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RESEARCH PAPER

The accuracy and consistency of rural, remote and outpost triage nurse decision making in one Western Australia Country Health Service Region

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Summary
Background: The Australasian Triage Scale aims to ensure that the triage category allocated, reflects the urgency with which the patient needs medical assistance. This is dependent on triage nurse accuracy in decision making. The Australasian Triage Scale also aims to facilitate triage decision consistency between individuals and organisations. Various studies have explored the accuracy and consistency of triage decisions throughout Australia, yet no studies have specifically focussed on triage decision making in rural health services. Further, no standard has been identified by which accuracy or consistency should be measured. Australian emergency departments are measured against a set of standard performance indicators, including time from triage to patient review, and patient length of stay. There are currently no performance indicators for triage consistency.
Methods: An online questionnaire was developed to collect demographic data and measure triage accuracy and consistency. The questionnaire utilised previously validated triage scenarios.[1] Triage decision accuracy was measured, and consistency was compared by health site type using Fleiss' kappa.
Results: Forty-six triage nurses participated in this study. The accuracy of participants' triage decision-making decreased with each less urgent triage category. Post-graduate qualifications had no bearing on triage accuracy. There was no significant difference in the consistency of decision-making between paediatric and adult scenarios. Overall inter-rater agreement using Fleiss' kappa coefficient, was 0.4. This represents a fair-to-good level of inter-rater agreement.

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Conclusions: A standard definition of accuracy and consistency in triage nurse decision making is required. Inaccurate triage decisions can result in increased morbidity and mortality. It is recommended that emergency department performance indicator thresholds be utilised as a benchmark for national triage consistency.

What is known

- Triage is the process of sorting or selecting patients in order to distribute resources appropriately. Inconsistencies or inaccuracies in triage decisions result in serious consequences for the patient in the context of morbidity or mortality.
- Triage nursing is an autonomous role that is usually undertaken in the Emergency Department. A triage nurse is responsible for the determination of urgency and interventions, in addition to determining the order in which patients are seen based on assessment. The national standard for triage education is the Emergency Triage Education Kit (ETEK).
- In the context of triage, clinical decision-making refers to the allocation of one Australasian Triage Score over four others using primary and secondary assessment skills, knowledge of pre-determined criteria and the Australasian Triage Scale. Despite this, a poor triage decision is a significant threat to patient safety and outcomes. Triage consistency and accuracy will result in an Australian-wide unilateral allocation of an Australasian Triage Score to a patient.
- Several Australian studies have explored triage consistency in locations such as Victoria, Western Australia and New South Wales. However several limitations in these studies were identified, including: inadequate provision of clinical information to participants, inconsistent data reporting, the utilisation of out-dated triage scales and a failure to compensate for a lack of visual and aural stimuli. In addition to these limitations, a gap in the literature includes the insufficient study of triage nurse decision-making in rural and remote areas.

What this paper adds?

- The aim of this study was to determine the level of triage decision accuracy and consistency in one Western Australian Country Health Service Region. This research contributes to the gap in literature surrounding the study of triage nurse decisions in rural and remote areas. Previous research on the consistency of triage held little comparison for the remoteness of Western Australia and its health regions.
- The most significant reason to conduct research into the consistency and accuracy of rural, remote and outpost triage nurse decisions is patient safety. People residing in rural and remote areas have significantly poorer health differentials when compared to metropolitan areas.
- Of the health workforce, the task of recruitment and retention of health professionals in rural and remote areas is challenging for employers, and a combination of personal and professional determinants results in an increased transient health population.
- Despite the inclusion of rural areas in the research of triage consistency, there failed to be consistent data reporting, varying terminology associated with statistical analysis, and a failure to clearly analyse and define what rural and remote was on a national level — for comparison. This study utilises national definitions for rural and remote areas, to enable future comparison. Statistical analysis and terms used were based on a Fleiss' kappa model and would therefore enable inter-rater analysis, but also clear terms associated with data findings would mean this data can be analysed in comparison to future studies.

Introduction

Triage in the emergency department (ED) is an autonomous nursing role, and involves the process of patient assessment and prioritisation, to determine the distribution of resources to patients. In Australia, the triage nurse is responsible for determining the urgency and order in which patients are seen, based on their assessment findings, and the Australasian Triage Scale (ATS).[2] The aim of the ATS is to ensure that the triage category allocated, reflects the urgency with which the patient needs medical assistance. This is dependent on triage nurse accuracy in decision making. The ATS is also designed to ensure consistent decisions are made by individuals and organisations. This is known as triage consistency.[3]

Inaccuracy or inconsistency in triage decisions can result in serious consequences for the patient, potentially increasing morbidity and mortality,[4] and can also negatively affect ED resources.[3] While 5-tier triage systems have historically been shown to improve patient outcomes,[5] triage has a direct impact on the quality of patient care and patient