



Contents lists available at ScienceDirect

International Emergency Nursing

journal homepage: www.elsevier.com/locate/aaen

The impact of an Emergency Department ambulance offload nurse role: A retrospective comparative study

Tanya Greaves^{a,*}, Marion Mitchell^b, Ping Zhang^c, Julia Crilly^d

^a School of Nursing and Midwifery Griffith University, Australia

^b School of Nursing and Midwifery and NHMRC Centre of Research Excellence in Nursing, Menzies Health Institute Queensland, Griffith University and Intensive Care Unit, Princess Alexandra Hospital, Brisbane, Australia

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

^d Department of Emergency Medicine, Gold Coast Health and Menzies Health Institute, Queensland, Griffith University, Australia

ARTICLE INFO

Article history:

Received 23 April 2016

Received in revised form 11 December 2016

Accepted 21 December 2016

Available online xxxxx

Keywords:

Emergency Services

Hospitals

Ambulances

Patient outcome assessment

Nursing

ABSTRACT

Objective: This study aimed to evaluate the impact of an Emergency Department Ambulance Offload Nurse (EDAOLN) role on patient and health services outcomes in one Queensland Emergency Department (ED).

Methods: A retrospective study of all ED presentations ($n = 21,454$) made to a tertiary hospital ED in Queensland, Australia, during July 9, 2012 – November 2, 2012; 39 days before (T1), during (T2) and after (T3) the introduction of the trial of an EDAOLN role. The primary outcome of interest was time to be seen by a clinician.

Results: Demographic and clinical profiles of ED presentations made during each of the time periods were relatively similar. Time to be seen improved marginally during the trial period of the EDAOLN (T1: 34 min vs. T2: 31 min, $p = 0.002$). The proportion of hospital admissions and those who did not wait differed between T1 and T2 (lower during T2 vs. T3). Most outcomes were not sustained when the role was removed (i.e. T2 vs. T3), and most returned close to baseline (i.e. T1 vs. T3).

Conclusions: As part of a health services framework designed to improve timely access to emergency care, an EDAOLN may be one of several options to consider.

© 2017 Elsevier Ltd. All rights reserved.

1. Introduction

Emergency Department (ED) overcrowding is a common issue noted internationally [1–3] that can impact on the ability to deliver safe, timely, quality care. ED overcrowding has been described as a situation where patient care is hindered due to large numbers of patients exceeding the department's ability to provide adequate physical space and provision of sufficient staff to meet patients' needs [4]. Negative outcomes such as increased length of stay (LOS) in EDs and hospital [5–8], and increased risk of in-hospital mortality [1–3] have been linked to ED overcrowding.

An emerging issue that has been linked to ED crowding (and reflective of a broader system's issue) is ambulance offload time (AOT) delay, also known as ambulance ramping. AOT delay refers to the extended time (usually >15 min or 30 min) [9,10] from ambulance arrival at the ED to the time the patient is transferred

onto an ED bed/chair. Of the 7.2 million ED presentations in Australia, around one in four arrived by ambulance in 2013–14 [11]. Previous research has indicated that approximately 16% of ambulance arrivals experience AOT delay of >30 min [12]. Some patient outcomes (including ED LOS) are better for those with an AOT less than 15 min [13] or 30 min [12] with an AOT of more than 30 min identified as a predictor of an extended ED LOS of more than 4 h [12]. Other reports indicate patient safety [14], patient privacy [15] and the ability for ambulances to return to the field [16] may be compromised when AOT delays occur. The economic impact to the health and ambulance services of AOT delays have been noted [10], however formal economic analyses have not, as far as we are aware, emerged.

Recommendations to minimise ED crowding, plan for times of increased ED workload and reduce AOT delays have emerged and include the introduction of a nursing role to assist waiting patients [10,17], ensuring triage occurs on arrival to the ED, that no patient returns to an ambulance after triage, the establishment of a high-level Emergency Services Management Committee to provide policy advice to the Minister and the nomination of an accountable

* Corresponding author at: Ipswich General Hospital, Emergency Department, Chelmsford Avenue, Ipswich, Qld 4305, Australia.

E-mail address: tanya.greaves@griffithuni.edu.au (T. Greaves).

person at the Executive Director level (or higher) to be responsible for ED access issues [10]. Little formal research evaluating the impact and effect of these recommendations exist. The temporary implementation of one of these recommendations (a triage competent registered ED nurse designated to rapidly assess and commence treatment for patients arriving to the ED by ambulance) provided an opportunity to investigate the impact of this initiative. The aim of this study was to identify if patient and service delivery improvements (particularly time to be seen by a clinician) occurred with the implementation of the Emergency Department Ambulance Offload Nurse (EDAOLN) role.

1.1. The EDAOLN role

The EDAOLN role was introduced in one Australian ED in 2012 and operated 24 h a day, seven days a week for a 39-day trial period. The role was performed by triage competent ED nurses; that is, senior nurses trained in the assignment of Australian Triage Scale (ATS) categories. These ATS categories are an indicator of the degree of urgency for treatment where the allocated category number corresponds to a timeframe in which patients should be seen by a doctor [18]. The EDAOLN role was dedicated to ambulance arriving patients. Another nurse/s would triage patients arriving by other means of transport allowing the EDAOLN to focus on ambulance arriving patients.

Following initial assessment by the EDAOLN, patients who arrived by ambulance and were triaged as Category 1 or 2 were promptly offloaded onto an ED stretcher as they should be seen immediately (ATS 1) or within 10 min (ATS 2) by a doctor or nurse working under the clinical supervision of a doctor [18]. Those triaged as Category 3 (should be seen within 30 min of arrival), 4 (should be seen within 60 min of arrival), or 5 (should be seen within 120 min of arrival), [18] were either offloaded onto an ED chair (if available and able) or remained on the ambulance stretcher and treatment commenced if required. Treatments and tests provided or ordered by the EDAOLN (in collaboration with ED doctors as required) included pain relief, X-rays, intravenous cannulation and laboratory/pathology collection.

1.2. Usual care

Prior to the introduction of the EDAOLN there was one main triage nurse who was responsible for all arriving patients – those that walked into the ED and those who arrived by ambulance or police vehicle. The main triage nurse was assisted, on an ad hoc basis, by other nurses. Once triaged, patients were either seated on a chair in the waiting room, allocated to an ED bed if one was available, or they may have needed to remain on the ambulance trolley. The main difference during the trial was that a designated senior nurse was allocated to assess and manage patients arriving by ambulance.

2. Methods

2.1. Design

A retrospective study was undertaken to compare demographic and ED patient outcomes before, during and after the implementation of the EDAOLN role.

2.2. Setting

The study site was a 570 bed, regional teaching hospital in Queensland, Australia that provided care to approximately

65,000 adults and children from a surrounding population of over 500,000 inhabitants during the study year [19].

2.3. Sample

Included in this study were all patient presentations made to one Queensland ED in 2012 during the study periods.

2.4. Outcomes

The primary outcome evaluated for this study was time to be seen. Secondary outcomes included: ED length of stay (LOS) which was divided into <4 h and \geq 4 h (i.e. did/did not meet National Emergency Access Targets, NEAT), <8 h and \geq 8 h (i.e. were not/were access blocked if admitted to hospital); and discharge destination from the ED (i.e. discharged from the ED, admitted to hospital, left ED without being seen (LWBS); left ED after treatment commenced (LATC) but not completed, transferred to other hospital and died in ED). Definitions pertaining to these outcomes are displayed in Table 1.

2.5. Data collection

Data were extracted from the ED Information System (EDIS) by a member of the hospital's Health Informatics Division and provided to the researchers in an Excel spreadsheet. Data included demographic information, unique record number (URN), reason for presenting to ED, mode of arrival, triage category, date and time of triage, date and time seen by clinician, date and time of discharge, ED classification of Disease codes-10, discharge destination from ED.

Data collected covered equal time periods (39 days) before (Time 1: 9th July–16th August 2012), during (Time 2: 17th August–24th September 2012) and after (Time 3: 25th September–2nd November 2012) the implementation of the EDAOLN role. These timeframes correlated to the Australian Winter (June, July, August) and Spring (September, October, November) seasons. As far as we are aware, there were no mass-casualty situations, epidemics or disasters that may have influenced these time periods in relation to patient presentations.

Data checking, cleaning and categorising were performed on the provided data. Checks were performed for duplicate data or date/time entry discrepancies (such as a re-presentation noted prior to the patient leaving the ED). Where possible, missing data were retrieved. Categories were created to condense and analyse data. This occurred for time of arrival to the ED: categorised according to the three main clinical shifts worked by nurses (early shift:

Table 1
Definitions of outcomes measures.

Outcome measures	Definitions
Time to been seen	Time from triage to first seeing a clinician, i.e. a doctor or a nurse working under the clinical supervision of a doctor [18]
ED length of stay (LOS)	Time (in min) from the time of presentation at the ED to the time of departure from the ED [33]
National Emergency Access Target (NEAT) Access block	An ED LOS of 4 h or less (Y/N) [4]
Left without being seen (LWBS)	An ED LOS of 8 h or more for a patient admitted to hospital (Y/N) [4]
Left after treatment commenced (LATC)	When a patient left before seeing a treating clinician (Y/N) [27]
	When a patient who presented to the ED, commenced clinical care for their presenting problem and decided to leave the ED before their care was complete (Y/N) [34]

Download English Version:

<https://daneshyari.com/en/article/5563052>

Download Persian Version:

<https://daneshyari.com/article/5563052>

[Daneshyari.com](https://daneshyari.com)