting policies and guidelines (NSW Department of Health 2011). This is reflected in other ED educational contexts. For example, many EDs offer transition programs to support entry into the speciality. In NSW and Queensland, state-wide programs are offered, but ED staff edit and contextualise the content to suit local needs (Morphet et al. 2015; Morphet et al. 2017). This highlights variation in educational preparation of emergency nurses more widely.

In EDs, where no additional educational preparation was provided, it was perceived that experienced emergency nurses performed the role, and as a result had the requisite skills and knowledge. In the majority of EDs there was no requirement for WRNs to have completed a postgraduate qualification. Postgraduate education was introduced to assist emergency nurses in developing the in-depth knowledge and clinical expertise required to care for the range of patients presenting to the ED (College of Emergency Nursing Australasia 2015a; Fry 2008). This includes rapid assessment and identification of deterioration (Jones, Shaban & Creedy 2015), a core expectation of the role discussed later in this chapter. However, postgraduate education does not specifically focus on preparation for the WRN role. This could be because the role does not yet have a presence in every ED and remains predominantly an unfunded position, except in departments in NSW where the CIN role has been implemented (Fry et al. 2012).

7.4.1.3 Communication skills

Findings from the observation in practice and practice survey phases both revealed that effective communication with both patients and the health care team was a key attribute required for the WRN role. During the observation phase, participants, all experienced emergency nurses, were observed to be engaged, present and available, as well as being empathic to the perceived needs and concerns of patients and families

in the waiting room. WRNs used appropriate verbal and non-verbal communication, and remained calm and positive, therefore providing reassurance and comfort for patients. These observations were similar to those from the practice survey where respondents identified that WRNs had to support and comfort patients by communicating and building therapeutic relationships. These findings are supported by Fry et al. (2013), who found nurses performing the CIN role used positive body language, in the form of eye contact, smile, touch, small talk, and humour to deliver compassionate care to alleviate stress and comfort and calm patients in the waiting room. WRNs were also observed to communicate and work collaboratively with the wider multidisciplinary health care team. Fry et al. (2013) also found that the CIN was required to work collaboratively with others in the ED, which relied heavily on interpersonal relationships, of which communication was an integral component. These relationships, focusing on teamwork, allowed for mentoring of effective communication skills and facilitated patient care (Fry et al. 2013).

Communication is the process where information is exchanged between stakeholders through multiple mediums including verbal, non-verbal and written (Bramhall 2014). A fundamental component of nursing, communication contributes to the development of caring relationships and successful teamwork in health care (Bramhall 2014; Slade et al. 2008). Of note, inadequate or poor communication is the largest contributing factor to poor patient outcomes, patient dissatisfaction and complaints in the ED (Garling 2008b; Pfeil et al. 2018; Pun et al. 2017; Shah et al. 2015). To be effective communicators, nurses need to have skills in maintaining focus on the patient, active listening, and assisting with information sharing (Bramhall 2014). Examples of these core skills include empathising, non-verbal communication, recognising and responding to emotional cues, using pauses and silences, negotiating, gaining consent, acknowledging and summarising comments or discussions, and reflection (Bramhall 2014). Empathy, focusing on the psychological requirements of patients, and developing reflective practice were identified by Lin, Hsu & Chong (2008) as areas for emergency nurses to focus on to be able to effectively communicate in the unique environment of the ED.

In the context of the ED, communication is more challenging than other health care settings due to external factors such as time constraints, noise and frequent interruptions (Jenkins et al. 2011; Pun et al. 2017; Slade et al. 2008). As discussed in Chapter One, the waiting room is used for a variety of purposes, including assessment of patients, communication with those waiting to receive care, patient education, and as a meeting place for families. The varied use of the waiting room adds a layer of complexity to the communication required in the space. Such varied user expectations may result in different meaning being attributed to interactions. This may impact interpretation and understanding of communication, expectations and care delivered (Cooke et al. 2006; Jenkins et al. 2011). Communication as a core activity of the WRN role is discussed further in Section 7.5.3 below, with a synthesis of findings across the study phases.

7.4.1.4 Assessment and monitoring

All three study phases identified that WRNs required proficiency in patient assessment, including rapid detection of patient deterioration. Key informants and practice survey respondents highlighted particularly the ability for WRNs to reassess waiting patients and escalate care if deterioration was detected. This is clearly an important attribute, as recognising and responding to clinical deterioration is a priority of the Australian health care system (Australian Commission on Safety and Quality in Health Care 2017). Early detection of clinical deterioration enables appropriate and timely care to commence, therefore preventing adverse patient outcomes and limiting further interventions in hospital (Australian Commission on Safety and Quality in Health Care 2017)

Broadly, managing any risk of clinical deterioration is a vital aspect of emergency nursing care in the ED. Despite this focus, Considine et al. (2018) found that up to 13% of episodes of clinical deterioration were not detected, despite reports that changes in patient condition were evident up to six-eight hours prior to cardiac arrest (Nielsen et al.

2016). Clinical deterioration in the ED is an indicator for increased adverse patient outcomes (Lambe, Currey & Considine 2016). Detection and response to clinical deterioration should therefore be proactive rather than reactive (Considine & Currey 2015), and a clear function for the WRN role. The ability to assess, detect deterioration and escalate care needs is a fundamental attribute for WRNs, especially in the context of extended waiting times in the ED (Considine & Currey 2015). Assessment as a core activity of the WRN role is discussed further in section 7.5.1, with a synthesis of findings across the study phases.

7.4.1.5 Clinical decision-making

The ability to make clinical decisions was a finding from all three study phases. Key informants and practice survey respondents identified that WRNs required the ability to escalate patient care needs and work effectively with multidisciplinary teams. During the observation in practice phase, WRNs (all experienced emergency nurses) were observed to escalate care needs, demonstrating critical thinking and the ability to anticipate and prioritise them.

Clinical decision-making is an essential component of nursing and plays an important role in patient safety (Meeks-Sjostrom 2013). A complex process, clinical decision-making encompasses numerous competing factors such as stress, previous experiences and the environment (Nibbelink & Brewer 2018). In environments such as the ED, multiple external factors make decision-making more challenging. Effective clinical decision-making in the ED has been linked to confidence, a key attribute of the WRN role identified in this study. Confidence, related to self-efficacy and experience, is influenced by motivation and one's ability to organise and execute tasks and activities (Fry & MacGregor 2014), and incorporate previous experiences (Wang et al. 2016). Self-efficacy relates to the confidence of the individual to complete a task and therefore impacts on their clinical decision-making abilities (Fry & MacGregor 2014).

The WRN as an autonomous practitioner was identified as an aspect of clinical decision-making by key informants and was observed in practice. Autonomy for emergency nurses comprises two aspects – professional autonomy when caring for patients, and autonomy of patients in the decision-making process. Professional autonomy relates to the nurse advocating for patients when there is discord between a biomedical model of care and a holistic approach (Ajeigbe et al. 2013; Jiménez-Herrera & Axelsson 2015). The second aspect of patient autonomy reflects the process of including patients as active participants in discussions and decisions relating to their care (Jiménez-Herrera & Axelsson 2015). WRNs were observed to participate in both aspects of autonomy, including escalation of care needs and enabling patients to actively participate in discussions about their care.

7.4.1.6 Patient focus

This study illustrated that the nurse performing the WRN role needed to be patient focused. Findings included that the WRN needed to have a holistic approach, and be respectful, empathetic and sincere when delivering care. These current findings are supported by an earlier study which identified important elements for emergency nurses to consider when delivering care, including effective communication with everyone involved in patient care, consideration of needs of the patient's family, being open to and perceptive to the needs of others, demonstrating genuine concern for patients, being morally responsible and present in the moment with the patient (Curtis & Wiseman 2008b). Emergency nurses also need to ensure that they meet the essential care needs of patients including hygiene, positioning, pressure area care, nutrition and toileting (Curtis & Wiseman 2008a), a finding of the practice survey of this research. Maintenance of patient privacy and dignity is also an important consideration in EDs; however, this can be particularly challenging at triage, and therefore in the waiting room, where the physical environment and overcrowding can impact on a nurse's ability to maintain privacy and dignity (Curtis & Wiseman 2008b).

7.4.2 Organisational resources

Study findings identified a number of organisational resources crucial for successful implementation of the WRN role, including funding, operational hours, reallocation, standardised policies and provision of a safe working environment, as discussed below.

7.4.2.1 Funding

Funding challenges were highlighted in both the key informant and practice survey phases. As noted in Chapter One, aside from NSW, the WRN role remains outside of nurse-patient ratios, as dictated by enterprise bargaining agreements and regular staffing requirements, and is therefore not considered a funded position in other Australian jurisdictions (Department of Health and Human Services State Government of Victoria 2015). To fund the position, local EDs and health care networks therefore allocate resources from existing (and generally already overstretched) staffing or operational budgets, which may affect other areas of ED or hospital services. Lack of specific funding obviously affects an ED manager's ability to introduce or implement the role more widely and on a sustainable basis. As of June 2018, public hospital funding in Australia moved to a safety and quality-based model, where health care services are fined if patients experience a hospital-acquired preventable complication (Eagar et al. 2013; Magid et al. 2018). Poor patient outcomes, such as adverse events related to deterioration due to delays in accessing care in the waiting room, could be viewed as an example of hospital-acquired preventable complication. This context may result in organisations reviewing models of care for patients in ED waiting rooms, therefore impacting funding for wider implementation of the role.

There are further implications for the role being unfunded under the current industry staffing agreement. In the practice survey, respondents indicated that the workload of the WRN was unpredictable and variable, which included caring for as many patients as were present in the waiting room at any one time, potentially affecting patient

safety. This clearly meant that any increase in clinical demands, in both volume and/or acuity, without reciprocal increases in resources, could exceed the capacity of one nurse, potentially compromising care delivery (Fry et al. 2012). During the observation phase, assistance was provided on one occasion for the WRN when workload exceeded their capacity; however, at other times assistance was not available, as resources could not be released from other areas of the ED to aid care delivery in the waiting room. These findings are similar to those of Fry et al. (2012) study where safety concerns due to uncapped numbers was identified as a concern for the CIN role.

7.4.2.2 Operational hours

Both key informants and respondents to the practice survey identified limited hours of operation for the role, in particular with no allocation of a WRN overnight. Limited hours of operation for the CIN were also reported by Considine et al. (2012). This has potential implications for patient safety in the waiting room during these un-staffed hours, especially during periods when patient transition, or patient flow, through the ED may be limited (Mason, Knowles & Boyle 2017). Decreased patient flow through the ED occurs when demand exceeds ED and hospital resources, resulting in delays in care commencement, increased waiting times, access block and overcrowding (De Freitas et al. 2018; Jarvis 2016). This, coupled with broader lower staffing resources on night duty (Australasian College for Emergency Medicine 2016), may result in an increased risk to patient safety. Notwithstanding this, decreased patient presentations and reduced hospital activity overnight may mitigate some risk to patient safety in the absence of a WRN.

7.4.2.3 Reallocation

Reallocation of the WRN to other duties within a shift was a finding from the practice survey where the WRN was re-allocated to assist other patient care needs in the ED, especially during busy periods. This practice during periods of high demand needs to be reconsidered as it may increase risks to patient safety. Reallocation takes

the WRN away from the waiting room when they are most needed, due to greater numbers of patients, longer waits and increased risk of undetected patient deterioration (Garling 2008a). In addition, practice survey respondents indicated that when the ED was understaffed the role was given the lowest priority, with the potential for it not being filled for that shift. This pattern of not allocating a WRN could be described as “risky care”, where resultant delays in care and undetected deterioration results in poor patient outcomes (Wolf et al. 2017).

7.4.2.4 Standardised policies

In all three study phases, both similarities and variations in policies supporting WRN practice were identified. These variations in particular influenced WRN practice for medication administration and interventions performed, as discussed later as an activity in Section 7.5.2. In this study, standing orders and clinical pathways were the most common supporting policies. As described in Chapter One, standing orders use pre-determined protocols to allow care to commence prior to patients being seen by a medical officer or Nurse Practitioner (Sturesson et al. 2018), while clinical pathways integrate guidelines and protocols to ensure a consistent approach to managing a variety of illnesses along a continuum of care (van der Kolk et al. 2017).

Standardised policies are largely developed and implemented independently by health care providers using a collaborative, multidisciplinary approach (Winokur, Loucks & Raup 2018). Standardised policies in the ED contribute to the implementation of timely care, reduce the need for interventions, and decrease costs and adverse events (Murray et al. 2017; Winokur, Loucks & Raup 2018); in addition, they promote consistency where variability in care decreases for patients presenting with the same illness (Murray et al. 2017). Triage provides a clear example of a standardised policy introduced across most EDs in Australia. Implementation of the ATS contributes to consistency when determining urgency and allocation of triage category nationally (FitzGerald et al. 2009).

7.4.2.5 Safe working environment

Provision of a safe working environment for the WRN, in particular in regard to high exposure to occupational stressors, was an important study finding. Survey respondents identified that the waiting room could be an unsafe environment, particularly when aggressive or violent patients or visitors were present. There were concerns that the WRN, as a single nurse role in an open public space, could be more exposed to risk of assault. Workplace violence and aggression is a growing problem in health care, with higher incidences reported in EDs than other clinical areas, in particular at triage and in the waiting room (Gates, Gillespie & Succop 2011; Morphet et al. 2014).

Emergency nurses' exposure to occupational stressors is widely acknowledged in the literature. Within their normal clinical practice they are exposed to traumatic events, increased and unpredictable workload, multiple roles, time pressures, high exposure to patients (including paediatrics) with serious and terminal illnesses, and emotional impacts including managing family responses and grief (Allen & Palk 2018). Exposure to frequent and ongoing demands and stressors can influence nurses' ability to care for others, with quality of care delivered to patients negatively impacted, since concentration, decision-making skills, communication and ability to establish therapeutic relationships may be affected (Allen & Palk 2018; Li, Cheng & Zhu 2018). This is concerning in relation to the WRN, who needs to build therapeutic relationships and undertake clinical decision-making in the challenging environment of the waiting room with multiple external factors present.

Frequent exposure to occupational stressors can impact nurses physically and emotionally. Studies have found high, frequent exposure to occupational results can result in increased absenteeism, attrition and turnover; poor job dissatisfaction and decreased morale; depression and anxiety; alcohol and drug abuse; burnout and Post-Traumatic Stress Disorder (Gates et al. 2011; Gates, Gillespie & Succop 2011; Li, Cheng & Zhu 2018). There was evidence of some of these effects in findings from the practice survey, where respondents indicated the role was unsatisfying and some nurses were

unwilling to perform the role. This relates to decreased morale and apathy (Gates, Gillespie & Succop 2011) and being defensive and distracted, leading to delays in treatment and increasing waiting times (Morphet et al. 2014). In relation to the WRN role, high exposure to occupational stressors may impact nurses' ability to provide emotional support to those in the waiting room, when they themselves need this assistance (Gates, Gillespie & Succop 2011).

7.5 Activities of the WRN

This section presents an integrated discussion on the key activities, as outlined in Figure 7.1, performed by WRNs during their clinical practice, with a synthesis of findings across the study phases: assessment, interventions, communication, and facilitating patient flow.

7.5.1 Assessment

Patient assessment was a key activity of the WRN role identified in all three study phases; the WRN was responsible for reassessing waiting patients, detecting clinical deterioration and thus contributing to patient safety. During observation, while reassessing patients, the WRN was noted to have a longer time period to assess patients compared to the triage nurse. This enabled the WRN to gather further information that was valuable in determining patient acuity or management. Survey respondents identified that assessment contributed to determining all patient care needs including personal care requirements. While survey respondents identified primary survey as the most common assessment approach conducted, during the observation phase focused assessments were conducted in the greatest frequency. Considine & Currey (2015) reported that the primary survey was the most important technique used by emergency nurses to assess patients for life threatening conditions and clinical deterioration.

Findings from the literature also identified that it is imperative that emergency nurses are able to accurately assess and interpret vital signs (Lambe, Currey &

Considine 2017). Vital sign abnormalities, especially tachycardia, tachypnoea and hypotension, precede clinical deterioration in the ED (Considine, Lucas & Wunderlich 2012; Hosking, Considine & Sands 2014; Nielsen et al. 2016); accurate assessment and interpretation of vital signs is therefore essential for patient safety (Lambe, Currey & Considine 2016). Despite this, Lambe, Currey & Considine (2016) identified marked differences in the frequency of vital sign reassessment in ED, commonly performed on an ad hoc basis and reliant on the individual nurse. Changes in heart rate, respiratory rate and blood pressure were identified as indicators for reassessment (Lambe, Currey & Considine 2016), which supports the findings outlined above in regards to deviations in vital signs prior to deterioration. Failure to reassess and interpret vital signs was not unique to the ED, with the Australian Commission on Safety and Quality in Health Care (2017) identifying similar trends within the entire health care system. Outcomes arising from WRN assessment are described in Sections 7.6, 7.7 and 7.8, and include expediting care, de-escalation and patient safety.

7.5.2 Secondary triage interventions

Commencing interventions early was another key activity of the WRN. Key informants identified that the WRN role differed from triage and Nurse Practitioners, and was responsible for performing secondary triage activities to decrease waiting times. The outcomes of commencing interventions early and decreasing waiting times are discussed later in Sections 7.6 and 7.7, relating to expediting care and patient safety.

During both the observation in practice and practice survey phases, one common WRN activity was administration of medications, with analgesia the most common. Disparity was noted with other interventions; peripheral IV cannulation was the most common practice observed, while practice survey respondents identified basic first aid/minor injury management as being performed in the greatest frequency. Patient safety was the reason for not administering or commencing medications or interventions,

given the need for close monitoring due to the potential for side effects, deterioration or adverse outcomes.

As previously discussed, standing orders and clinical pathways were identified as guiding WRN practice in this study. Use of standing orders, and by inference clinical pathways, decrease waiting times to interventions, including for x-rays and analgesia administration, and overall length of stay for patients (Dewhirst et al. 2017; Douma et al. 2016; Ho, Chau & Cheung 2016). It is therefore clear that standing orders and clinical pathways should underpin WRN practice to decrease waiting times, improve care for patients and provide clear expectations for nurses in the role and other staff. Implementing standing orders and clinical pathways needs organisational support, but as noted in the observation in practice phase, one health care organisation did not support nurse-initiated pathology. Lack of practice guidelines was identified as leading to delays in patient care and frustration for nurses performing the WRN role.

7.5.3 Communication

Findings from all three study phases identified communication with patients, families and staff was a key activity of the WRN role. Key informants identified that the WRN was in a unique position to communicate with patients and families, with survey respondents reporting development of therapeutic relationships to reassure and comfort those in the waiting room. During observation, WRNs were observed to introduce themselves and make eye contact with patients and families. WRNs explained their role, informed patients of ED processes and provided information on their progress and reasons for delays. WRNs were observed using appropriate terminology and language, clarifying unclear points, and ensuring patients and families were included in all discussions and decisions. During communication with staff, WRNs communicated with the nurse-in-charge, triage nurses and the multidisciplinary team in the ED, as well as with the wider health care team, primarily for making referrals outside of the ED. In high-risk clinical areas for errors, such as the ED and waiting room, effective communication

is fundamental to the provision of safe, quality care (Källberg et al. 2017; Pun et al. 2017), with poor patient outcomes linked to episodes of failed communication (Källberg et al. 2017; Pun et al. 2017). The outcomes of clear communication are described in Sections 7.6, 7.7 and 7.8, and include de-escalation, therapeutics relationships, expediting care, advocacy, empowerment, safety and patient-centred care.

7.5.4 Facilitation of patient flow

Assisting with patient flow was identified as an activity of the WRN in the observation in practice and practice survey phases. The WRN allocated treatment spaces and assisted patients who may have difficulty locating cubicles due to the layout of the ED or language barriers. This finding was supported by Asplin et al. (2003), who also connected this practice with limiting or decreasing length of stay during patients' transitions through the ED. Delayed transition through the ED contributes to overcrowding which can also compromise patient safety, increase waiting times and contribute to patient dissatisfaction (Morley et al. 2018). In the literature, overcrowding is identified as a multi-factorial issue, including increased demand for services, delays to assessment and management and access block (Jones, Wells & Ameratunga 2018). WRN ability to improve patient flow links with expediting care, as discussed in Section 7.6.1.

7.6 Outputs and outcomes of the role

This section presents an integrated discussion on the outcomes, as outlined in Figure 7.1, of allocating a WRN to care for patients in ED waiting rooms, presented in five sections: expedite care, patient advocacy, therapeutic relationships, de-escalation and empowerment.

7.6.1 Expedite care

An outcome finding in all phases of this research was to expedite care; commencing interventions, diagnostics and early management in the waiting room minimised delays to treatment. Delays in receiving ED treatment have been associated with access block and overcrowding, and have the greatest impact on the provision of safe, quality care, accounting for an estimated 1500 deaths in Australia annually (Perera et al. 2014; Sprivulis et al. 2006). By expediting care the WRN contributes to potentially improving patient outcomes.

The ability to reassess patients also contributes to interventions commencing early, for example administration of analgesia, as the WRN was able to reassess patients for adverse outcomes and effectiveness of the intervention, ensuring safe, quality care (Smith, Bouchoucha & Watt 2016), as opposed to care being delayed until a cubicle was available. Reassessment has also been linked to improving inequities in accessing care in the ED. For example, patients presenting via ambulance were likely to have care commenced prior to arrival, while self-presenting patients may experience delays to care if a treatment cubicle was not immediately available (Smith, Bouchoucha & Watt 2016). In addition, patients presenting by ambulance may be allocated to the waiting room, meaning interruption to their care. Presence of a WRN enables care for all patients in the waiting room to be commenced or continued in a timely fashion. Overall, care can be expedited, patients can be reassessed and care needs escalated, improving both patient safety and perception of care.

Another example of WRNs expediting care was noted during observation in practice, where a WRN was observed to commence patient care in the cubicle rather than handing over and returning to the waiting room. While of benefit to that individual patient, this increased the time the WRN was absent from the waiting room, and therefore it potentially compromised safety for other patients in the waiting room with care needs. Wolf et al. (2017) referred to this as an aspect of ‘uncertainty’. Described as

nurse anxiety, uncertainty occurred when they had not yet assessed the patients in the waiting room, and therefore did not know the severity of their condition. This concept could be extrapolated to the waiting room, where the WRN could become anxious leaving patients in cubicles when they know little about their condition and having not yet assessed them, especially if they anticipated delays in care commencing in the cubicle and /or no staff available to continue care for that patient.

An important component of expediting care is the requirement for the WRN to communicate and work collaboratively with medical staff, in particular the team leader. In the ED, effective communication and teamwork have been identified as the foundation for improving patient care and outcomes (Obenrader et al. 2019; Olde Bekkink, Farrell & Takayesu 2018). Through collaborative teamwork and effective communication, the WRN can expedite care by escalating care, in particular for the deteriorating patient, with the medical team.

7.6.2 Patient advocacy

Patient advocacy was an outcome of the WRN role in this research. WRNs were observed to actively listen and engage with patients and families, imperative for patient advocacy, while key informant and survey respondent findings identified escalating care needs as another example of advocacy. In this circumstance, the WRN informed appropriate ED team members of a patient deterioration, and that they were no longer safe to wait. An additional finding from the observation phase was that WRNs identified and escalated care needs that fell outside of standing orders and clinical pathways.

Nursing advocacy is a key ethical obligation and an essential part of ED nursing care (Enns & Sawatzky 2016; McGrath & Phillips 2009). For ED nurses to advocate there was a need for respect among the multidisciplinary team so that patient concerns and messages could be effectively communicated to clinical decision-makers (McGrath & Phillips 2009). Challenges to patient advocacy in the ED were acknowledged, including varying paradigms of care delivery, unequal power relationships, reluctance due to

previous unsuccessful attempts to advocate (McGrath & Phillips 2009), workload, time restraints, staffing, and their ability to look after their own health and wellbeing (self-care) (Enns & Sawatzky 2016). Many of these factors were also identified in this research as potentially affecting the ability of a WRN to advocate for patients in the waiting room.

7.6.3 Therapeutic relationships

Findings from both the observation and the practice survey phases identified development of therapeutic relationships with patients and families as an outcome of the role. A key aspect of developing therapeutic relationships is highly developed communication skills, already established in this study as a key attribute of WRNs. High-level communication skills enable WRNs to quickly establish therapeutic, caring relationships with patients and families in the waiting room. Establishing these relationships is crucial for a WRN to deliver patient-centred care and incorporate an awareness of each patient's life experiences, occurrences, perceptions and interpretations, as well as their health experiences (Berg & Danielson 2007). When patients become unwell their situation in life changes, exposing them to uncertainty, powerlessness and vulnerability, and challenges their concepts of trust, comfort, self and caring (Delmar 2006; Hoeck & Delmar 2018). Upon entering the health care system, patients enter a high risk environment where they are vulnerable and commonly in a position of dependence, with little to no choices as their immediate needs may not able to be met without assistance (Harrington 2006). By establishing therapeutic relationships, the WRN assists with restoring a patient's concept of self and place in the world (Harrington 2006). In both the emergency setting and health care overall, patients desire a personal caring relationship with nurses and report that even if they were being physically cared for, they feel neglected if they perceive that a caring relationship was absent (Berg & Danielson 2007; Welch 2010). Patients therefore wanted nurses to care about them as a person and not just care for their illness or injury. This is commonly described as empathy in the wider literature (Berg & Danielson 2007; Welch 2010).

Empathy was a finding of this research, with WRNs observed to be present with patients and families and actively listening to their needs and concerns. Empathy refers to the ability of nurses to understand feelings and incorporate others' perspectives and experiences into care and interactions. Wiman & Wikblad (2004) found that to be empathetic, ED nurses had to have good communication skills, be attentive, present in the conversation, and actively listen and respond to patient concerns. Empathy is therefore a key aspect of nursing practice and is imperative to understand the cognitive and emotional perspectives and reactions of patients (McKinnon 2018). Active listening, self-awareness and the ability to share emotions are fundamental aspects of empathy (McKinnon 2018).

Presence in the waiting room was another important study finding. In hospital settings, patients commonly reported that they were unsure who to talk to and ask specific questions about their care or experiences, and found it difficult to get answers (Berg & Danielson 2007). This is particularly true for the ED waiting room, which is traditionally not allocated a dedicated nurse; this results in those in the waiting room being unclear who is caring for them, who to ask questions to, and being at risk of miscommunication (Philip et al. 2018). Knowing which nurse or doctor is looking after them is the ED is important to patients and families, allaying concerns that they have not been 'lost in the system' (Philip et al. 2018). In addition, there was a perception that care was not provided when needed (Lovato et al. 2012), including an expectation that care commenced on presentation to the ED, rather than waiting for a treatment area to be available (Garling 2008a). With the presence of a WRN, patients and families could therefore identify that someone was responsible for caring for them, reassuring them that their needs were being looked after and that someone would be supporting them whilst they waited, as well as commencing relevant care and treatment early.

By establishing therapeutic relationships, the WRN developed respect, trust and reassured those in the waiting room. Ward et al. (2017) identified that in the health care system trust is imperative for therapeutic relationships, for patients to have positive

experiences and, ultimately, make informed decisions of their health. When it comes to health care, patients place their trust in health care providers, commonly handing over the right to make decisions about their health to the professionals. This trust relationship is then continued until treatment is completed. If satisfied with their outcomes, patients report feeling relieved, but engage further or seek alternatives if the outcome is unsatisfactory (Wang et al. 2016). Importantly, establishment of therapeutic relationships reassures patients when communication is undertaken in a caring, positive and motivating manner, and they feel comforted and have the confidence to ask questions (Teasdale 1989).

7.6.4 De-escalation

De-escalating agitated patients and families was both observed and identified in the practice survey. The WRN was observed to identify a patient becoming increasingly agitated while waiting, and successfully verbally de-escalated their behaviour. Verbal de-escalation requires advanced communication and highly developed negotiation skills to ascertain, manage and resolve issues (Hallett & Dickens 2017; Wyder et al. 2017). The ED waiting room is often a challenging and difficult environment for verbal de-escalation to be achieved. Effective de-escalation skills have been linked to experience and education, with nurses needing assessment skills to detect signs of violence or aggression early, and knowledge in how to provide a safe environment (Edward et al. 2018). Luck, Jackson & Usher (2009) found that by providing a safe environment, the risk of violence and aggression in the ED decreased. As identified above, the WRN also contributes to providing a safe environment by having a presence in the waiting room and establishing therapeutic relationships.

7.6.5 Empowerment

This study found that the WRN empowered patients by informing and disseminating information to those in the waiting room. In the literature, empowerment is

defined as a patient's perception of access to information, support, resources and opportunities to engage and learn to maximise their health outcomes. Patients gain a sense of being competent to make meaningful decisions that impact their life (Connolly, Jacobs & Scott 2018).

Survey respondents identified the WRN was responsible for communicating ED processes and keeping those in the waiting room informed of the wait. Patients and families presenting to the ED may overestimate their urgency, do not understand the triage system, and interpret flow in the ED as being unfair (Welch 2010) – in particular, not being seen in order of arrival (Cashin et al. 2007; Philip et al. 2018). In addition, Swancutt et al. (2017) found that patients often have limited insight into potential reasons for delays to care whilst in the ED, which can contribute to increasing frustrations, stress, and a poor perception of the care received. In the last decade, a number of studies highlighted the importance of providing information to patients about ED care and processes (Corbett, White & Wittlake 2000; Kologlu, Agalar & Cakmakci 1999; Papa et al. 2008), with Reid et al. (2017) finding that current wait times was the most valued information. It could therefore be suggested that the WRN plays a role in decreasing stress and anxiety for patients and families in the waiting room by explaining ED processes, and can provide up-to-date information on wait times.

Observation and practice survey results also found the WRN educated those located in the waiting room, including those who had returned seeking clarification about discharge instructions. Patient education is a crucial aspect of care provision by nurses broadly, and is an increasing requirement in ED staff due to the increasing number of patients presenting with both acute and chronic illnesses (Szpiro et al. 2008; Wei & Camargo 2000). Despite education of patients about discharge instructions being a common occurrence in the ED, Sheikh et al. (2018) found that patients leaving the ED generally had a poor understanding of them. As noted earlier, a finding in the observation phase was that WRNs had a longer time to assess and communicate with patients than the triage nurse. This is beneficial, as it allows sufficient time for patients to be involved

in discussions and to assess if discharge plans have been understood, improving health literacy and empowering patients to make choices in regards to their health (Sheikh et al. 2018).

Health literacy is the ability of patients to read, understand and implement information given to them, allowing them to actively participate in and make decisions on their health care (World Health Organization 2013). There is a direct correlation between health literacy and health outcomes (World Health Organization 2013). Poor health literacy is an under-recognised problem in the health care system, with the Australian Bureau of Statistics (2009) reporting that 60% of Australians have poor health literacy skills, and are therefore unlikely to read and correctly interpret information provided to them. This limited understanding results in patients being unable to make judgements, identify complications or implement management plans (Adams et al. 2009). Though patient education, the WRN can therefore play an active role in improving the health literacy of patients and families, contributing to improving health outcomes and empowering those in the waiting room to participate in decisions relating to their health care.

7.7 Improved care quality and patient safety

Considered potentially the most important aspect of the WRN role was delivery of safe, timely, quality care (Figure 7.1). In all three study phases, WRNs acted as a safety net for those in the waiting room, by expediting care and contributing to minimising waiting times. These findings are supported by Fry & Jones (2005), who found that the CIN had a positive impact on patient care by expediting care and reducing rates of patients LWBS. As previously noted, this is a key aspect of the role, as patients who experience extended waits and delays to care are at increased risk of deterioration and increased morbidity and mortality (Bernstein et al. 2009; Scott, Considine & Botti 2015). Unacceptable wait times, as determined by patients, also influence patient satisfaction,

ED experience and overall perceptions of care (Holden & Smart 1999; Swancutt et al. 2017).

Importantly, the activities of reassessing and monitoring patients also contributed to patient safety in the waiting room, as the WRN was able to detect and escalate care for patients with clinical deterioration. Considine et al. (2018) established that managing risk of clinical deterioration is a fundamental component of emergency nursing practice.

The WRN also contributed to patient safety by making the waiting room a safer environment in which patients and families waited. In their research on violence and aggression in the ED, Luck, Jackson & Usher (2009) found patients reported less stress and were reassured and comforted when therapeutic relationships were present. This could be linked to the WRN, who through their presence and proven ability to develop therapeutic relationships are able to contribute (Fry et al. 2013; Fry et al. 2012) to providing a safe waiting environment.

7.8 Delivery of patient-centred care

Finding from this research demonstrated that WRNs delivered patient-centred care (Figure 7.1); this is an important outcome, as patient-centred care underpins all effective health care provision. As discussed in Chapter One, Scholl et al. (2014) developed a model of patient-centred care that all members of the health care team can implement in any clinical setting. When the results of this study are compared to the model, the WRN clearly demonstrates meeting all 15 domains (see Table 7.1).

Table 7. 1 Examples of WRN meeting each domain of the Model of Patient-Centredness

Dimension	Examples of WRN meeting domain	Study phase		
		Key informants	Observation in practice	Practice survey
Fundamental Principles				
Essential clinician characteristics	Attributes identified include holistic, empathetic, respectful and sincere		x	
Clinician-patient relationships	Developed therapeutic relationships with patients and families in waiting room	x	x	x
Patient as a unique person	Active listener; acknowledged patient needs and preferences		x	
Biopsychosocial perspectives	Holistic approach; incorporated patient emotional, physical and spiritual aspects		x	
Enablers				
Clinician-patient communication	Highly developed communication skills	x	x	x
Integrated medical/non-medical care	Ensured culturally competent care e.g. referral to Indigenous Liaison Worker		x	
Teamwork and team building	Worked collaboratively within and with multidisciplinary health care teams	x	x	x
Access to care	Ensured timely access by expediting care and escalating care	x	x	x
Coordination and continuity of care	Referring patients to appropriate services outside of the ED	x	x	
Activities				
Patient information	Through effective communication and education shared knowledge with patients and families	x	x	x
Patient involvement in care	Actively listened and encouraged patients to be involved in discussions so they could make informed decisions on their health		x	x
Involvement of family and friends	Encouraged and permitted family to be part of any discussions		x	
Patient empowerment	Through effective communication education allowed patients to self-manage illness and injuries		x	
Physical support	Implemented medications and interventions in waiting room; ensured provision of a safe environment	x	x	x
Emotional support	Acknowledged the emotional state of patients during example of de-escalation		x	

Adapted from Scholl et al. (2014)

By implementing patient-centred care the WRN demonstrates the ability to communicate and work collaboratively with patients, families and members of the multidisciplinary team to plan and implement personalised care for those in the waiting room (Australian Commission on Safety and Quality in Health Care 2010). As discussed in Chapter One, patient-centred care improves patient satisfaction and outcomes, staff perceptions of care delivery, and has a positive impact on organisations in terms of improved efficiencies within the system (Stewart et al. 2000).

An argument can be made that the nurses working in the WRN role could exhibit a more person-centred approach to care provision, as discussed in Chapter One; despite care episodes being intermittent, the WRN plays a role in initiating a co-ordinated approach across multiple health care providers, a key component of person-centred care. This includes the WRN referring patients to health care providers outside of the ED such as the community setting.

7.9 Conclusion

The ED, including the waiting room, is a complex and challenging environment in which to provide nursing care, with many factors impacting on its delivery. The WRN role was implemented in some EDs to expedite care and provide quality, safe care for patients and families allocated to the waiting room. This mixed-methods exploratory sequential design generated new knowledge in relation to the WRN role, specifically within Australian EDs. This study identified the resources required to implement the role, activities performed in clinical practice, and the outcomes of having a WRN allocated to the ED waiting room, within the context of the many external factors that can influence the role.

Importantly, the WRN plays a valuable role in ensuring timely, quality care is delivered to patients, as well as contributing to a safe environment for those waiting for definitive care and treatment. Of note, and despite time constraints and other influencing

factors, the WRN can develop therapeutic relationships that contribute to improving patient outcomes.

CHAPTER EIGHT – RECOMMENDATIONS AND CONCLUSION

8.1 Introduction

This final chapter provides a synopsis of the key study findings within the context of the methodological strengths and limitations of the research and concludes with recommendations for policy, practice and research.

8.2 Methodological strengths and limitations

Interpretation and application of the reported findings need to be considered within the context of a number of methodological strengths and limitations. Individually, each phase of the research had strengths and limitations as single studies, as reported in Chapters Four, Five and Six. Use of an exploratory sequential mixed-methods design underpinned by pragmatism informed data collection, data analysis and integration of different forms of data. By countering the strengths and limitations of qualitative data and quantitative data approaches (Creswell & Plano Clark 2011; Tashakkori & Teddlie 1998b), the overall study provided an in-depth understanding of the WRN role. This design also allowed for data from one phase to inform data collection in subsequent phases (Creswell & Plano Clark 2011); findings from the initial key informant interviews guided development of the observation tool, and findings from observation informed survey development.

Trustworthiness was established in the key informant interviews and observation in practice phases, ensuring truth, value, applicability, consistency and neutrality were achieved (Guba 1981; Lincoln & Guba 1985). In the practice survey, a strength was the systematic approach to developing the survey (de Vaus 2014), including establishing face and content validity and reliability (Schneider et al. 2014). It is however acknowledged that responses may have been influenced by the format, construct and

interpretation of items, as the survey was self-reporting (de Vaus 2014). In the observation in practice phase, a further strength was having a metropolitan and rural ED as study settings. These varied settings increased the quality and depth of data collected, analysis and findings (Onwuegbuzie & Collins 2007).

A potential limitation in the observation phase was social desirability and the observer (Hawthorne) effect (Schneider et al. 2014). While there is no direct measure of this presence, the literature suggests the effect can be minimised the longer the researcher engages in the study setting. Meaningful relationships with participants in this study were developed, with the initial part (passive practice observations with no data collected) contributing to decreasing the observer effect on participants (Chiesa & Hobbs 2008; Groenkjaer 2002; Leonard & Masatu 2006). Mulhall (2003) argued that the observer effect may be exaggerated, with most professionals unable to maintain behaviour that is outside their norm.

There is also the potential for observer or researcher bias. This bias refers to the observer having prior knowledge and feelings, often unconsciously, about the topic or subject. This may impact of data collection and analysis due to the researchers preconceived ideas or assumptions, resulting in a tendency to see what they expect or want to see (Mahtani et al. 2018). In the case of this research, data collection was undertaken by an experienced emergency nurse who had prior knowledge and experience of the role. Observer bias was reduced with the use of a structured approach with a data collection tool during the observation phase and the iterative process utiltised during data analysis during each phase of the research (Mahtani et al. 2018).

A further potential limitation of the research that needs to be considered is the relationship between perceptions and reality, often referred to as perception of reality. Often in this relationship an individual's perceptions of an issue or event does not match the accurate version of the reality. The altered perception of reality is identified as being a normal aspect of everyday human cognition (Akerman, Williams & Meunier 2007; Carbon & Jakesch 2013). Perception and interpretation are intertwined, with an

individual's perception, feelings and understanding impacting their attitude of an issue or an event, which in regards to WRNs, this may influence their practice and ultimately patient outcomes (Akerman, Williams & Meunier 2007; Carbon 2014).

Study results may not be generalisable to the wider Australian ED setting as most data were collected from two states, Victoria and NSW. Findings may also not be reflective of rural and remote emergency health care settings or private health care providers in Australia. Also, data were predominantly collected from participants with experiences in the WRN role. Limited data were collected in EDs where no WRN role was implemented; therefore comparisons could not be explored. A further limitation to generalisability of the results is that observation occurred in only two EDs. Although data saturation was reached with the data collection at both sites there is potential for selection bias as the sample may not be representative of WRNs (Hammer, Du Prel & Blettner 2009).

8.3 Implications for policy, practice and education

No standardised approach to implementation of the WRN role across Australian EDs was identified, with variations in experience, preparation and supporting policies noted. A standardised approach could outline minimum benchmarks for experience and educational preparation of nurses performing the role.

This research found that experienced emergency nurses had the skills, attributes and ability to make complex decisions in the challenging environment of the waiting room, while inexperienced nurses in the role could compromise patient care, outcomes and safety. A further consideration, in terms of experience, could be the requirement for nurses to be regularly allocated to and work in the role. This would contribute to nurses, both maintaining and continuing to develop the skills and attributes to ensure patient safety in the waiting room.

In terms of preparation, despite a recommendation that emergency nurses be educated to a minimum Graduate Certificate level (College of Emergency Nursing

Australasia 2015b), in Australian EDs only one-third of emergency nurses held a Graduate Certificate in emergency nursing (Morphet et al. 2016). In terms of the WRN role, nurses who do not have graduate-level education will need additional preparation to ensure they have the appropriate skills and knowledge to care for all patients allocated to the waiting room. In light of observed findings that inexperienced and ill-prepared WRNs were less efficient in the role, the development of a standardised approach is recommended for the educational preparation of nurses for the role to ensure minimum skills and knowledge are attained prior to commencing in the role. The education would need to be flexible to integrate local health care priorities and work practices of each ED.

Variations in policies to support practice were also identified. Despite each jurisdiction determining policy, a standardised approach could recommend medications and interventions that each organisation could consider to support the WRN in implementing care for patients in the waiting room.

Study findings support the need for a national standardised approach for the WRN role, similar to the CIN role implemented in NSW (NSW Government 2010). A standardised approach would provide a clear description, clarify expectations and responsibilities, reduce uncertainty, and potentially make the role more appealing and rewarding for nurses. This approach would also contribute to improving safety and outcomes for patients in the waiting room.

Implications for policy relating to WRNs' frequent exposure to occupational stressors were also identified; the physical and mental health of WRNs can be negatively affected, with subsequent detrimental impacts on patient care and outcomes (Allen & Palk 2018; Li, Cheng & Zhu 2018). In response to their high exposure to occupational stressors, it is recommended that mandatory resilience training be provided for emergency nurses moving into new positions, such as the WRN role. This training should include information of what to expect from the ED, the effects of exposure to occupational stressors, promotion of and strategies to improve resilience. Resilience education includes coping strategies incorporating relaxation techniques, stress management,

mindfulness and self-care practices (Allen & Palk 2018). Policy in relation to debriefing is also required, including instructions on how to effectively debrief, guidelines on how to support staff, and how to engage with formal debriefing services outside of local, informal debriefing activities. These services should include multiple options, including management and formal counselling services (Allen & Palk 2018). It is important for staff to be able to develop open, nurturing relationships to allow for effective communication and emotional insight. Emotional insight is a key factor for the development of resilience, as this allows nurses to identify when they require support (McAllister & McKinnon 2009).

There is also a need for the review of the operational hours of the role. This study confirmed that the WRN plays an important role in patient safety and care delivery to a vulnerable cohort of patients in the waiting room (Harrington 2006; Philip et al. 2018). The WRN is generally not operational overnight (between 2000-0800hrs), when on average 31% of ED presentations occur (Australian Institute of Health and Welfare 2016, 2017), leaving a vulnerable cohort at risk; moreover, patients who have not been treated during the evening still require assessment and management (Australasian College for Emergency Medicine 2016). In addition, anecdotal evidence identifies that overnight is the time when ED and hospital resources, including experienced staff, are at their lowest, patient flow from ED into the hospital is often limited, causing waiting times to increase, and placing those in the waiting room at risk of undetected deterioration. This may impact patient safety in the waiting room when the WRN is not present.

A final implication for practice is the need for the WRN to communicate and work collaboratively with the medical team. In the ED, effective communication and interdisciplinary collaboration has been shown improve patient care and outcomes, with poor patient outcomes and satisfaction, for patients and staff, linked to ineffective communication and teamwork (Obenrader et al. 2019; Olde Bekkink, Farrell & Takayesu 2018).

8.4 Recommendations for further research

Important implications for further research exploring WRNs in EDs are noted. As this research highlighted, there has been limited evaluation of the impact the role actually has on patient care and outcomes. Findings from current research on WRNs identifies that an outcome of the role was to expedite care and decrease waiting times (Considine et al. 2012; Fry & Jones 2005; Fry et al. 2012). Despite this, there has been no research to explore if a reduction in waiting times was achieved. Future studies may explore patient outcomes relating to waiting times, for example time to intervention after triage. A study comparing EDs with and without a WRN could investigate this outcome. An extension of this would be research exploring the cost effectiveness, in terms of the role potentially decreasing waiting times, patient outcomes and patient flow.

Further research on the WRN should explore the impact of the limited hours of operation on patient outcomes and safety. The role is not present overnight, when overall ED resources are at their lowest, increasing the risk of a failure to detect patient deterioration.

Exploring the nursing voice, in relation to the role, was the focus of this research. In the future, research on the WRN role should include perspectives of other health care professionals including medical staff and the interaction and impact the role has on other roles and the various models of care operating in EDs. Although examining patient voice was outside the scope of this study, this is an important area for future research. To date there has been no research that explores patient or family perceptions of their experiences when interacting with the WRN. The WRN intends to ensure care is patient-centred, and observation in this study concluded that the role did improve this aspect of care. An important study now would be to explore patient experiences of the waiting room, and WRN in relation to this health care priority and satisfaction with care received.

Also outside the scope of this research, was an evaluation of the standardised education program implemented across NSW for the CIN role. Additional research could

evaluate the package to determine if it was suitable for implementation Australia wide as a means of preparing WRNs. An evaluation could explore educational outcomes of the program and identify if content needed to be expanded to improve preparation of nurses for the role.

8.5 Conclusion

Using a sequential exploratory mixed-methods design, this study has contributed new knowledge on the WRN role in Australian EDs. The overall study aim was to explore nurses perceptions of the implementation of a nurse allocated to care for patients in ED waiting rooms. Study findings provided a rich narrative of the development, implementation and implications of WRNs in ED waiting rooms. For the first time, this study clearly detailed nurse attributes and organisational resources necessary to support the role, WRN activities and outcomes of the role.

Findings from the study identified that the role was perceived to mitigate risk and improved safety for those patients allocated to the waiting room. The WRN detected clinical deterioration, expedited care and ensured that safe, quality care was delivered in a timely fashion. The study identified a number of variables that affected the effectiveness and efficiency of the role. Nurses working in the role required a clear set of attributes, which included being an RN who was competent and confident working in all areas of the ED. In addition, the nurse needed to have proficient assessment skills, highly developed communication skills, and possess complex clinical decision-making capabilities, which included being a critical thinker, patient advocate, and autonomous practitioner. WRNs were required to have a focus on both the patient and safety in the waiting room. Organisational resources found to be impacting the role were funding, operational hours, re-allocation of the nurse during busy periods, provision of a safe working environment and supporting policies.

Despite variations relating to education, preparation and supporting policies being identified, experienced emergency nurses were acknowledged as possessing the requisite skills and knowledge to execute the role. Experience was linked to preparation, with postgraduate-prepared emergency nurses identified as having the abilities to deliver safe, quality care in the challenging environment of the waiting room. In terms of policy, standing orders and clinical pathways supported the majority of WRN roles in Australia, although there were differences in clinical presentations, medications and interventions the WRN could instigate.

The key activities of the WRN were assessment, including reassessment, secondary triage interventions (of which administration of analgesia, peripheral IV cannulation and basic first aid/minor injury management were the most common), communication with those in the waiting room and the multidisciplinary team, and contributing to patient flow.

The study found the overarching outcomes of the WRN was a perception of improved patient safety and quality of care, established as potentially the most important outcome of the role, and delivery of patient-centred care for patients and families in the waiting room. This was achieved by the WRN by expediting care, advocating, developing therapeutic relationships, de-escalating stressed and agitated patients and empowering persons in the waiting room.

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APPENDIX A – Critical Appraisal Skills Programme (CASP) Tools

CASP tool	Questions
Cohort Study	1. Did the study address a clearly focused issue? 2. Was the cohort recruited in an acceptable way? 3. Was the exposure accurately measured to minimise bias? 4. Was the outcome accurately measured to minimise bias? 5. What confounding factors have the authors accounted for in the design and/or analysis? 6. Was the follow up of subjects long enough and complete? 7. What are the results of the study? 8. How precise are the results? 9. Do you believe the results? 10. Can the results be applied to the local population? 11. Do the results of this study fit with other available evidence? 12. What are the implications of this study for practice?
Case Control	1. Did the study address a clearly focused issue? 2. Did the authors use an appropriate method to answer their question? 3. Were the cases recruited in an acceptable way? 4. Were the controls selected in an acceptable way? 5. Was the exposure accurately measured to minimise bias? 6. What confounding factors have the authors accounted for? 7. What are the results of the study? 8. How precise are the results? How precise is the estimation of risk? 9. Do you believe the results? 10. Can the results be applied to the local population/ 11. Do the results of this study fit with other available evidence?
Randomised Controlled Trial	1. Did the trial address a clearly focused issue? 2. Was the assignment of patients to treatments randomised? 3. Were all the patients who entered the trial properly accounted for? 4. Were patients, health workers and study personnel 'blind' to treatment? 5. Were the groups similar at the start of the trial? 6. Aside from the experimental intervention, were the groups treated equally? 7. How large was the treatment effect? 8. How precise was the estimate of the treatment effect? 9. Can the results be applied in your context (local population)? 10. Were all clinically important outcomes considered? 11. Are the benefits worth the harms and costs?
Qualitative	1. Was there a clear statement of the aims? 2. Is the qualitative methodology appropriate? 3. Was the research design appropriate to address the aims of the research? 4. Was the recruitment strategy appropriate to the aims of the research? 5. Was the data collected in a way that addressed the research issue? 6. Has the relationship between the researcher and participants been adequately considered? 7. Have ethical issues been taken into consideration? 8. Was the data analysis sufficiently rigorous? 9. Is there a clear statement of findings? 10. How valuable is the research?

(Critical Appraisal Skills Programme [CASP] 1993)

Waiting Room Nurse role **Observation Checklist** **version:4**

Date: _____ Observation Period: _____ Location:

	Number of times observed per session	Notes
VERBAL COMMUNICATION		
• With patient		
• Triage nurse		
• Nurse in Charge		
• Allied health (Specify)		
• Medical officer (include referrals)		
• Attendant		
• Relatives / Carers		
DOCUMENTATION:		
• With patient (e.g. education pamphlets, directions)		
• Medication chart		
• Triage nurse		
• Nurse in Charge		
• Allied health (Specify)		
• Medical officer		
• IT system		
Triage (including ambulance) or redirects		

Date: _____ Observation Period: _____ Location:

INTERVENTIONS/DIAGNOSTICS		
Analgesia – Morphine		
Analgesia – oral opioids		
Analgesia – paracetamol		
Analgesia – NSAIDS		
Nitrates		
Bronchodilators		
Antiemetic - Ondansetron		
Antiemetic - Metoclopramide		
Medication – Other (Specify)		
IV fluids		
Suturing		
Oxygen administration		
First Aid - BLS		
- wound care		
- sling		
- RICE		
Cannulation (including pathology)		
Venepuncture (including pathology)		

Date: _____ Observation Period: _____ Location:

Electrocardiogram		
Patient Assessment – vital signs		
- history of event		
- past history		
- pain assessment		
Patient Reassessment (including re-triage)		
Urinalysis/MSU		
Wound swab		
Pathology – other		

Free Text:

APPENDIX C – Online Survey

WAITING ROOM NURSE ROLE SURVEY

PARTICIPANT DEMOGRAPHICS

The following questions relate to your current employment, waiting room nurse role in your emergency department, experience and educational qualifications.

Identifying the hospital allows the researcher to recognise multiple responses from the same hospital. This is important when determining the extent to which the role is implemented across Australia. Details on the hospital will be de-identified and not used for any other purposes. All other information from participants at the same hospital will be used in the research.

1. State the name of your main place of work/employment.(free text)
2. State or Territory hospital located in.
    - Australian Capital Territory (ACT)
    - New South Wales (NSW)
    - Northern Territory (NT)
    - Queensland (Qld)
    - South Australia (SA)
    - Tasmania (Tas)
    - Victoria (Vic)
    - Western Australia (WA)
3. Your role/title in the ED.(free text)
4. Your total years of nursing experience.(free text)
5. Your total years of emergency nursing experience. (free text)
6. Your highest educational qualification held.
    - Bachelor of Nursing (BN)
    - Graduate Certificate
    - Graduate Diploma
    - Master
    - Doctor of Philosophy (PhD)
    - Other (please specify)
7. Do you work in the triage role? (free text)
    - Yes / No

WAITING ROOM NURSE ROLE

The remainder of the survey relates to the allocation of the additional nurse to care for patients in the waiting room.

For ease, the additional nurse allocated to the waiting room will be referred to as the waiting room nurse in the survey.

8. Does your emergency department allocate an additional nurse, other than the triage nurse or Fast Track nurse for example, to care for patients in the waiting room?
    - Yes / No (if no, skip logic to question 49)
9. Title of nurse/role allocated to care for patients in your ED waiting room. (Free text)
10. Discuss the aim or /purpose of the waiting room nurse role in your ED. (Free text)
11. Discuss the roles and responsibilities associated with the waiting room nurse role in your ED. (Free text)
12. Is there a minimum amount of emergency nursing experience required by the nurse prior to commencing in the waiting room nurse role?
    - Yes / No
13. Do they need to be able to work at triage?
    - Yes / No
14. Do they need post graduate qualifications?
    - Yes / No
15. Indicate the minimum amount of emergency nursing experience (in years) required prior to commencing in the waiting room nurse role?
    - Graduate
    - 1 year
    - 2 years
    - 3 years
    - 4 years
    - 5 years
    - Other (please specify)
16. Do they need to be able to work at triage?
    - Yes / No
17. Do they need post graduate qualifications?
    - Yes / No
18. If required, indicate the minimum level of post graduate qualification required prior to commencing in the waiting room nurse role.
    - Graduate Certificate
    - Graduate Diploma
    - Master (Nursing)

- Master (Nurse Practitioner)
- Other (please specify)

19. Is there any additional educational preparation prior to commencing in the waiting room nurse role e.g. workshops, orientation, clinical support.
    - Yes / No (if no, skip logic to question 44)
20. Discuss the educational preparation required prior to commencing in the waiting room nurse role (include number of sessions, length in hours and topics covered). (Free text)

POLICIES AND PROTOCOLS

This section of the survey explores the hospital policies and protocols associated with the waiting room nurse role.

Examples of standing orders include nurse initiated policies and clinical pathways.

21. Do standing orders guide practice for the waiting room nurse role in your ED?
    - Yes / No (if no, skip logic to question 46)

22. Indicate the standing orders that guide practice for nurses in the waiting room nurse role (tick all applicable boxes)
    - Nurse initiated analgesia
    - Nurse initiated x-ray
    - Nurse initiated pathology
    - Clinical pathways
    - Other (please specify)
23. If clinical pathways guide practice, please list the clinical pathways e.g. chest pain, headache (adult), vomiting and diarrhoea (paediatrics) (free text)
24. Discuss any other policies or protocols which guide practice for the waiting room nurse role. (free text)
25. Discuss if you think the policies and procedures adequately support the waiting room nurse role e.g. are more nurse initiated policies required. (free text)
26. Indicate if and how regularly the policies and protocols supporting the waiting room nurse role are reviewed and updated. (free text)
27. Discuss if nurses are included as part of the review process. (free text)

MEDICATION ADMINISTRATION

Although medication administration falls under the Registered Nurse scope of practice, in some EDs nurses performing the waiting room nurse role are not permitted to administer some medications in the waiting room due to limited resources and safety concerns.

This section of the survey will identify medications nurses are permitted to administer to patients in the waiting room, either through nurse initiated, standing orders or by a medical order.

28. Identify all oral, inhaled and topical medications the waiting room nurse is allowed to administer to patients in the waiting room.
    - Aspirin
    - Dexamethasone
    - Endone
    - Hydrocortisone
    - Ibuprofen
    - Indomethacin
    - Inhaled Adrenaline
    - Inhaled Salbutamol
    - Inhaled Steroids
    - Local anaesthetic creams (e.g. EMLA, ANGEL, Lignocaine)
    - Loratidine
    - Metoclopramide
    - Nitrates
    - Ondansetron
    - Panadeine Forte
    - Panadeine
    - Paracetamol
    - Prednisolone
    - Promethazine
    - Other (please specify)
29. Identify all intravenous (IV) medications the waiting room nurse is allowed to administer to patients in the waiting room.
    - Fluids
    - Hydrocortisone
    - Metoclopramide
    - Morphine
    - Ondansetron
    - Other (please specify)

30. Is the waiting room nurse allowed to administer oxygen therapy to patients in the waiting room?
    - Yes / No
31. Identify and discuss the reasons why the waiting room nurse is not allowed to administer specific medications to patients in the waiting room. (free text)

INTERVENTIONS

Although the interventions listed below fall under the Registered Nurse scope of practice, in some EDs nurses performing the waiting room nurse role are not permitted to perform some interventions in the waiting room due to limited resources and safety concerns.

This section of the survey will identify interventions nurses are permitted to perform in the waiting room, either through nurse initiated, standing orders or by a medical order.

32. In the waiting room, is the waiting room nurse permitted to (tick all applicable responses):
    - Administer basic first aid or minor injury management (RICE, apply sling)
    - Measure blood glucose levels (BGL)
    - Perform cannulation (including bloods)
    - Collect mid stream urine (MSU)
    - Commence oral rehydration (e.g. Gastrolyte)
    - Distribute food and drinks
    - Perform electrocardiogram (ECG)
    - Take venous blood gases (VBG)
    - Perform urinalysis
    - Perform urine pregnancy test
    - Perform venepuncture (including bloods)
    - Undertake wound care/dressings
    - Take wound swabs
    - Other (please specify)
33. Identify and discuss reasons why any specific interventions that the waiting room nurse is not permitted to perform. (free text)
34. If able to work in triage, is the waiting room nurse permitted to triage patients presenting to the ED.
    - Yes / No (if No, skip logic to question 48)
35. Discuss the circumstances under which the waiting room nurse is permitted to triage arriving patients (e.g. ambulance arrivals, workload, covering break). (free text)

PATIENT ASSESSMENT

Although patient assessment is a key skill set for ED nurses. These questions relating to patient assessment are designed to ascertain the types of patient assessments performed by the waiting room nurse.

36. Discuss any specific aspects of patient assessment that the waiting room nurse performs e.g. primary assessment, focused assessment, head to toe assessment, chest auscultation. (free text)
37. Is the waiting room nurse responsible for reassessing patients in the waiting room?
    - Yes / No
38. Discuss the policy or protocol relating to reassessing patients in the waiting room including any criteria (e.g. time frames, minimum assessment requirements). (free text)
39. Discuss the process for reporting and escalating deteriorating patients in the waiting room e.g. change triage category, report to triage nurse, report to nurse in charge. (free text)

COMMUNICATION AND DOCUMENTATION

Communication and documentation have been identified as important aspects of the role.

40. Please discuss the importance of effective communication associated with the waiting room nurse role. (free text)
41. Please discuss the importance of documentation within the waiting room nurse role. (free text)

GENERAL COMMENTS

42. Are there any barriers or challenges associated with the waiting room nurse role? (free text)
43.
44. Please feel free to add any general comments about the waiting room nurse role or comment on areas not addressed in the survey. (free text)

Thank you for participating in the survey.

Your time is greatly appreciated.

SKIP LOGIC

45. Do you think there should be some educational preparation prior to commencing in the waiting room nurse role?
    - Yes / No

46. Discuss the type of education, length of session and content to be covered OR reasons why you think additional education is not required.(free text)

    Skip logic: On completion of Question 45, return to Question 21.

47. Please explain if you think standing orders, including nurse initiated interventions, would be beneficial OR not beneficial in the waiting room nurse role in your ED. (free text)

48. Which standing orders do you think would be beneficial in the role?
    - Nurse initiated analgesia
    - Nurse initiated x-ray
    - Nurse initiated pathology
    - None
    - Other (please specify)

    Skip logic: On completion of Question 47, return to Question 23.

49. Discuss the reasons why the waiting room nurse is not permitted to triage. (free text)

    Skip logic: On completion of Question 48, return to Question 36.

50. Has the waiting room nurse role been considered in your ED?
    - Yes / No

51. Discuss why you think the waiting room nurse role would or would not be beneficial in your ED. (free text)

52. Are there any other comments you would like to make in regards to the waiting room nurse role? (free text)

Thank you for participating in the survey.

Your time is greatly appreciated.

APPENDIX D – UTS ethics approval: Key informant interviews

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www.uts.edu.au

UTS CRICOS PROVIDER CODE 00099F

03 June 2015

Professor Doug Elliott
Faculty of Health
UNIVERSITY OF TECHNOLOGY, SYDNEY

Dear Doug,

UTS HREC 2015000226 – Professor Doug Elliott, Associate Professor Virginia Plummer, Professor Debra Jackson (for Ms Kelli Louise Innes, PhD student) – "An exploration of a nursing role in Emergency Department waiting rooms (Phase 1)"

The UTS Human Research Ethics Committee reviewed your application titled, "An exploration of a nursing role in Emergency Department waiting rooms (Phase 1)", and agreed that the application meets the requirements of the NHMRC National Statement on Ethical Conduct in Human Research (2007). I am pleased to inform you that ethics approval is now granted.

Your approval number is UTS HREC REF NO. 2015000226 Your approval is valid five years from the date of this email.

Please note that the ethical conduct of research is an on-going process. The National Statement on Ethical Conduct in Research Involving Humans requires us to obtain a report about the progress of the research, and in particular about any changes to the research which may have ethical implications. This report form must be completed at least annually from the date of approval, and at the end of the project (if it takes more than a year). The Ethics Secretariat will contact you when it is time to complete your first report.

I also refer you to the AVCC guidelines relating to the storage of data, which require that data be kept for a minimum of 5 years after publication of research. However, in NSW, longer retention requirements are required for research on human subjects with potential long-term effects, research with long-term environmental effects, or research considered of national or international significance, importance, or controversy. If the data from this research project falls into one of these categories, contact University Records for advice on long-term retention.

If you have any queries about your ethics approval, or require any amendments to your research in the future, please do not hesitate to contact Research.Ethics@uts.edu.au.

Yours sincerely,

Production Note:
Signature removed prior to publication.

Professor Marion Haas
Chairperson
UTS Human Research Ethics Committee

APPENDIX E – Email invite to key informants

Invitation to be a key informant for a study on waiting room nurse roles

My name is Kelli Innes and I am a PhD candidate at the University of Technology, Sydney. My supervisors are Professor Doug Elliott (UTS), Professor Debra Jackson (Oxford Brooks University) and Associate Professor Virginia Plummer (Monash University). Our research is titled “An exploration of a nursing role in Emergency Department waiting rooms”.

The research explores the introduction of a nurse allocated to care for patients in emergency department waiting rooms and I would welcome your contribution to the project. I have invited you to participate as you are known as having had experience / expertise in developing these roles, and therefore could provide an historical perspective into the development of that role.

The research will involve participation in a semi-structured interview which should take no more than one hour of your time. During this interview, you will be asked to talk about your experiences and views of models of waiting room care.

I have attached an Information Sheet and Consent form for your information. Please contact me if you have any other questions.

If you are interested in participating, or have any questions, please contact me on my student email account [redacted] to express your interest by 31st July 2015.

You are under no obligation to participate in this research.

Thank you

Kelli Innes

[redacted]

APPENDIX F – Participant information and consent form: key informants

UNIVERSITY OF TECHNOLOGY SYDNEY

INFORMATION SHEET

An exploration of a nursing role in Emergency Department waiting rooms (Phase 1)
(UTS HREC REF NO. 2015000226)

WHO IS DOING THE RESEARCH?
My name is Kelli Innes and I am a PhD candidate at UTS. My supervisors are Professor Doug Elliott, Professor Debra Jackson and Associate Professor Virginia Plummer.

WHAT IS THIS RESEARCH ABOUT?
This research is to find out about your views and perceptions of waiting room nursing roles in Australia.

IF I SAY YES, WHAT WILL IT INVOLVE?
I will ask you to participate in a semi-structured interview.

ARE THERE ANY RISKS/INCONVENIENCE?
Yes, there is some inconvenience. The interview will take approximately one (1) hour to complete. A time and location convenient to you will be arranged.

WHY HAVE I BEEN ASKED?
You are able to give me the information I need to find out about the introduction of a waiting room nurse role in an emergency department that you were part of implementing.

DO I HAVE TO SAY YES?
You don't have to say yes.

WHAT WILL HAPPEN IF I SAY NO?
Nothing. I will thank you for your time so far and will not contact you about this research again.

IF I SAY YES, CAN I CHANGE MY MIND LATER?
You can change your mind at any time and you don't have to say why. I will thank you for your time so far and won't contact you about this research again.

WHAT IF I HAVE CONCERNS OR A COMPLAINT?
If you have concerns about the research that you think I (Kelli Innes) or my supervisor Professor Elliott can help you with, please feel free to contact us on [redacted] (Kelli) or 02 9514 4832 (Professor Elliott).

If you would like to talk to someone who is not connected with the research, you may contact the Research Ethics Officer on 02 9514 9772, and quote this number 2015000226

APPENDIX G – Monash Health HREC approval for observation

MonashHealth

Research Support Services
Monash Health
Monash Medical Centre
246 Clayton Road
Clayton Victoria 3168

Level 2 I Block
Australia

Tel (03) 9594 4611
Fax (03) 9594 6306

19 May 2016

Ms Kelli Innes
Faculty of Health
University of Technology Sydney
City Campus
15 Broadway
Ultimo NSW 2007

Dear Ms Innes

Study title: An Exploration of a Nursing Role in Emergency Department Waiting Rooms
NMA Reference Number : LNR/16/MonH/130
SSA Reference Number : LNRSSA/16/MonH/168
Monash Health HREC Ref: 16188L

The Monash Health HREC Low Risk Review Panel reviewed the above application and are also satisfied that the responses to our correspondence of 22 April 2016 have been sufficiently addressed.

The HREC approved the above application on the basis of the information provided in the application form, protocol and supporting documentation.

This reviewing HREC is accredited by the Consultative Council for Human Research Ethics under the single ethical review system.

Approval

The HREC and Site Specific Authorisation approval is from 6 May 2016.

Approval is given in accordance with the research conforming to the *National Health and Medical Research Council Act 1992* and the *National Statement on Ethical Conduct in Human Research (2007)*. The HREC has ethically approved this research according to the Memorandum of Understanding between the Consultative Council and the participating organisations conducting the research.

Approval is given for this research project to be conducted at the following sites and campuses:

- Monash Health, Dandenong Hospital

You must comply with the following conditions:

The Principal Investigator is required to notify the Research Support Services, Monash Health of the following:

1. Any change in protocol and the reason for that change together with an indication of ethical implications (if any)

2. Serious or unexpected adverse effects of project on subjects and steps taken to deal with them
3. Any unforeseen events that might affect continued ethical acceptability of the project
4. Any expiry of the insurance coverage provided in respect of sponsored trials
5. Discontinuation of the project before the expected date of completion, giving reasons
6. Any change in personnel involved in the research project including any study member resigning from Monash Health &/or the study team.

At the conclusion of the project or every twelve months if the project continues, the Principal Investigator is required to complete and forward an annual progress report to the Committee.

Annual progress report reminder letters will be forwarded to the researcher.

Approved documents

Documents reviewed and approved by the Low Risk Review Panel were:

Document	*Version*	*Date*
Low/Negligible Risk Application Form		8/4/2016
Low/Negligible Risk Site Specific Assessment form		5/5/2016
Research Protocol		12/4/2016
Victorian Specific Module		30/3/2016
Participant Information Sheet	7	5/5/2016
Study Introductory Letter/email		
Waiting Room Nurse Role – Observation Checklist	4	29/3/2016

If you should have any queries about your project please contact Julie Gephart by email julie.gephart @southernhealth.org.au

The HREC wishes you and your colleagues every success in your research.

Yours sincerely

Production Note:
Signature removed prior to publication.

Dr James Doery
Deputy Chair, HREC

Cc: Ms Kate Sandry, Dandenong Emergency

APPENDIX H – UTS HREC approval: Observation

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UTS CRICOS PROVIDER CODE 00099F

15 July 2016

Professor Doug Elliott
Faculty of Health
UNIVERSITY OF TECHNOLOGY, SYDNEY

Dear Doug,

UTS HREC ETH16-0546 – Professor Doug Elliott (for Ms Kelli Louise Innes, PhD student) – "An exploration of a nursing role in Emergency Department waiting rooms" [External Ratification: Monash Health HREC Human Research Ethics Committee HREC approval – 16188L – 06/05/2016-06/05/2017]

Thank you for your response to the Committee's comments for your project titled, "An exploration of a nursing role in Emergency Department waiting rooms". Your response satisfactorily addresses the concerns and questions raised by the Committee who agreed that the application meets the requirements of the NHMRC National Statement on Ethical Conduct In Human Research (2007). I am pleased to inform you that your external ethics approval has been ratified.

Your approval number is UTS HREC REF NO. ETH16-0546 Approval will be for the period specified above and subject to the provision of annual reports and evidence of continued support from the above-named Committee.

Please note that the ethical conduct of research is an on-going process. The National Statement on Ethical Conduct in Research Involving Humans requires us to obtain a report about the progress of the research, and in particular about any changes to the research which may have ethical implications. This report form must be completed at least annually, and at the end of the project (if it takes more than a year). The Ethics Secretariat will contact you when it is time to complete your first report.

I also refer you to the AVCC guidelines relating to the storage of data, which require that data be kept for a minimum of 5 years after publication of research. However, in NSW, longer retention requirements are required for research on human subjects with potential long-term effects, research with long-term environmental effects, or research considered of national or international significance, importance, or controversy. If the data from this research project falls into one of these categories, contact University Records for advice on long-term retention.

If you have any queries about your ethics approval, or require any amendments to your research in the future, please do not hesitate to contact Research.Ethics@uts.edu.au.

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Professor Marion Haas
Chairperson
UTS Human Research Ethics Committee

APPENDIX I – Ballarat HREC approval: Observation

Ballarat Health Services
and St John of God Hospital Ballarat
Human Research Ethics Committee
Phone: 03 53204787
Email: researchethics@bhs.org.au

Professor Doug Elliott
University of Technology Sydney
15 Broadway
ULTIMO NSW 2007

25 August 2016

Dear Professor Elliott

Study title: An exploration of a nursing role in Emergency Department waiting rooms

HREC Reference Number: LNR/16/BHSSJOG/35

Thank you for your response to the Committee's request for further information dated 16 August 2016.
Your response was reviewed by the Ballarat Health Services and St John of God Hospital Ballarat HREC Secretary on 16 August 2016.

Decision

The application is approved on the basis of the information provided.

Approval

The approval is valid from 16 August 2016.

Approval is given in accordance with the research conforming to the *National Health and Medical Research Council Act 1992* and the *National Statement on Ethical Conduct in Human Research (2007) (Updated May 2015)*.

Approved documents

Documents reviewed and approved were:

Document	*Version*	*Date*
Cover Letter		10 May 2016
Research Project Ethics Checklist		
LNR Application		14 June 2016
Peer Review – Dr Julia Morphet		
Protocol	1	10 May 2016
Letter of Invitation - Tracked	V2	12 August 2016
Letter of Invitation - Clean	V2	12 August 2016
Participant Information Sheet - Tracked	Version 5	12 August 2016
Participant Information Sheet – Clean	Version 5	12 August 2016
Observation Checklist	4	29 March 2016
CV & Researcher Declaration – Professor Doug Elliott		11 May 2016
Researcher Declaration & CV – Kirsty McLean		7 August 2016

CV & Researcher Declaration – Kelli Innes		10 May 2016
CV & Researcher Declaration – Virginia Plummer		
CV & Researcher Declaration – Phillip Catterson		
Additional Associate Investigator Letter		12 August 2016
VSM		11 May 2016
SSA		28 June 2016
Response to HREC Committee		12 August 2016

The following conditions of approval apply:

Site-Specific Assessment (SSA)

SSA authorisation is required at all sites participating in the study. SSA must be authorised at a site before the research project can commence.

The completed Site-Specific Assessment Form and a copy of this ethics approval letter must be submitted to the Research Governance Officer for authorisation. This applies to each site participating in the research.

Correspondence to HREC

Please submit a signed original hardcopy marked attention to HREC Secretary along with electronic version to researchethics@bhs.org.au of the same. Quote the reference number from the title of this letter in all correspondence.

Protocol Amendments

Any changes to the protocol must be submitted to the HREC for approval and should be accompanied by a summary outlining the reasons for the change together with an indication of any ethical implications. Two copies of amended documents must be provided: one with the amended version number or date clearly stated in the footer and another clearly highlighting the amended text.

Reporting to HREC

The committee require that you provide notification of the:

1. Project commencement date,
2. Any local AE/SAE within 24 hours,
3. Annual progress reports,
4. Notification of conclusion of participant involvement,
5. Notification of study completion, and
6. Provide a copy of the final report and any publications arising from the project.

Please note, an annual progress report is due August 2016 – continuing approval is subject to the timely submission of a satisfactory progress report. The progress report template can be downloaded from our webpage: http://www.bhs.org.au/sites/default/files/finder/doc/ethics-committee/BHS_SJOG_HREC_Research_Progress_Report_form.doc#overlay-context=node/22

Publications

The Ballarat Health Services and St John of God Hospital Ballarat Human Research Ethics Committee, encourages the publication of results of the research in a discipline appropriate manner. Publications should provide evidence of the contribution that participants, researchers, funding sources and the organisations have made.

The HREC wishes you and your colleagues every success in your research.

Yours sincerely

Production Note:
Signature removed prior to publication.

Dr Susan Joy Shea
Secretary
Ballarat Health Services & St John of God Hospital Ballarat HREC

APPENDIX J – Participant information form: Observation

UNIVERSITY OF TECHNOLOGY SYDNEY

Participant Information Sheet

Non-Interventional Study - *Adult providing own consent*

MonashHealth

Title	*An exploration of a nursing role in Emergency Department waiting rooms*
Short Title	*Exploration of waiting room nurse role*
Protocol Number	*LNR/16/MonH/168*
Coordinating Principal Investigator/ Principal Investigator	*Professor Doug Elliott* *Ms Kelli Innes* *Professor Debra Jackson* *Associate Professor Virginia Plummer*
Location	*Dandenong Hospital Emergency Department*

Part 1 What does my participation involve?

1 Introduction

You are invited to take part in this research project, *'An exploration of a nursing role in Emergency Department waiting rooms'*, given that you currently perform this role at Dandenong Hospital. The research project aims to identify and explore the roles and responsibilities of those undertaking the waiting room nurse role.

This Participant Information Sheet tells you about the research project. It explains what is involved with the project. Knowing what is involved will help you decide if you want to take part in the research.

Please read the information carefully. Ask questions about anything that you don't understand or want to know more about. Before deciding whether or not to take part, you might want to talk about it with a colleague, relative or friend.

Participation in the research is voluntary. If you don't wish to take part you don't have to.

Verbal consent will be obtained at the commencement of the scheduled observation period.

You will be given a copy of this Participant Information to keep.

2 What is the purpose of this research?

This research has been initiated by the student researcher Ms Kelli Innes and will be used to obtain a Doctor of Philosophy (PhD) degree. The project is self-funded. No costs will be incurred by yourself or Monash Health.

The overall aim of the research is to explore the introduction of a nurse allocated to care for patients in emergency department waiting rooms. The specific study objectives are to explore:

1. The factors contributing to the development of a waiting room nursing roles.
2. The current role and models of waiting room nursing roles in practice.
3. Nurses' perceptions of waiting room nursing roles.

This phase of the study addresses the second aim.

There is limited literature assessing the emergency department waiting room nurse role and therefore only limited conclusions and generalisations can be made. The key findings to date relate to variability and lack of clarification within the role, the importance of communication, and support from other emergency department staff to facilitate the roles. There is little evidence to support improvement in patient outcomes.

Undertaking a mixed method approach, this study will enable exploration of the historical establishment on the role, current implementation of the role and nurses perceptions of the role.

Evaluation of the role may contribute to future policy development on waiting room nurse roles and lead to further research, in particular a consumer perspective on the role.

3 What does participation in this research involve?

Participation will involve you performing your normal role and responsibilities when allocated to the waiting room nurse role. The researcher will observe your interactions, processes and practices. Observations will be recorded in an observation tool. It is anticipated that there will be eight episodes of observation, of four to five hours duration across a number of different time periods including weekends. The patient will be included as part of the environment.

No identifiable data is collected. The research project has been designed to make sure the researchers interpret the results in a fair and appropriate way and avoids researchers or participants jumping to conclusions.

There are no costs associated with participating in this research project to yourself or Monash Health.

Verbal consent will be obtained at the commencement of the scheduled observation period.

4 What do I have to do?

You will be required to undertake your normal role and responsibilities when allocated to the waiting room nurse role during the observation period.

5 Other relevant information about the research project

Any nurse who undertakes the waiting room nurse role during the observation period will be invited to participate in the research.

A similar observation period will also be undertaken at Ballarat Base Hospital emergency department.

The Principal Investigator Ms Kelli Innes is an employee of Monash Health. There is no conflict of interest or coercion as she works in the emergency department at another site of Monash Health.

6 Do I have to take part in this research project?

Participation in any research project is voluntary. If you do not wish to take part, you do not have to. If you decide to take part and later change your mind you are free to withdraw from the project at any stage.

Your decision to take part or not to take part, or take part and withdraw, will not affect your employment or relationship with Monash Health.

7 What are the possible benefits of taking part?

There will be no clear benefit to you from this research. Results from the research may influence future policy and role development.

8 What are the possible risks and disadvantages of taking part?

The only perceived risk is inconvenience.

If you become upset or distressed as a result of participation in the research, the researcher will arrange for counselling or other support. Any counselling will be provided by qualified staff who are not member so of the research team. Counselling will be provided free of charge.

9 What if I withdraw from this research project?

If you decide to withdraw from this research project, please notify a member of the research team. There are no implications from withdrawing from the research.

10 What happens when the research project ends?

A summary of the results will be sent to the Nurse Unit Manger (NUM) of the emergency department who can distribute them to participants.

Part 2 How is the research project being conducted?

11 What will happen to information about me?

No identifiable data will be collected .It is anticipated that the results of this research will be published and/or presented in a variety of forums.

Observation tool and field notes will be securely stored in a locked filing cabinet in a locked office for ~~5~~ 7 years post publication of results prior to be shredded in secure waste.

12 Complaints and compensation

If you have any complaints in regards to the research project, you should contact the study team as soon as possible.
Local complaint person: Ms. Deborah Dell,
Position: Manager, Human Research Ethics Committee
Telephone: (03) 9594 4611.'

13 Who is organising and funding the research?

This research project is being conducted by Professor Doug Elliott, Ms Kelli Innes, Professor Debra Jackson and Associate Professor Virginia Plummer.

No financial benefits will arise from the research. The research is self-funded by the research team. There are no costs associated with participating in this research project to yourself or Monash Health.

14 Who has reviewed the research project?

All research in Australia involving humans is reviewed by an independent group of people called a Human Research Ethics Committee (HREC). The ethical aspects of this research project have been approved by the HREC of Monash Health and the University of Technology Sydney.
This project will be carried out according to the National Statement on Ethical Conduct in Human Research (2007). This statement has been developed to protect the interests of people who agree to participate in human research studies.

15 Further information and who to contact

If you want any further information concerning this project, you can contact Principal Investigator Ms Kelli Innes on [redacted]

APPENDIX K – Email invite: Observation

Letter/Email of Invitation

My name is Kelli Innes and I am a PhD candidate at the University of Technology, Sydney (UTS). My supervisors are Professor Doug Elliott (UTS), Professor Debra Jackson (Oxford Brooks University) and Associate Professor Virginia Plummer (Monash University). Kirsty McLean, ED Nurse Unit Manager is an Associate Researcher on this project. Our research is titled “An exploration of a nursing role in Emergency Department waiting rooms”.

The research explores the introduction of a nurse allocated to care for patients in emergency department waiting rooms and I would welcome your contribution to the project. I have invited you to participate as you currently undertake the Clinical Initiative Nurse (CIN) role, providing nursing care in the waiting room at Ballarat Health Services.

The research will involve my observation of you performing the role to identify the processes, interactions and practices of the role. You will only be required to perform your normal duties. Additional questions relating to the CIN role may be asked by the researcher. This will not require any additional time from you.

I have attached a Participation Information Sheet for you to read and keep. Verbal consent will be obtained at the commencement of the scheduled observation period.

This project has been approved by Ballarat Health Services Human Research Ethics Committee

Please contact me if you have any other questions.

You are under no obligation to participate in this research.

Thank you

Kelli Innes,

Lecturer, Monash University

PhD Candidate, UTS

Kirsty McLean

Nurse Unit Manager, Ballarat Base ED

APPENDIX L – UTS HREC Approval: Survey

UTS
UNIVERSITY OF TECHNOLOGY SYDNEY

Research & Innovation
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PO Box 123 Broadway
NSW 2007 Australia
T: +61 2 9514 9681
F: +61 2 9514 1244
www.uts.edu.au

UTS CRICOS PROVIDER CODE 00099F

11 May 2017

Professor Doug Elliott
Faculty of Health
UNIVERSITY OF TECHNOLOGY, SYDNEY

Dear Doug,

UTS HREC ETH17-1248 – Professor Doug Elliott, Associate Professor Virginia Plummer (for Ms Kelli Innes, PhD student) – "An exploration of a nursing role in Emergency Department waiting rooms"

The Faculty has considered your Nil/Negligible Risk Declaration Form for your project titled, "An exploration of a nursing role in Emergency Department waiting rooms", and agree your research does not require review from the UTS Human Research Ethics Committee. Please keep a copy of your Declaration form on file to show you have considered risk.

For tracking purposes, you have been provided with an ethics application number, which is UTS HREC ETH17-1248.

I also refer you to the AVCC guidelines relating to the storage of data, which require that data be kept for a minimum of 5 years after publication of research. However, in NSW, longer retention requirements are required for research on human subjects with potential long-term effects, research with long-term environmental effects, or research considered of national or international significance, importance, or controversy. If the data from this research project falls into one of these categories, contact University Records for advice on long-term retention.

You should consider this your official letter of noting.

If you have any queries about your ethics clearance, or require any amendments to your research in the future, please do not hesitate to contact the Ethics Secretariat at the Research and Innovation Office, on 02 9514 9772.

Yours sincerely,

Production Note:
Signature removed prior to publication.

Associate Professor Beata Bajorek
Chairperson
UTS Human Research Ethics Committee

APPENDIX M – CENA research approval: Survey

ACN 102 961 799
226 Liverpool Street
HOBART TAS 7000
Tel: 03 6231 2722

Email: national@cena.org.au
Website: www.cena.org.au

26th May 2017

Ms Kelli Innes
PhD Candidate, University of Technology Sydney
Lecturer, Nursing & Midwifery, Monash University
RN, MN (Emergency), BN,
CENA Fellow
KelliLouise.Innes@student.uts.edu.au

Dear Ms Innes,

On behalf of the Board of Directors and the Research Committee of the College of Emergency Nursing Australasia (CENA) I wish to advise you of our support to access the CENA membership for your study entitled; 'An exploration of a nursing role in Emergency Department waiting rooms'.

In view of this support, CENA gives formal permission to place an advertisement via our e-blast system, which is emailed to our membership. You are also entitled to one reminder e-blast. The appropriate contact regarding circulating your call to participate is via Nikki, CENA Secretariat. Nikki's email is: national@cena.org.au.

The appropriate contact to publish the findings from this study is via Professor Ramon Shaban, Editor-in-Chief, Australasian Emergency Nursing Journal. Ramon's contact details are: editor@cena.org.au.

I would like to remind you that all publication outputs arising from CENA approved studies must include the following statement:

> *"This study was generously supported by the College of Emergency Nursing Australasia (CENA). The views of these researchers do not necessarily represent the views of CENA"*

It is the responsibility of the researcher(s) to maintain contact with the CENA Research Committee Chair regarding any publications or presentations that arise out of the study.

We wish you well with this study and look forward to the findings and welcome future publications. If you have further questions please do not hesitate to contact me. Please quote the reference: CENA/RC/2017/04 in future communication.

Kind Regards,

Production Note:
Signature removed prior to publication.

Dr Lisa Kuhn
Acting Chair, CENA Research Committee.

APPENDIX N – Participant information form: Survey

UNIVERSITY OF TECHNOLOGY SYDNEY

INFORMATION SHEET

An exploration of a nursing role in Emergency Department waiting rooms (Phase 3)
(UTS APPROVAL NUMBER ETH17-1248)

WHO IS DOING THE RESEARCH?
My name is Kelli Innes and I am a PhD candidate at UTS. My supervisors are Professor Doug Elliott, Professor Debra Jackson and Associate Professor Virginia Plummer.

WHAT IS THIS RESEARCH ABOUT?
This research is to find out about the extent of implementation of the waiting room nurse role in Australia, and roles and responsibilities of nurses performing role.

IF I SAY YES, WHAT WILL IT INVOLVE?
I will ask you to complete an on-line survey.

ARE THERE ANY RISKS/INCONVENIENCE?
Yes, there are some risks/inconvenience. The on-line survey will take between 10 – 30 minutes to complete.

WHY HAVE I BEEN ASKED?
As a member of the College of Emergency Nursing Australasia (CENA) you will be able to give me the information I need to find out which emergency departments in Australia have implemented a waiting room nurse, and the roles and responsibilities of nurses performing the role.

DO I HAVE TO SAY YES?
You don't have to say yes.

WHAT WILL HAPPEN IF I SAY NO?
Nothing. I will thank you for your time so far.

IF I SAY YES, CAN I CHANGE MY MIND LATER?
Once you have completed the survey your response will not be able to be removed from the research. All responses are de-identified.

WHAT IF I HAVE CONCERNS OR A COMPLAINT?
If you have concerns about the research that you think I Kelli Innes or my supervisor can help you with, please feel free to contact me (us) on [redacted] (Kelli) or 02 9514 4832 (Professor Elliott).

If you would like to talk to someone who is not connected with the research, you may contact the Research Ethics Officer on 02 9514 9772, and quote this number (UTS HREC Approval Number ETH17-1248)

APPENDIX O – Email invite: Survey

Invitation to participate be a study exploring the waiting room nurse role in emergency department waiting rooms.

My name is Kelli Innes and I am a PhD candidate at the University of Technology, Sydney (UTS). My supervisors are Professor Doug Elliott (UTS), Professor Debra Jackson (Oxford Brooks University) and Associate Professor Virginia Plummer (Monash University).

Our research is titled “An exploration of a nursing role in Emergency Department waiting rooms”. This phase of the research aims to explore the extent to which the waiting room nurses has been implemented, roles and responsibilities of nurses performing the role and perception of the role in the ED.

We would welcome your contribution to the research as a valued emergency nurse. To participate all you need to be is a Registered Nurse working in an emergency department.

All you need to do is complete an on-line survey that will take 10 – 30 minutes of your time. The link to the survey is below. Participation is voluntary and you are under no obligation to complete the survey. Is you choose not to participate there will be no ramifications All responses are anonymous. Consent is implied with completion of the survey.

An Information Form is attached below for your reference.

Thank you

Kelli Innes