



## Triage and treat model of care: Effective management of minor injuries in the emergency department



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### ABSTRACT

**Background:** The increasing demands on the emergency department (ED) can result in lengthy waits for non-urgent category four and five presentations. As a result, some patients are given definitive simple treatments in the triage area and/or are given advice regarding self-care. Alternatively, patients may be provided with information and directions to an external healthcare provider in order to receive care. This process is commonly referred to as a “triage and treat” model of care. This study aims to describe the relationship between the triage and treat model of care and patient outcomes, including effectiveness, length of stay, patient flow and patient satisfaction with emergency clinical care.

**Method:** A cross-sectional descriptive study was used in this pilot study to determine the effectiveness of a triage & treat model of care in a single Regional ED. Convenience sampling was used with patient follow up via a phone call to determine if any clinical complications or unexpected outcomes occurred and to determine the level of satisfaction with the care received.

**Results:** One hundred and seventeen participants constituted the final data set, with the majority of the presentations in the 0–10 age range (38%). The mean length of stay was 19 min with the majority (97%) presenting with wounds requiring interventions. Of the participants recruited to the study only 23% (n = 27) required review following their triage and treat care and only three participants recruited to the study expressed being dissatisfied, equating to a high level of satisfaction with this model of care. A content analysis of the open ended responses yielded two positive themes (timely treatment and effective model of care) and two negative themes (lack of education and dissatisfaction with care).

**Conclusion:** This pilot study has shown the triage and treat model of care to be a safe and effective option for caring for participants presenting to the ED for the management of the minor wounds. The triage and treat model of care improves patient satisfaction and flow through the emergency department while also reducing waiting times making it an effective emergency model of care.

What is known?

- Nurses do triage & treat and discharge patients presenting to the Emergency Department with minor injuries informally.
- A formalised model of care described as “Triage and Treat” is a relatively new modality for emergency care in Australia.
- Long waiting times in Emergency Departments are directly correlated to poor satisfaction with care.

What this paper adds?

- Triage & treat is a time effective model of care for minor injury presentations
- Triage and treat model of care appeared to improve patient satisfaction for emergency care of minor wounds
- Improves patient flow through the emergency department.

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## 1. Introduction

The introduction of the National Emergency Access Target (NEAT) by the Australian Government for ED's aimed to address the increasing demands for emergency care by improving patient flow, decreasing overcrowding and improving quality of patient care (Perera et al., 2014). Contributing to the problem of increased demand in Regional Victoria is a growth in the number of ED presentations by a population unable to access primary health care in the community, partly attributed to the decline in after-hours General Practitioner (GP) services (Australian Medical Association, 2005 as cited by Combs, Chapman, & Busby, 2006). In Australia, attendances to ED's have continued to increase by 17% over the last 5 years (Allen et al., 2015). The increasing demands on the ED can result in lengthy waits for non-urgent presentations, a decrease in patient satisfaction with a resultant increase in the "did not wait to be seen" group of patients (Allen et al., 2015).

Conversely the "see and treat" or "triage and treat" model of care aims to triage, treat and discharge patients soon after the first point of contact by an autonomous clinician for minor injuries and illnesses (Parker, 2004). These patients are given definitive simple treatments in the triage area and/or are given advice regarding self-care or contact details of potential alternative healthcare providers if they wish not to wait for ED treatment. Staff dedicated to triage and treat patients must be able to work autonomously, competently, making decisions about treatment, investigations and discharge plans, usually carried out by a medical officer or emergency nurse practitioner (Parker, 2004). A cross-sectional descriptive study was used in this pilot study to determine effectiveness, length of stay and level of patient satisfaction following a "triage & treat" episode of care in a single regional ED.

## 2. Background

Reforms in Australian emergency care set patient care targets of less than four hours from admission to discharge or transfer (Khanna, Boyle, Good, & Lind, 2013). Fast track systems aim to stream low acuity patients through a dedicated area in order to reduce waiting times and length of stay. The success of this type of stream has led to its wide use across many Australian and International Emergency Departments (Kinsman et al., 2008; O'Brien, Williams, Blondell, & Jelinek, 2006; Maull, Smart, Harris, & Karasneh, 2009; Ieraci, Digiusto, Sonntag, Dann, & Fox, 2008; Sanchez et al., 2006). Designated fast track areas are usually staffed by a mixture of senior clinicians such as emergency nurse practitioners/candidates and medical officers supported by a senior emergency nurse. Current literature suggests that dedicated senior staff and patient selection are key factors to the success of fast track (Considine, Kropman, & Stergiou, 2010).

Fast track, streaming and "triage and treat" were identified as the three major models affecting patient flow in a review of literature detailing improvements in process redesigns for ED across Australia, United Kingdom (UK) and North America (Combs et al., 2006). A study in Western Australia reviewed the effects of the introduction of a fast track model as a revised model of care, it aimed to reduce patient delays in receiving treatment and reducing the number of patients that did not wait to be treated (Combs et al., 2006). The introduction of a fast track area of care utilising advanced practice by senior nursing staff was extremely successful in reducing waiting times for Australasian Triage Scale (ATS) categories three, four and five, and also reduced the number of patients leaving without treatment (Combs et al., 2006).

Similarly, a study by Kwa and Blake (2008) investigated the introduction of a fast track area within their ED, highlighting improvements that were made to the length of stay for low acuity

patients without risk to higher acuity patients. Likewise, the introduction of streaming processes in an Australian tertiary adult teaching hospital, demonstrated reductions in length of stay and waiting times for discharged patients without increasing waiting times for admitted patients (O'Brien et al., 2006). Whilst, in an Australian regional hospital the introduction of streaming processes had similar success in improving the eight hour to admission and four hour to discharge target times (Champion et al., 2008).

Undeland, Kowalski, Berth, and Gundrum (2010), assessed the safety and appropriateness of antibiotic treatment in adult patients with pharyngitis who opted for a nurse-only triage and treat algorithm versus patients who underwent a physician-directed clinical evaluation. The algorithm aimed to confirm the presence of a sore throat as the primary symptom and identify potential complications that would warrant physician evaluation. The nurse-only triage and treatment algorithm performed well and appeared to be safe and cost-effective (Undeland et al., 2010). A study by Buchan, Saihan, and Reynolds (2003) in the UK, reported on the success of a nurse triage, diagnosis and treatment pathway for eye injury patients in an outpatient ophthalmic ED. All patients deemed suitable for nurse triage management were assessed, managed and discharged by the triage nurse. The authors revealed that the high standard of diagnostic and management skills of the triage nurses, led to improvements in time management of medical staff, waiting times and patient satisfaction (Buchan et al., 2003).

A similar study in the Netherlands, Derkson et al. (2007) compared the assessment and management of acute ankle and foot injuries as managed by specialised emergency nurses (SEN) or medical officers. This included the use of a flow diagram including the use of the Ottawa ankle and foot rules. Whilst their study focussed specifically on the ability for their SEN's to assess, treat and discharge patients within this diagnostic group as safely as their medical counterparts, this management was not performed at triage. Rather their study proved that specialised emergency nurses may be able to safely manage specific minor injuries, reducing patient waiting times and improving patient satisfaction.

The see and treat model was developed from a process called streaming which incorporates an admission or discharge stream. The discharge stream includes fast track, which is usually brought into operation during peak times and consists of a senior nurse and senior doctor working with the patients in the triage area to expediate treatment (Castille & Cooke, 2003; Cook, Wilson, & Pearson, 2002; Parker, 2004; Rogers, Ross, & Spooner, 2004). The triage and treat initiative was found to be well supported by staff, waiting times were reduced, patient satisfaction improved and the UK Department of Health targets were achieved; however most programs were limited by the lack of additional resources and suitably experienced staff (Castille & Cooke, 2003; Cook et al., 2002; Parker, 2004; Rogers et al., 2004).

A systematic literature review undertaken by Oredsson et al. (2011) reviewed studies reporting on patient flow processes such as fast track, streaming, team triage, point of care testing and nurse initiated x-ray at triage. Improvements in length of stay and waiting times appeared modest in most studies, however the fast track process appeared to demonstrate the best scientific evidence for improvements in patient flow. Lee, Smith, and Jennings (2008) further demonstrated the benefits of triage related interventions in two Victorian metropolitan ED's for the management of low acuity lower abdominal pain. Showing that the initiation of treatment such as analgesia and pathology performed in the triage area improved efficiency, patient satisfaction and waiting times. Similarly, a study in the United States, highlighted the use of computer system integration to improve the patient registration process aiding in the prompt initiation of interventions such as pathology and radiology requests (Chan, Killeen, Kelly & Guss, 2005). Further, an emergency physician, immediately accessible to triage for deci-

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