



A structure and process evaluation of a police Watch House Emergency Nurse (WHEN) model of care

Julia Crilly^{a,b,*}, Josea Polong-Brown^b, Cathy Lincoln^c, Jo Timms^b, Ken Becker^d, Paul Scuffham^a, Nelle Van Buuren^c, Andrew Fisher^b, Danny Murphy^e, David Green^{a,b}

^a Menzies Health Institute Queensland, Griffith University, Queensland, Australia

^b Department of Emergency Medicine, Gold Coast Health, Queensland, Australia

^c Gold Coast Forensic Medicine, Department of Emergency Medicine, Gold Coast Health, Queensland, Australia

^d Southport Watch House, Queensland Police Service, Queensland, Australia

^e Emergency Management Unit, State Operations Unit, Queensland Ambulance Service, Queensland, Australia

ARTICLE INFO

Keywords:

Emergency department
Qualitative
Nursing
Police
Detainees
Custody
Evidence

ABSTRACT

Background: Increasing presentations to the Emergency Department (ED) via police (which include detainees, prisoners and community residing persons) and the increase in chronic and mental health illness in detainee and prisoner populations has prompted an increased requirement for healthcare delivery within the custodial environment.

This study aimed to describe the Watch House Emergency Nurse (WHEN) role, focusing on structures and processes underpinning the role.

Methods: In this qualitative, descriptive study, semi-structured interviews were undertaken in 2015 with 14 key stakeholders from health, police, and ambulance services. Interviews were analysed using content analysis to inform the findings.

Findings: Important structural elements of the WHEN role included an ED triage competent registered nurse, a 2-day integrated training program, and clear guidelines to provide a framework for identifying, prioritising and managing healthcare needs. Important process elements were clear communication between nurses, police, and medical staff, and a clear understanding of roles and responsibilities to facilitate continuity of care and appropriate referral. The underpinning perceived benefit of the WHEN role was 'safety'. This was in terms of personal, professional, and detainee safety.

Conclusion: The structures and processes underpinning the innovative WHEN role provides a valuable foundation for guiding evaluations of other nursing roles in other early custody settings.

1. Introduction

The World Health Organisation (WHO) has indicated that it is important to understand prisoner's health needs, how imprisonment affects health and how evidence-based health services can be provided for those requiring treatment, care and illness prevention whilst in custody [1]. Specific medical and nursing roles have been established to enhance the delivery of healthcare in the custodial environment, contributing to ongoing responsibility of Governments to meet obligations to provide equitable and accessible healthcare to prisoners [2,3]. Research studies and reports regarding the custodial nursing role have been derived from the United Kingdom [2,4–9], USA [10], New Zealand [11] and Australia [12–14]. The majority of these were

undertaken in the medium-long term detention prison settings; few [11,14] related to the early (i.e. immediate post-arrest period) police custody setting. Furthermore, most of these studies were descriptive and no qualitative studies outlining nursing roles in the early custodial setting were identified.

The delivery of healthcare in the early police custodial environment can include: basic primary care assessment, monitoring of vital signs, alcohol or other drug screening, injury management, mental health assessment (including risk of harm to self or others) and referral to psychiatric emergency services under the Mental Health Act, and providing information about and/or referral to rehabilitation centres. Literature is limited however defining the specific skills, qualifications, experience and requirements of nurses working in this setting with a

* Corresponding author at: Menzies Health Institute Queensland, Griffith University, Parklands Drive, Southport 4215, Queensland, Australia.

E-mail address: Julia.Crilly@health.qld.gov.au (J. Crilly).

population that has significant morbidity.

In response to limited literature regarding models of health care delivery that are specific to the short-term custodial setting; coronial inquiries and recommendations; changes in the healthcare requirements of detainees over time; extended watch-house stays for some detainees; increasing numbers of detainees being transferred from the watch-house to the ED; and costs to the police service and ED associated with watch-house-to-hospital transfers a Watch House Emergency Nurse (WHEN) role was developed.

The aim of this study was to describe the WHEN role, focusing on structures and processes underpinning the role. This qualitative study forms one part of the evaluation with the outcomes of the WHEN model to be presented elsewhere.

2. Methods

2.1. Design and setting

This qualitative, descriptive study was guided by Donabedian's [15] structure, process and outcomes framework, Irvine, Sidani and Hall's [16] nursing role effectiveness model and Bogdan and Biklin's [17] structure and process coding scheme. These frameworks are used to describe the quality of healthcare and, in this study, provided an avenue to comprehensively describe the structures and processes of the WHEN role. Structural elements cover the 'what' aspects of the role and inform the process elements; the 'how' aspects of the role.

The study was undertaken in a large regional public, teaching hospital in Queensland, Australia. At the time the WHEN role began, the hospital served an estimated resident population of 541,000 [18]. The ED provided adult and paediatric services to 74,532 patient presentations in 2013.

Various terms are used to describe police custodial facilities. A building with a variable number of cells attached to a police station and/or courthouse where people are detained following arrest and/or awaiting court appearance can be referred to as: police cells, 'watch-house' (in New Zealand and some Australian states), 'custody suite' (United Kingdom), 'lock-up', or 'jail' (USA). The police watch-house in this study is one of the busiest in Queensland with approximately 12,000–14,000 detainees processed in 2013. Periods of detention in Queensland police watch-houses can range from four hours (e.g. if waiting to be bailed and released) to two or three weeks, depending upon reason for detention and ability to transfer from police to correctional facilities. Prisoners remanded in custody by the Courts may be held for extended periods whilst waiting to be accepted by Corrective Services and then transported to Corrective Services jails.

2.2. A description of health care delivery in the watch-house before the WHEN role began

Each watch-house has its own local arrangement with respect to health care. At the watch-house where this study was conducted, before the WHEN role began, local arrangements for healthcare included access to a forensic medical officer (i.e. physician who specialises in forensic medicine) on a 24/7 basis for police and contracted domiciliary nurses (i.e. registered nurses who work in community care). The forensic medical officer provided clinical forensic services, medical advice and support to the watch-house. The on-site contracted domiciliary nurses were employed to work in the watch-house 7 days a week, but limited to approximately 3–6 h/day, generally morning to early afternoon. If police sought healthcare for a detainee outside this time, and a forensic medical officer was unable to attend, detainees were transported to the ED in the custody of police officers, via ambulance, if needed.

Prior to the commencement of the WHEN role, a steering committee was established to guide the WHEN role (and broader operational model) development and implementation. Funding from Health

Support Queensland was provided to cover ED registered nurses to work in the watch-house for a 66-day pilot period (3 May–8 July 2013). Ten ED nurses were initially selected through an expression of interest process. A subsequent two-day orientation and education workshop for the WHEN role, the environment, and processes provided them with the ability to confirm their willingness to continue in the role, or return to their substantive role in the ED. Along with the workshop, understanding the role was supported by a 'buddy system' whereby the new ED WHENs would spend time working alongside the existing domiciliary nurses. Establishment of the role involved consultation with the Queensland Nurses' Union, with no major concerns noted and a review of the medical room, undertaken by a Workplace Health and Safety Officer, which resulted in a slight reconfiguration of the furniture. Other considerations included legalities, liability cover, and approval from the hospital Chief Executive Officer and senior Queensland Police Service management. The WHENs worked in the watch-house between 1:00 pm and 8:00 am. They supplemented the existing on-site contracted nurse cover (who worked the early shift) and thereby provided a 24 h, 7 day nurse presence in the watch-house. The aim of the WHEN role (within the broader model) was to provide assessment and management (under forensic medical officer supervision) for detainees in the watch-house requiring healthcare, to provide continuity of care, reduce the need for transfer to the ED, and reduce the potential risks associated with the early police detention period.

2.3. Participants

With the assistance of ED, Police, forensic medical officer, and ambulance managers, participants were purposively selected and invited to participate in an interview if they met the inclusion criteria: aged 18 years or older and employed on a full or part-time, permanent basis within the ED, police, ambulance or forensic medical service during the initial stage of the WHEN role, and were involved with establishing or providing care delivery of detainees either in the watch-house or in the ED. Fourteen participants were invited and all agreed to participate and met the criteria. They included: operational managers from the ED and police watch-house, ED nurses working in the WHEN role, forensic medical officers, police watch-house officers, and paramedics attending the watch-house during the initial stage of the WHEN role.

2.4. Data collection

Data were collected by a PhD prepared nursing academic (JC) with experience in undertaking semi-structured interviews. Semi-structured interviews were used as they allow participants to respond freely in their own words to broad and prompting questions and provide opportunities to further explore particular threads and elicit more detail [19].

Interviews were undertaken during February 2015 at a time and place convenient to the participant. Interviews were audio-taped, transcribed verbatim and lasted between 15 and 73 min. *A priori* categories [17] (see Table 1) were used to guide interview questions and subsequent analysis relating to the structures and processes of the WHEN role. Examples of questions asked included: "What resources were needed to set up the WHEN model?" (to understand the *a priori* organisational structure category regarding resources) and "Can you please explain to me what you do on an average day within WHEN?" (to understand the *a priori* process category regarding regular and irregular event chronology). At the end of the interview, demographic characteristics of the participant (age, gender, years of professional experience, and years of experience in their current specialty area) were collected.

Table 1
A priori categories for structure and process analysis of the WHEN role (adapted from Bogdan and Biklin, 1992).

Category	Definition
Structures	
<i>Nursing structure</i>	
Setting	General information on WHEN role
Staffing	Staffing requirements needed to operate WHEN role
<i>Organisational structure</i>	
Resources	Identification of resources available
Access to resources	Accessibility of resources
Physical structures	Physical components needed to operate WHEN
Road map of social structures	Participants view on key personnel
Barriers	Barriers to setting up WHEN
Barrier solutions	Solutions to barriers
Processes	
<i>Events</i>	
Regular chronology of event (care provider)	Regular practices
Irregular chronology of event (care provider)	Irregular practices
<i>Referral</i>	
Referral practice before WHEN	Practice before WHEN
Referral practice after WHEN	Practice after WHEN
Changes in working practices	Perception of how practice has changed
Problem solving	What care providers do when an issue arises
Key features of the WHEN nursing role	Roles undertaken by the WHEN
<i>Communication</i>	
Inter-facility communication	Methods of communicating between facilities
Inter-professional communication	Methods of communicating between care professionals
Patient involvement	Methods of communicating with patient
<i>Improvement</i>	
Room for improvement – with WHEN model	Care provider's recommendation for WHEN model improvement
Room for improvement – with WHEN nursing role	Care provider's recommendation for WHEN role improvement

WHEN, Watch House Emergency Nurse.

2.5. Ethical considerations

The study received approval from the health service and university Human Research Ethics Committee (HREC/13/QHC/22, HREC/15/QGC/69, NRS/05/15/HREC), the Queensland Police Service Research Committee and the Queensland Ambulance Service.

2.6. Data analysis

Interview data were analysed using content analysis. A priori categories suggested by Bogdan and Biklin [17] were used to guide the sorting, coding and analysis of the data. These categories (outlined in Table 1) also enabled the analysis to be tied to the research question [20]. Several readings of the transcripts were required to complete this process. Coding and analysis was undertaken by two researchers (JC and JP-B) independently to enhance rigor.

2.7. Rigor

The qualitative nature of this method of inquiry requires consideration of potential threats to rigor and trustworthiness such as credibility, confirmability, dependability and transferability [21]. To minimise the impact of these threats, the following strategies recommended by others [22–24] were employed: i) different multi-

disciplinary perspectives were purposively sought to help produce a more comprehensive set of findings (credibility), ii) interview meaning was confirmed by participants with member checking during the interview, participant quotes from various sources are presented to support interpretation (confirmability), iii) other researchers were engaged with the analysis (dependability) and, iv) contextual data from the setting and participant characteristics were reported to enable readers to evaluate application to other settings (transferability).

3. Results

3.1. Description of participants

Fourteen participants from health (n = 7), police (n = 5) and ambulance services (n = 2) consented to be interviewed. The group had a median (*Mdn*) age of 51 years (Interquartile Range, IQR: 41–57), half (n = 7) were female. Participants were relatively experienced in terms of years working in the profession (*Mdn* 19, IQR: 9–34 years) and time working in their current speciality area (*Mdn* 9, IQR: 6.5–14 years).

3.2. Description of WHEN structures

Nursing structures of the WHEN role were noted to include ED experience (at least 5 years) and triage competency. This skill set was seen as useful in illness/injury detection of detainees and instilled an element of trust with the forensic medical officers and police officers: "... you can really trust their judgment in terms of their assessment" (Participant 1). One police officer noted: "...the nurses pick up the little abnormalities that we don't pick up because we are not trained to do so" (Participant 6).

The WHENs were also required to have undergone occupational violence prevention (OVP) training, an important element when considering the environment in which they were working: "...it's not like you're dealing with nice people who say thank you very much for looking after me, you know, they might tell you to F-off" (Participant 4). Exposure to violence was, however, seen by one nurse as familiar territory: "... you get yelled at and abused, but it's no different from here [ED]" (Participant 7). Despite this, the nurses described the watch-house as a 'safer' environment to work in than the ED.

Evident from the interviews were specific attributes the WHENs needed to have to work in the role. These included professionalism, resilience, being non-judgemental, approachable, and easy going. These attributes allayed a sense of calm, confidence and reassurance with the police and forensic medical officer staff.

The skill set and attributes of the WHENs were imperative, especially in avoiding deaths in custody:

"We had a prisoner brought in on night shift ... We found out...he'd taken a bad batch of ice [methamphetamine] and he was in a padded cell 'cause he was so violent. ... she [WHEN] was on the phone [to the ambulance] he actually went unconscious and went blue. And [the WHEN] was actually able to... bag him and keep him alive... if she hadn't had been here, he probably would have died...in custody." (Participant 4).

Organisational structures of the WHEN role can be considered in terms of physical and social organisational structures. With regards to the *physical organisational structures*, these included funding, space, equipment and resource documents. An existing medical room in the watch-house provided dedicated space for the nurses and doctors to conduct assessments, keep medical equipment (such as manual blood pressure device, tympanic (ear) thermometer, glucometer, torch, wound care dressings, bag-valve-mask), and medications to deliver the required healthcare. The consideration of the need for and type of equipment was noted by several participants: "We had enough to be able to do a sugar [blood sugar level], to get their vitals, we didn't have an ECG [electrocardiogram] machine down there. We figured if they needed an ECG they should be up here [in ED] anyway" (Participant 13) and "you need a thermometer, preferably one that goes in the ear. You can't have glass ones, for safety" (Participant 1). The medical room contained an examination

bed, desk, angle poised lamp, two chairs, hand washing facilities, medication cabinet, small refrigerator, sharps container, pin board, resource folders (with literature and guidelines) and a clock. These facilities and primary care equipment were important in avoiding some cases of unnecessary transfer to hospital. Resource folders were easily available to nursing staff and police officers working in the watch-house. They included printed guidelines to inform care delivery of common healthcare scenarios encountered in the watch-house setting (e.g. diabetes, drug and alcohol dependence, managing serious medical conditions, transfer to/from hospital processes, obtaining health information from other providers, responding to medico-legal requests), as well as useful contact information (e.g. phone numbers of General Practitioners, pharmacies, ED, forensic medical officers). As described by one participant, the guidelines were straight forward and easy to follow: “They had about half a dozen sheets of paper that looked at ‘if a patient does this, you need to do that.’ It was very descriptive, and it was ... simple, black and white” (Participant 13). A note book in the medical room was used by nurses and forensic medical officers for general communication (e.g. supplies to order). A section of a white board at the prisoner reception bench was also used by nurses and police to communicate who required nurse review, mental health review, medications or other interventions (e.g. blood sugar levels).

With regard to the *social organisational structures*, these included the role, purpose and responsibilities of the WHENs themselves as well as other service providers (i.e. forensic medical officer, police officers, paramedics, ED doctors and nurses, other medical specialists, court liaison officer, chemists/pharmacists) with which the WHENs would interact. The role, purpose and responsibility of the WHENs was described as: “...initial assessment of detainees...ongoing observation of them and management of things like their diabetes, their blood sugar, their insulin, their medication. Need to keep an eye on them to make sure they’re safe” (Participant 13).

Responsibility for clinical decisions in relation to a detainee whilst in the watch-house lay with the forensic medical officer; if the detainee was in the ED, clinical responsibility lay with the treating ED medical officer. WHENs were clinically supervised by the forensic medical officers but professionally supervised by the ED Assistant Director of Nursing. A forensic medical officer was on call 24/7 and all nurse consultations were discussed by phone. This supervisory model also meant that forensic medical officers could provide formal and informal education for the WHENs, broadening their understanding of legal systems and language: “The stuff that you learn from the FMOs [forensic medical officers]... it’s the language of the watch-house and the language of forensics... we had to learn that... we had a big list of terminology and definitions” (Participant 12). This social organisational structure (or supervisory model), meant that the need for transfer to the ED was avoided in some cases. The structures described facilitated the ability to carry out processes as outlined next.

3.3. Description of WHEN processes

Process aspects related to the WHEN role included regular events, referral (in and out), communication, and identifying opportunities for improvement. The WHENs formed a central component to the 24 h/7day delivery of health care in the watch-house as evident in the process of when a new detainee arrives to the watch-house (see Fig. 1) and also for existing detainees (see Fig. 2).

An average day of a WHEN in the initial stages of the pilot might involve: liaison with the police shift supervisor and other watch-house staff including a ‘cell door triage’ to identify detainees potentially requiring health assessment, patient assessment and prioritisation, patient follow-up/review, communication with other healthcare professionals (e.g. forensic medical officer, watch-house nurses, ED staff, paramedics, court liaison officers, acute care assessment team, alcohol and other drugs services, pharmacists, general practitioners), and stocking of the medical room. The pre-existing link the WHENs had

with the ED was seen to facilitate the referral process if transfer to ED was required.

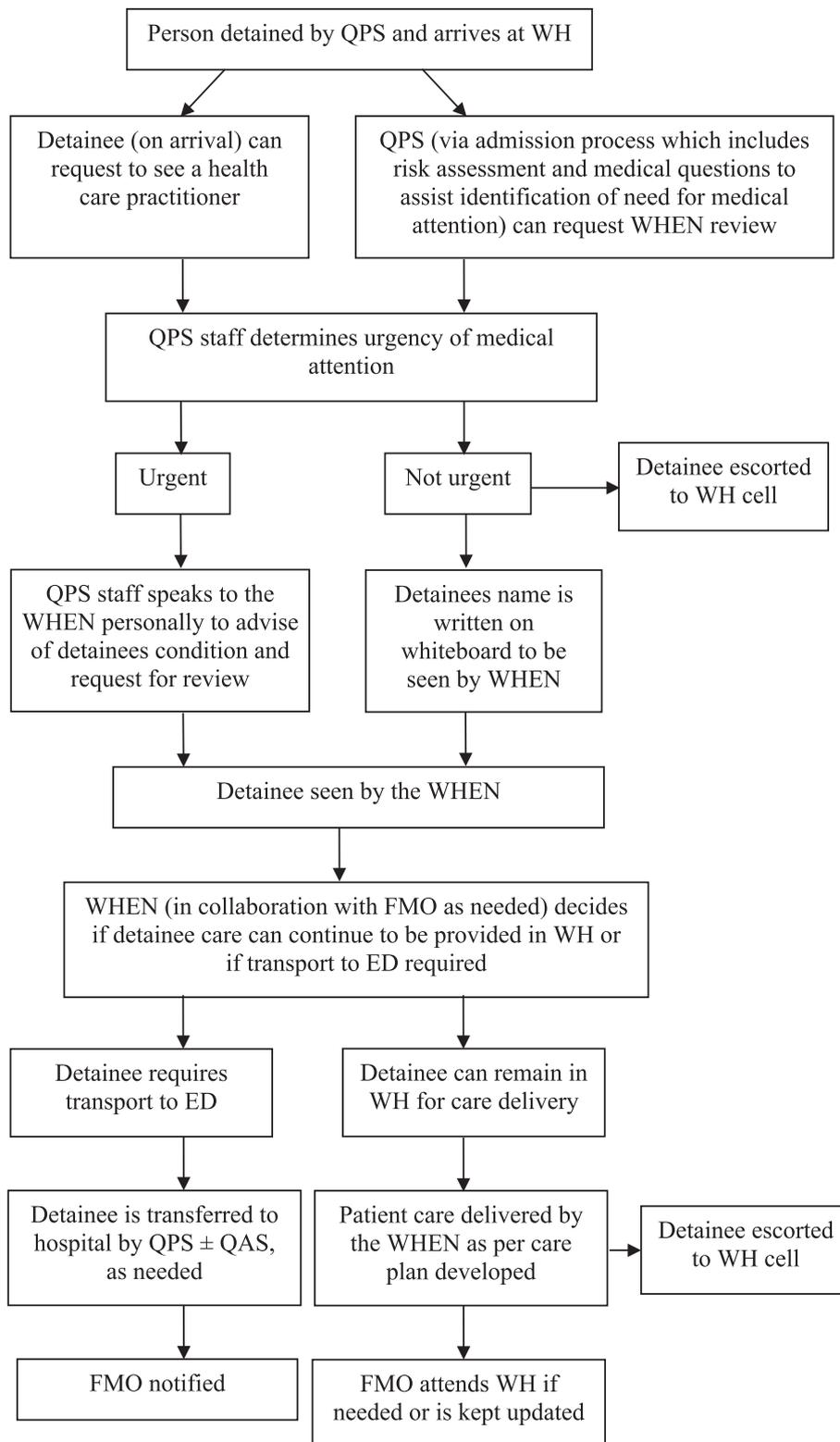
Key to the processes the WHENs were involved was the communication and decision-making with inter-professional and inter-agency groups as well as detainees. This occurred in a variety of ways for a variety of purposes. The WHENs were pivotal to the decision-making around the triage of detainees, as well as when and where healthcare was delivered (e.g. remain in watch-house or transfer to ED). They would also communicate with police officers by way of providing informal and often incidental education. Examples of educational information provided to police officers included medications or medical conditions – the aetiology, signs and symptoms and treatment pathways. “I ask all the time about different types of medications and about what they do and side effects. Like codeine, why do we dose people up who are withdrawing” (Participant 9). WHENs also provided reassurance to detainees regarding the confidentiality of their interaction: “I think because we’ve got an officer with us I think... the prisoners think that the officers are going to use that to put a charge on them. And I just say to them ‘the officers are here for my protection only, he’s not listening to your story’... So they sort of settle down a little bit” (Participant 10).

Understanding the events, referral and communication processes of the WHEN role helped highlight areas of the role that worked well and areas for improvement.

The underpinning perceived benefit of the WHEN role that arose from the participant interviews was safety. Safety was considered in some way in every interview with health, police and ambulance participants. Safety was noted in terms of personal safety: “I have never felt unsafe in there, ever” (Participant 10), professional safety: “I just feel safer with the nurses in the watch-house” (Participant 3) medication safety: “If the nurse dispensed the medications then you’ve got that little bit more expertise and it’s not going to get as messed up” (Participant 8) and detainee safety: “If she [ED Nurse] hadn’t have been here, he [detainee] probably would have died...” (Participant 4).

Other noted advantages of the WHEN role included improved inter-professional relationships between services (particularly between the ED and police), ability to inform policy development, the secondment opportunity for ED nurses to use their assessment skills external to the hospital environment, and economic benefits, freeing up police staff and vehicles (especially if ED transfer was avoided). An example of how the WHEN role was seen to strengthen the collaborative relationship between health and police and inform policy development aimed at minimising harm for detainees was highlighted in one interview: “...The nurses have picked up on critical issues... we are dealing with similar people. As a result of that [incident]... we had a meeting to come up with a new policy... Cooperation like that minimises the risk of a death in custody from drug overdose” (Participant 4). Regarding secondment, whilst not unfamiliar with treating patients with conditions similar to those seen in police detainees, the opportunity for the WHENs to work in the watch-house environment enhanced their understanding of the legal system: “This is the law in real life and we don’t really come in contact with it because we’re all law-abiding citizens... and understanding the whole court processing all of a sudden it’s a whole new area of knowledge that we’re being exposed to” (Participant 12).

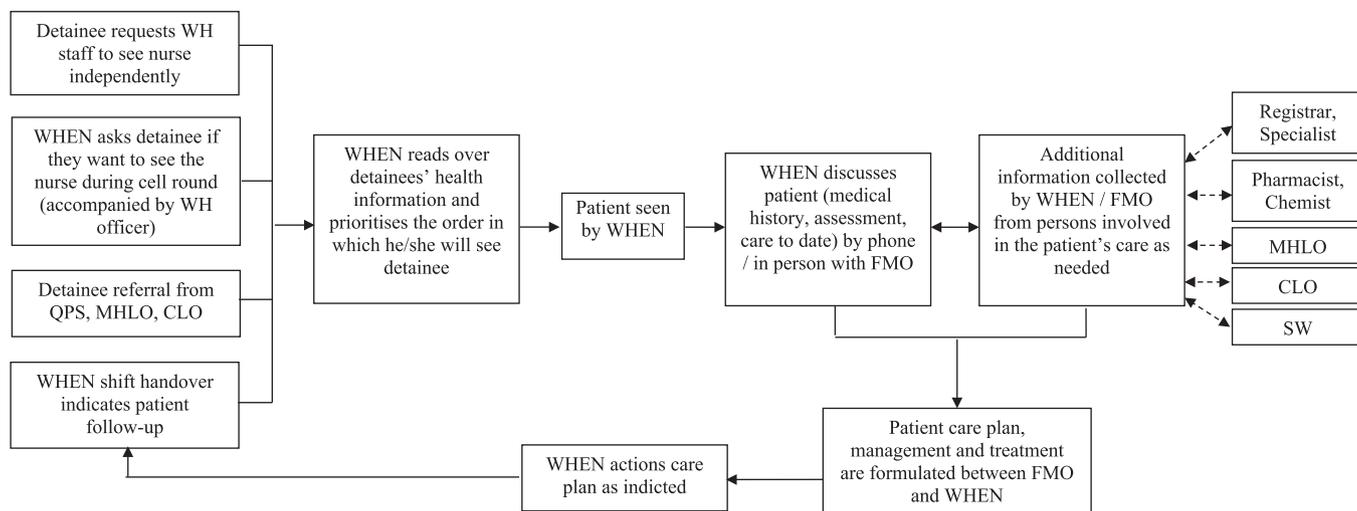
Opportunities for role improvement included succession planning and capacity building for the recruitment and retention of WHENs. Other opportunities revolved around further clarification of roles and responsibilities as well as education and skill development within and across stakeholder groups. Information technology system integration was also seen as an area for improvement for the WHENs to enable remote access to hospital healthcare records from the watch-house that would facilitate care continuity as noted by one participant: “If they had access to records ... health records... link in to mental health [records] as well... if they had access to that sort of stuff it would probably help them a lot” (Participant 9).



Legend

- QPS = Queensland Police Service
- WH = Watch House
- WHEN = Watch House Emergency Nurse
- QAS = Queensland Ambulance Service
- FMO = Forensic Medical Officer

Fig. 1. Process map depicting how a new detainee is seen by the WHEN in the local WH.



Legend
 WH = Watch House → Regular processes
 WHEN = Watch House Emergency Nurse - - - Processes/ interactions undertaken, as needed
 QPS = Queensland Police Service
 MHLO = Mental Health Liaison Officer
 CLO = Court Liaison Officer
 FMO = Forensic Medical Officer
 SW = Social worker

Fig. 2. Process map depicting how an existing detainee/patient in the local watch house is seen by the WHEN.

4. Discussion

Custodial healthcare involves unique challenges of maintaining care and compassion for a vulnerable group of patients within a law enforcement environment [25]. This study was focussed on the structures and processes underpinning the role of the ED nurse working in the watch-house (i.e. WHEN).

4.1. WHEN structures

The on-site WHENs, with their triage competence and acute assessment skills, provided early and rapid access to specialist expertise for detainees. They undertook work consistent with advanced nursing practice [26]. Evaluations of other ED nursing roles functioning in out-of-hospital settings undertaken in Australia have highlighted that individual nurse structures regarding experience and education [27] are important factors underpinning outcomes. This current study identified an additional, less tangible individual factor of the WHENs – resilience – that appeared necessary to work in the watch-house setting. The identified relationship between nurse education and experience with expertise demonstrated in a multi-hospital study in the US, reiterates the importance of professional development and practice in a supportive environment [28].

The part-time watch-house and part-time ED structure of the WHEN role was purposively decided on to maintain the skill set of the ED nurses and foster a degree of role ownership by a small group of interested ED nursing staff. Providing staff with the opportunity to work in other settings (i.e. secondment) is one of several strategies that may be used to prevent burnout and attrition [14,29,30]. Whilst the funding model and cost effectiveness of the WHEN role is to be published separately, the service has demonstrated sustainability, as it continues to be operational today, albeit in a slightly revised format to that described herein.

4.2. WHEN processes

The care delivery, referral practices and inter-agency and inter-personal communication processes with which the WHENs engaged, contributed to the delivery of appropriate, timely, and safe healthcare as well as identifying service improvement opportunities. In regard to the care delivered, being detained in the watch-house could be considered a ‘teachable moment’, i.e. an opportunity for clinician-detainee interaction to prompt behaviour change [31]. With detainees staying longer in watch-house settings, other aspects of nursing care delivery undertaken in longer terms prison settings (e.g. immunisation screening, and dietary advice) [5,9] could be considered for the WHEN role.

The safety aspect highlighted in our findings support the need for integration between police and health [32] to minimise risk. The notion of safety was evident in all interviews and in varying contexts. For the WHENs, their concern for personal safety was minimised by police officer presence at all times when interacting with a detainee. With workplace violence reaching epidemic levels in busy EDs [33] the opportunity for ED nurses to utilise their skills in a different setting via the secondment arrangement, improved the WHEN’s perception of their working environment [14] and facilitated further capacity building into the WHEN role. The WHEN role was also noted to alleviated professional safety concerns for the police officers, who are not healthcare professionals. The WHENs contribution to enhancements in detainee safety included avoiding deaths in custody and facilitating inter-agency care continuity. Additionally, the generation of ideas (from within) for service improvement as well as learning opportunities and knowledge development across all stakeholder groups extended beyond that which may have originally been anticipated. With informal education noted between professional groups (nursing and police), the WHEN role could possibly be broadened to include leading further inter-agency educational development opportunities.

The underpinning structures and processes of the WHEN role described herein inform and contribute to local policy development as well as local and global recommendations [1,32]. The WHEN role is

innovative in that it is a new and transformative approach to healthcare delivery in a setting with a vulnerable population with unique healthcare needs. Roles such as this have not been described in the literature and so this research provides evidence of a new approach to healthcare delivery in the out-of-hospital setting.

4.3. Limitations

Limitations for this qualitative study exist. First, as this study was focussed primarily on the role of the ED nurses working in the watchhouse, detainees and domiciliary nurses were not interviewed which may limit the comprehensive understanding of healthcare delivery during the time the WHENs commenced this role. Second, due to the time difference between the initial commencement of the role, and the interviews (due to time required to obtain multi-institutional study approvals) there may be recall bias from some participants. Third, this study was undertaken at one site, limiting the transferability of findings to other settings.

5. Conclusion

Emergency nurses can make a meaningful contribution to the delivery of healthcare for people in the acute custodial phase of detention which can be complex and requires multi-disciplinary and interagency collaboration. Findings from this study can be used to inform service development at a local and potentially state wide or national level, and lead to further work to implement and evaluate the role at other sites.

Ethical statement

The study received approval from the health service and university human research ethics committee (HREC/13/QHC/22, HREC/15/QGC/69, NRS/05/15/HREC), the Queensland Police Service Research Committee and the Queensland Ambulance Service.

Disclaimer

The views and findings presented are those of the investigators and do not represent those of the collaborating organisations.

Funding source

Funding was awarded from the Gold Coast Hospital Foundation to undertake this study.

Declaration of Competing Interest

Crilly is a reviewer for IEN.
Green is the Clinical Medical Director of the ED.
Lincoln is a Medical Officer for the watch house.
Van Buuren is a Medical Officer for the watch house.
Becker is the Officer in Charge of the watch house.

Acknowledgement

We wish to thank staff who agreed to participate in the interviews.

References

- [1] Enggist S, Møller L, Galea G, Udesen C. Prisons and health. Denmark: WHO Regional Office for Europe; 2014.
- [2] Payne-James JJ, Anderson WR, Green PG, Johnston A. Provision of forensic medical services to police custody suites in England and Wales: current practice. *J Forensic Leg Med* 2009;16:189–95.
- [3] De Viggiani N. A clean bill of health? The efficacy of an NHS commissioned out-sourced police custody healthcare service. *J Forensic Leg Med* 2013;20:610–7.
- [4] Norman A. Prison health care: what is it that makes prison nursing unique? *Br J Nurs* 1999;8:1032–3.
- [5] Parrish A. Prison healthcare who needs a nurse? *Nurs Manage* 2002;8:6–9.
- [6] Bond P, Kingston P, Nevill A. Operational efficiency of health care in police custody suits: comparison of nursing and medical provision. *J Adv Nurs* 2007;60:127–34.
- [7] Powell J, Harris F, Condon L, Kemple T. Nursing care of prisoners: staff views and experiences. *J Adv Nurs* 2010;66:1257–65.
- [8] Peate I. Protecting the health of offenders in prison and other places of detention. *Br J Commun Nurs* 2011;16:450–4.
- [9] Perrett SE. Prisoner health: assessing a nurse-led hepatitis C testing clinic. *Br J Nurs* 2011;20:611–4.
- [10] Shields KE, de Moya D. Correctional health care nurses' attitudes toward inmates. *J Correct Health Care* 1997;4:37–9.
- [11] O'Connor T. Improving relations between police and mental health services. *Kai Tiaki Nurs* 2009;15:18–9.
- [12] Doyle J. Forensic nursing: a review of the literature. *Aust J Adv Nurs* 2001;18:32–9.
- [13] Cashin A, Newman C, Eason M, Thorpe A, O'Discol C. An ethnographic study of forensic nursing culture in an Australian prison hospital. *J Psychiatr Ment Health Nurs* 2010;17:39–45.
- [14] Crilly J, Greenslade J, Lincoln C, Timms J, Fisher A. Measuring the impact of the working environment on emergency department nurses: a cross-sectional pilot study. *Int Emerg Nurs* 2017;31:9–14.
- [15] Donabedian A. Evaluating the quality of medical care. *Milbank Mem Fund Q* 1966;44:166–206.
- [16] Irvine D, Sidani S, Hall LM. Linking outcomes to nurses' roles in health care. *Nurs Econ* 1998;16:58.
- [17] Bogdan RC, Biklin SK. Qualitative research for education: An introduction to theory and methods. Sydney: Allyn & Bacon; 1992.
- [18] Australian Bureau of Statistics. Data by region: Gold Coast, [http://stat.abs.gov.au](http://stat.abs.gov.au;); 2013 [accessed 18 June 2018].
- [19] Polit D, Beck C. Nursing research: Generating and assessing evidence for nursing practice. 8th ed. Philadelphia: Lippincott Williams & Wilkins; 2008.
- [20] Miles MB, Huberman AM. Qualitative data analysis: an expanded sourcebook. 2nd ed. California: Sage Publications; 1994.
- [21] Lincoln YS, Guba EG. Naturalistic inquiry. Newbury Park: Sage; 1985.
- [22] Graneheim UH, Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurs Educ Today* 2004;24:105–12.
- [23] Krefting L. Rigor in qualitative research: the assessment of trustworthiness. *Am J Occup Ther* 1991;45:214–22.
- [24] Noble H, Smith J. Issues of validity and reliability in qualitative research. *Evid Based Nurs* 2015;18:34.
- [25] Payne-James J. Healthcare and forensic medical services in police custody—to degrade or to improve? *Clin Med* 2017;17:6–7.
- [26] Bryant-Lukosius D, DiCenso A, Browne G, Pinelli J. Advanced practice nursing roles: development, implementation and evaluation. *J Adv Nurs* 2004;48:519–29.
- [27] Crilly J, Chaboyer W, Wallis M. A structure and process evaluation of an Australian hospital admission avoidance programme for aged care facility residents. *J Adv Nurs* 2012;68:322–34.
- [28] McHugh MD, Lake ET. Understanding clinical expertise: nurse education, experience, and the hospital context. *Res Nurs Health* 2010;33:276–87.
- [29] Gerrish K, Piercy H. Capacity development for knowledge translation: evaluation of an experiential approach through secondment opportunities. *Worldviews Evid Based Nurs* 2014;11:209–16.
- [30] Swenty CF, Schaar GL, Phillips LA, Embree JL, McCool IA, Shirey MR. Nursing sabbatical in the acute care setting: what is the evidence? *Nurs Forum* 2011;46:195–204.
- [31] Lawson PJ, Flocke SA. Teachable moments for health behavior change: a concept analysis. *Patient Educ Couns* 2009;76:25–30.
- [32] Office of the State Coroner, Queensland Courts. Findings of Inquest: Inquest into the death of Herbert John Mitchell, http://www.courts.qld.gov.au/data/assets/pdf_file/0008/170774/cif-mitchell-hj-20121214.pdf [accessed 18 June 2018].
- [33] Emergency Nurses Association. Public Policy Agenda: 2018/2019. Safety in the Emergency Care Environment. <https://www.ena.org/government-relations/public-policy-agenda> [accessed 30 July 2019].