



Australian Government

Department of Health and Ageing

EMERGENCY TRIAGE EDUCATION KIT

TRIAGE WORKBOOK



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FOREWORD

In 2005–06, nearly 4.8 million people presented to emergency departments in larger Australian hospitals. Only 12 per cent were non-urgent cases. Sixty nine per cent of people were seen within the time recommended for their triage category, with half of this number seen in less than 24 minutes.

Despite the pressure on triage staff working, the figures show that they mostly get it right. Providing accurate and timely assessments of seriously ill patients, based on urgency, is what makes the triage system work.

A clinically based system of triaging ensures that patients needing priority medical care get it. The Emergency Triage Education Kit aims to provide further support to Triage Nurses. This revised edition includes more than 150 scenarios designed to strengthen Triage Nurses' assessment skills. It also covers complex areas such as mental health, paediatrics, obstetrics and rural/remote triage. It aims to help nurses provide better assistance to people presenting to emergency departments.

The kit was funded by the Commonwealth Government and developed in collaboration with the Australasian College of Emergency Medicine, the Australian College of Emergency Nursing, the College of Emergency Nursing Australasia and the Council of Remote Area Nurses of Australia.

Tony Abbott MP
Minister for Health and Ageing





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INTRODUCTION

In November 2001, the then Department of Health and Aged Care funded the development of a resource book for nurse educators to promote the consistent application of the Australasian Triage Scale (ATS).

This resource is founded on the original fieldwork of Whitby, Leraci, Johnson and Mohsin (1997) that described the clinical features used by Triage Nurses to assess urgency in relation to patient presentations to emergency departments. The ATS (formerly known as the National Triage Scale) has been shown to be both a reliable and valid instrument for sorting patients according to their care requirements in order to optimise clinical outcomes in emergency departments.^{17,31}

In the past decade, a number of researchers have documented acceptable levels of inter-rater reliability among Triage Nurses using the ATS and confirmed its utility in practice.^{17,20,31,33} Throughout Australia, triage standards regarding time-to-treatment and performance thresholds are now uniformly employed to quantify both the quality of emergency care and to measure emergency department casemix.⁴

Enhancing the consistency of the application of the ATS is a shared goal for emergency nursing, the Australasian College for Emergency Medicine (ACEM) and the Australian Government Department of Health and Ageing.

The first edition of the Emergency Triage Education Kit (ETEK) was published in April 2002 as the Triage Education Resource Book (TERB). This revised edition is the result of a collaborative effort between the Australasian College for Emergency Medicine, the Australian College of Emergency Nursing, the College of Emergency Nursing Australasia and the Council of Remote Area Nurses of Australia.

Emergency care is recognised as a nursing specialty of the National Specialisation Framework for Nursing and Midwifery (2006). Additionally, an outcome of the National Health Workforce Strategic Framework (2004) is to build a suitably trained, competent and sustainable health workforce. To underpin this, a single national accreditation scheme for health education and training is to be put in place by 1 July 2008. The Department believes the content of this revised education kit will provide valuable input to the development of emergency triage training materials to support the national accreditation scheme for the emergency care nursing speciality.





CHAPTER 1: INTRODUCTION

Statement of purpose

The purposes of this chapter are to:

- Provide an overview of the triage education program and emphasise its role in optimising triage consistency throughout Australia; and
- Discuss the purpose of triage systems in the context of acute health care delivery.

Learning outcomes

After completing this chapter, participants will have a clear understanding of the triage education program's purpose and structure and how the content may be applied in their work environment.

Participants will also develop an appreciation of the national and international developments that form the basis of emergency department (ED) triage in Australia. They will also be able to identify factors influencing consistency of triage in that context.

Learning objectives

- State the aims and purpose of ED triage systems.
- Differentiate the purpose of military and disaster triage systems from ED triage systems.
- Define 'urgency'.
- Make a distinction between the concepts of urgency, severity and complexity of illness and injury.
- Compare and contrast the basic categories of the Australasian Triage Scale (ATS) with the Canadian Triage and Acuity Scale (CTAS), the Manchester Triage Scale (MTS), and the Emergency Severity Index (ESI).
- Identify the four essential features of a robust triage scale and discuss these with respect to the ATS.

Key points

- A triage system is the essential structure by which all incoming emergency patients are prioritised using a standard rating scale. The purpose of a triage system is to ensure that the level of emergency care provided is commensurate with clinical criteria.
- 'Urgency' is determined according to the patient's condition on arrival at the ED.
- A five-tier triage scale is a valid and reliable method for categorising ED patients.
- This program forms part of a national strategy aimed at optimising consistency of triage using the ATS.



Content

The program aims to provide a nationally consistent approach to the educational preparation of nurses for the triage role, particularly the consistent application of the Australasian Triage Scale (ATS).^{1,2}

The program's educational strategy integrates available evidence into a valid set of training tools. These tools are used by clinicians* performing triage in hospital EDs and those working in rural and remote area health services who make triage decisions as part of their role.

The program provides teaching strategies to assist educators in the delivery of specific triage training to suitably qualified and experienced emergency nurses.

In the context of rural and remote environments, the program can be used as a self-directed learning package because the core principles for consistent application of the ATS still apply.

Program structure

The course content has been designed to allow for the inclusion of locally based policies and protocols to optimise consistency of triage or reduce ED transit time. The program comprises the following 10 individual learning units.

- Chapter 1: Introduction
- Chapter 2: The Australasian Triage Scale
- Chapter 3: Communication issues at triage
- Chapter 4: Triage basics
- Chapter 5: Mental health triage
- Chapter 6: Rural and remote triage
- Chapter 7: Pain assessment at triage
- Chapter 8: Paediatric triage
- Chapter 9: Obstetric triage
- Chapter 10: Medico-legal issues at triage.

Each chapter comprises a summary of the key points related to the topic, lesson plans, learning activities and resource materials, including web-based materials, evidence-based reviews, research articles and opinion papers. A summary of each available resource is also provided, stating how the information can be used for training and/or practice.

* A clinician is defined as a registered nurse or medical practitioner who is performing triage.



Program implementation

The process for implementing the program involves the following steps:

1. Selection of appropriate participants.

The selection of participants to undertake the program will be informed by local policy. Individual organisations will be responsible for setting criteria with respect to the level of emergency experience and qualifications required for entry into the program. Importantly, there is no minimum number of participants required; however it is desirable for participants to have opportunities for group discussions with their peers during the program.

2. Implementation of the lesson plans.

The implementation of the lesson plans involves the completion of a series of structured learning activities. Each of the 10 lesson plans comprises learning objectives, a synopsis of the literature relevant to the topics discussed, teaching strategies including learning activities, multiple-choice questions, discussion points and/or patient scenarios, and a list of additional resources for use by participants. The final two chapters consolidate and test the participant's knowledge.

Successful completion of the program is at the discretion of the instructor*. In settings where there is no infrastructure for triage training, the program can be used as a self-paced learning resource, with participants working through the readings and learning activities in a structured way.

3

Definitions

Triage system: The process by which a clinician assesses a patient's clinical urgency.

Triage: A triage system is the basic structure in which all incoming patients are categorised into groups using a standard urgency rating scale or structure.³

Re-triage: Clinical status is a dynamic state for all patients. If clinical status changes in a way that will impact upon the triage category, or if additional information becomes available that will influence urgency (see below), then re-triage must occur. When a patient is re-triaged, the initial triage code and any subsequent triage code must be documented. The reason for re-triaging must also be documented.^{2,6}

Urgency: Urgency is determined according to the patient's clinical condition and is used to 'determine the speed of intervention that is necessary to achieve an optimal outcome'.⁴ Urgency is independent of the severity or complexity of an illness or injury.⁵ For example, patients may be triaged to a lower urgency rating because it is safe for them to wait for an emergency assessment, even though they may still eventually require a hospital admission for their condition or have significant morbidity and attendant mortality.²

* The instructor will be the nominated person within the organisation who is responsible for clinical development of nurses providing emergency care.



A brief history of triage

The term 'triage' is derived from the French word *trier*, meaning to pick or to sort.⁷ Triage systems were first used to prioritise medical care during the Napoleonic wars of the late 18th century.⁸ Subsequent wars have led to the refinement of systems for the rapid removal of the injured from the battlefield to places providing definitive care. Mass Casualty Incident (MCI) triaging has also been developed and continues to evolve. The underlying principle of MCI triage is to achieve the greatest good for the greatest number of casualties in a setting where clinical demand overwhelms the available resources.

In civilian medicine, triage systems have been refined and adapted for use within a range of settings. In all health care environments, the triage process is underpinned by the premise that a reduction in the time taken to access definitive medical care will improve patient outcomes.

Emergency department triage

Australia is experiencing increased public demand for emergency medical care. Current trends indicate a growth in the number of ED presentations in many locations; the reasons for this growth are varied and complex.⁹

Standardised triage scales are useful in developing strategies to manage ED demand. In this context they can also be used to inform clinical service development, clinical risk management and patient safety.¹⁰

Purpose of a triage system

The purpose of a triage system is to ensure that the level and quality of care that is delivered to the community is commensurate with objective clinical criteria, rather than administrative or organisational need. In this way, standardised triage systems aim to optimise the safety and the efficiency of hospital-based emergency services and to ensure equity of access to health services across the population.

The use of a standard triage system facilitates quality improvement in EDs, because it allows for comparisons of key performance indicators (i.e. time-to-treatment by triage category) both within and between EDs. Since the early 1990s the use of computerised information systems in Australian EDs has permitted the precise calculation of time-to-treatment against a variety of patient outcomes, including triage code, chief complaint, diagnosis and discharge destination.



Function of triage

Triage is an essential function underpinning the delivery of care in all EDs, where any number of people with a range of conditions may present at the same time. Although triage systems may function in slightly different ways according to a number of local factors, effective triage systems share the following important features:⁵

- A single entry point for all incoming patients (ambulant and non-ambulant), so that all patients are subjected to the same assessment process.
- A physical environment that is suitable for undertaking a brief assessment. It needs to include easy access to patients which balances clinical, security and administrative requirements, and the availability of first aid equipment and hand-washing facilities.
- An organised patient processing system that enables easy flow of patient information from point of triage through to ED assessment, treatment and disposition.
- Timely data on ED activity levels, including systems for notifying the department of incoming patients from ambulance and other emergency services.

Emergency triage scales

Internationally, five-tier triage scales have been shown to be a valid and reliable method for categorising people who are seeking assessment and treatment in hospital EDs.¹¹⁻²² These scales show a greater degree of precision and reliability when compared with either three-tier²³ or four-tier triage systems.³

The features of a robust triage system can be evaluated according to the following four criteria:

- **Utility:** The scale must be relatively easy to understand and simple to apply by emergency nurses and physicians.
- **Validity:** The scale should measure what it is designed to measure; that is, it should measure clinical urgency as opposed to severity or complexity of illness or some other aspect of the presentation or of the emergency environment.
- **Reliability:** The application of the scale must be independent of the nurse or physician performing the role, that is, it should be consistent. 'Inter-rater reliability' is the term used for the statistical measure of agreement that is achieved by two or more raters using the same scale.²⁴
- **Safety:** Triage decisions must be commensurate with objective clinical criteria and must optimise time to medical intervention. In addition, triage scales must be sensitive enough to capture novel presentations of high acuity.³

The Australasian Triage Scale (ATS), formerly the National Triage Scale (NTS)

The National Triage Scale (NTS) was implemented in 1993, becoming the first triage system to be used in all publicly funded EDs throughout Australia. In the late 1990s, the NTS underwent refinement and was subsequently renamed the Australasian Triage Scale (ATS).



The ATS has five levels of acuity²:

- Immediately life-threatening (category 1)
- Imminently life-threatening (category 2)
- Potentially life-threatening or important time-critical treatment or severe pain (category 3)
- Potentially life-serious or situational urgency or significant complexity (category 4)
- Less urgent (category 5).

The ATS has been endorsed by the Australasian College for Emergency Medicine¹ and adopted in performance indicators by the Australian Council on Healthcare Standards.²⁵

Canadian Triage and Acuity Scale (CTAS)

The Canadian Triage and Acuity Scale (CTAS) was officially included in policy throughout Canada in 1997.

The CTAS has been endorsed by the Canadian Association of Emergency Physicians and the National Emergency Nurses Affiliation of Canada.

This scale is very similar to the ATS in terms of time-to-treatment objectives, with the exception of category 2, which is <15 minutes rather <10 minutes as in the ATS.

Manchester Triage Scale (MTS)

The Manchester Triage Scale (MTS) was jointly developed by the Royal College of Nursing Accident and Emergency Association and the British Association for Accident and Emergency Medicine.

The MTS differs from both the ATS and the CTAS in that it is an algorithm-based approach to decision-making.³ The MTS involves the use of 52 separate flow charts that require the decision-maker to select the appropriate algorithm on the basis of the presenting complaint, and then gather and analyse information according to life threat, pain, haemorrhage, consciousness level, temperature, and the duration of signs and symptoms.

The MTS requires standard documentation, and this streamlined approach is believed to save time as the documentation is simplified. In addition, the approach is thought to be particularly beneficial for novice nurses because the decision-making process occurs within very well-defined parameters.

Emergency Severity Index (ESI)

The Emergency Severity Index (ESI) is a system of triage categorisation that is based on both treatment acuity (*How soon should a patient be seen?*) and resource consumption (*What resources is the patient likely to require?*). The ESI has been refined on a number of occasions.^{21,22,26} It has been found to be reliable when tested using written case scenarios²¹, and is currently being considered for use across the United States of America.²⁴



The triage role

Triage decision-making is an inherently complex and dynamic process. Decisions are made within a time-sensitive environment, with limited information, for patients who generally do not have a medical diagnosis. Due to the multifaceted nature of the triage role, nurses are required to possess specialised knowledge as well as experience with a wide range of illness and injuries. Triage decisions can be divided into primary and secondary categories according to the aims of the triage system. Understanding these decision types is helpful in describing the roles and responsibilities of the Triage Nurse in actual practice.

‘Primary triage decisions’ relate to the establishment of a chief complaint and the allocation of urgency. When a triage code is selected there are three possible outcomes:

- ‘**Under-triage**’ in which the patient receives a triage code that is lower than their true level of urgency (as determined by objective clinical and physiological indicators). This decision has the potential to result in a prolonged waiting time to medical intervention for the patient and risks an adverse outcome^{24,27}
- ‘**Correct (or expected) triage decision**’ in which the patient receives a triage code that is commensurate with their true level of urgency (as determined by objective clinical and physiological indicators). This decision optimises time to medical intervention for the patient and limits the risk of an adverse outcome^{24,27}
- ‘**Over-triage**’ in which the patient receives a triage code that is higher than their true level of urgency. This decision has the potential to result in a shortened waiting time to medical intervention for the patient, however, it risks an adverse outcome for other patients waiting to be seen in the ED because they have to wait longer.^{24,27}

The Triage Nurse makes urgency decisions using clinical and historical information to avoid systematic under- or over-triage. ‘Secondary triage decisions’ are concerned with expediting emergency care and disposition.^{28,29} The Triage Nurse employs locally based policies and procedure to expedite care for all patients where appropriate.

All patients in the waiting room must be reassessed by the Triage Nurse once the triage time has expired. This second assessment should always be documented in the patient’s notes.⁶

The role of education in optimising triage outcomes

The ability of any triage system to achieve its aims is based on the assumption that decision-making is consistent over time and among the clinicians who use the scale.

The successful implementation of this program forms part of a longstanding national commitment among peak emergency nursing, medicine and government bodies to achieve consistency of triage using the ATS by providing a coherent approach to preparing clinicians for practice.

Teaching resources

Further reading

Essential reading for this lesson is as follows:

- Australasian College for Emergency Medicine. Policy on the Australasian Triage Scale. ACEM [Online] 2006 [cited 2007 Feb 2]. Available from:
URL: http://www.acem.org.au/media/policies_and_guidelines/P06_Aust_Triage_Scale_-_Nov_2000.pdf¹

This is the foundation document for describing the application and use of the ATS. It provides detailed information on the time-to-treatment categories from a system perspective. It also shows performance indicator thresholds for each of the five categories of the ATS and discusses its role in enhancing quality of care in EDs nationwide.

- Australasian College for Emergency Medicine. Guidelines for implementation of the Australasian Triage Scale in Emergency Departments. ACEM [Online] 2005 [cited 2007 Feb 2]. Available from:
URL: http://www.acem.org.au/media/policies_and_guidelines/G24_Implementation__ATS.pdf²

These guidelines will be discussed in more detail in Chapter 2. They provide an overview of the principles of triage in terms of its function and assessment processes, and identify safety issues relevant to the role. The terms 'time-to-treatment' and 're-triage' are defined. Specific conventions for triaging paediatrics trauma and behaviourally disturbed patients are also discussed.

A decision-making framework for the application of the ATS is provided. There are five tables, one for each ATS category. Within each table are the ATS codes, time-to-treatment objectives and descriptors, and clinical criteria.

- Richardson D. Triage. In: Cameron P, Jelinek G, Kelly AM, et al. Textbook of Adult Emergency Medicine. Sydney: Churchill Livingstone; 2004. p. 702–5.

This chapter is a useful introduction to the ATS. It includes some background information about the evolution of the ATS and an overview of triage principles from an ED perspective.

- Zimmermann PG. The case for a universal, valid, reliable 5-tier triage acuity scale for US emergency departments. *Journal of Emergency Nursing*, 2001;27(3):246–54.

This journal article, published in the United States of America, reviews research into the application of triage scales in a number of countries including Australia and Canada. It has been included here because it provides an international perspective on triage systems.



Teaching strategies

Multiple-choice questions.

Select one answer only.

1. The primary aim of an ED triage system is to:
 - (a) define the ED casemix
 - (b) ensure that ED care is delivered according to time of arrival
 - (c) ensure that ED care is delivered according to clinical need
 - (d) prevent ED overcrowding.
2. In an ED triage system, 'urgency' refers to:
 - (a) the complexity of the patient's condition at a particular point in time
 - (b) the clinical features of the patient's condition
 - (c) severity
 - (d) complexity.
3. When talking about the 'reliability' of a triage scale, we are referring to:
 - (a) its utility (i.e. how easy the scale is to use)
 - (b) how consistently the scale is applied to the same cases by different users
 - (c) how sensitive the scale is to capturing novel presentations of high acuity and its ability to measure what it sets out to measure
 - (d) correlation with diagnosis.
4. In terms of precision, five-tier triage scales are:
 - (a) equal to three-tier scales
 - (b) more reliable than three- or four-tier scales
 - (c) equal to four-tier scales
 - (d) both (a) and (c) above.

Discussion points

After completing the prescribed reading, consider the following questions. Discuss your answers with peers and/or your educator/supervisor.

1. What are 'under-triage' and 'over-triage'?
2. What factors do you think are likely to contribute to each?
3. How might these factors be minimised in actual practice?





CHAPTER 2: THE AUSTRALASIAN TRIAGE SCALE

Statement of purpose

This chapter focuses on the research evidence that has supported the implementation of the ATS.

The purposes of this chapter are to:

- Provide an overview of the ATS and its expected outcomes;
- Discuss factors that influence the validity and the reliability of the ATS; and
- Identify how the ATS is used as a quality indicator in Australian EDs.

Learning outcomes

After completing this chapter, participants will have developed knowledge of the outcomes of the ATS.

Learning objectives

- Describe the five categories of the ATS in terms of time-to-treatment and clinical descriptors.
- Consider how triage decisions are used to assess ED performance.
- Discuss the major environmental factors that threaten consistency of triage.

Key points

- The ATS aims to provide a timely assessment of all people who present to the ED on the basis of clinical criteria.
- The time-to-treatment criteria attached to the ATS categories describe the maximum time a patient can safely wait for medical assessment and treatment.
- The decision to allocate a triage code using the ATS should take no more than five minutes.
- Each ED presentation must be assessed as a unique episode of illness/injury that is independent of chronicity and frequency of presentation.



Content

Philosophy

The philosophy underpinning the use of the ATS is based on the values of justice and efficiency in health service delivery.^{4, 17} The ATS has been designed to provide a timely assessment and medical intervention for all people who present to an ED. Implicit within this framework is the principle that it is neither clinically or ethically appropriate to expect any group of people to routinely wait longer than two hours for medical care in an ED.¹

Development

FitzGerald (1989) first tested the validity and reliability of the Ipswich Triage Scale (ITS), which was an adaptation of the Box Hill Hospital System. He examined correlations between triage codes and outcome measures, including in-hospital mortality and admission rates. Informed by this original work, the development and implementation of the National Triage Scale (NTS) throughout Australia occurred in 1993.

The subsequent implementation of the ATS was supported by a process of consultation by the Commonwealth Department of Health and Family Services with clinicians and key professional bodies throughout Australasia. Research by Whitby, Leraci et al. (1997)³¹ was used in the ATS to describe the clinical features associated with urgency and to develop more comprehensive descriptions of each of the five triage categories.

Within the ATS framework, urgency is a function of both the patient's clinical risk and the severity of their symptoms. The strength of the ATS lies in its use of physiological descriptors to tier common complaints into the appropriate triage category. This approach can enhance decision-making by reducing the time taken to determine a triage code.³

A comprehensive explanation of the ATS, and the descriptors for each of the ATS categories, are provided in Appendix B.

Application

The application of the ATS is underpinned by the formulation of a chief complaint, which is identified from a brief history of the presenting illness or injury. Triage decisions using the scale are made on the basis of observation of general appearance, focused clinical history and physiological data. Clinicians who undertake the role must have experience in the assessment of a wide range of illness and injury. They must also meet organisational requirements to undertake the role. An assessment of their suitability for the role should also be judged on the individual's ability to consistently and independently make sound clinical decisions in a time-pressured environment.³²



Outcomes

Time-to-treatment

The time-to-treatment criteria attached to the ATS categories describe the ideal maximum time a patient can safely wait for medical assessment and treatment. The extent to which these criteria can be met is routinely evaluated against nationally recommended performance standards for each of the five ATS categories. These performance indicator thresholds are outlined in the Australasian College for Emergency Medicine’s policy document for the ATS¹ and are detailed in Table 2.1.

Table 2.1: ATS categories for treatment acuity and performance thresholds¹

ATS category	Treatment acuity (maximum waiting time)	Performance indicator (%)
1	Immediate	100
2	10 minutes	80
3	30 minutes	75
4	60 minutes	70
5	120 minutes	70

The performance indicators describe the minimum percentage of presentations per ATS category that are expected to achieve the ideal time-to-treatment criteria. In situations where achievement of a performance indicator is at risk, organisational strategies should be implemented to satisfy demand and meet clinical needs.¹

Consistency of triage

The degree to which clinicians agree on the allocation of a triage code across populations is a marker of the reliability of the ATS.

For more than a decade, research has been conducted to assess the consistency of triage achieved using the ATS.^{17,19,20,33} While these studies have been helpful in understanding the ways in which groups of nurses use the ATS, they have also repeatedly highlighted the difficulties associated with measuring triage consistency in clinical practice.

For this reason, evaluation of consistency of triage is carried out at a macro, rather than a micro level*. For example, the distribution of presentations across the five categories of the ATS, commonly referred to as ‘footprints’, is helpful in assessing consistency. These can be compared between EDs with similar demographic profiles to detect systemic under- or over-triage.

*See <http://www.aihw.gov.au/hospitals>



Factors that influence triage decision-making using the ATS

A number of non-clinical factors are known to threaten the reliability and utility of five-tier triage scales. These factors relate to patient and environmental influences.^{19,34}

Environmental factors such as staffing, skill-mix and ED activity level must not influence urgency allocation.

The potential for a person to leave the ED without medical treatment is not considered a valid reason for upgrading a triage code. Additionally, caution must be exercised when a person has had multiple presentations to the ED with the same or similar complaints. In such situations it is essential that each presentation be assessed and triaged as a new episode. Frequency of presentations to the ED must not influence the allocation of a triage code.

Teaching resources

Further reading

- Australasian College for Emergency Medicine. Guidelines for implementation of the Australasian Triage Scale in Emergency Departments. ACEM [Online] 2005 [cited 2007 Feb 2]. Available from:
URL: http://www.acem.org.au/media/policies_and_guidelines/G24_Implementation__ATS.pdf

These guidelines provide an overview of the principles of triage in terms of its function and assessment processes, and identify safety issues relevant to the role. The terms 'time-to-treatment' and 're-triage' are defined. Specific conventions for triaging paediatrics trauma and behaviourally disturbed patients are also discussed. A decision-making framework for the application of the ATS is provided. There are five tables, one for each ATS category. Within each table are the ATS codes, time-to-treatment objectives and descriptors and clinical criteria.

- Fernandes C, Tanabe P, et al. Five-Level Triage. A report from the ACEP/ENA Five-level triage task force. *Journal of Emergency Nursing* 2005;31(1):39–50.²⁴

This journal article, published in United States of America, discusses the literature that informed the development of triage policy in that country.

Teaching strategies

Multiple-choice questions

Select one answer only.

1. The term 'time-to-treatment' in the ATS refers to:
 - (a) the average time that a patient in that category should wait for assessment and treatment
 - (b) the maximum ideal time that a patient in that category should wait for assessment and treatment
 - (c) the minimum time that a patient in that category should wait for assessment and treatment
 - (d) the performance-indicator threshold for that category.
2. The performance-indicator threshold for the ATS categories are:
 - (a) the minimum percentage of presentations per ATS category that are expected to achieve the time-to-treatment objective
 - (b) the maximum percentage of presentations per ATS category that are expected to achieve the time-to-treatment objective
 - (c) the degree to which clinicians agree on the allocation of a triage code across a population
 - (d) the minimum time that an individual patient in that category should wait for assessment and treatment.



3. Commonly referred to as 'footprints', the distribution of presentations across the five categories of the ATS can be used to:
 - (a) determine the accuracy of individual triage decisions
 - (b) determine whether nurses are systematically under- or over-triaging certain groups of patients
 - (c) benchmark triage categories with EDs with similar demographic profiles
 - (d) both (b) and (c) above.

4. Environmental factors such as staffing, skill-mix, and ED activity level:
 - (a) are considered valid reasons for upgrading a triage code
 - (b) must not influence urgency allocation
 - (c) can lead to under- or over-triaging
 - (d) both (b) and (c) above.

Discussion points

After completing the prescribed reading, consider the following questions. Discuss your answers with your peers and/or your educator/supervisor.

1. How could you assess the consistency of triage within your own ED?

2. What strategies, if any, might be employed to improve triage consistency within your own ED?

CHAPTER 3: COMMUNICATION ISSUES

Statement of purpose

The purpose of this chapter is to emphasise the importance of communication in enhancing the effectiveness and accuracy of the triage process.

Learning outcomes

After completing this chapter, participants will be able to identify barriers to effective communication at triage. Awareness of these barriers will inform the development of strategies to optimise communication within their own triage environments.

Participants are encouraged to reflect upon their own communication style and to develop strategies to manage communication situations that they find challenging.

Learning objectives

- Appreciate the importance of communication at triage.
- Identify and discuss factors that may influence the communication process at triage.
- Discuss how quality of communication impacts upon assessment of urgency using the ATS.
- Discuss strategies to enhance the communication process within own triage environment.
- Analyse and reflect on specific strategies to manage challenging communication encounters at triage.

Key points

- Patient actions and reactions at triage will be influenced by the nurse's ability to manage the communication process.
- Communication is a two-way process that involves both verbal and non-verbal components equally.
- The better the communication, the more data gained and the more informed and accurate the triage assessment.
- Never underestimate the effect of environment and influencing factors on communication.
- Remain calm. Listen, interpret, explain with care, and check for understanding.
- Be aware of your own reactions, triggers and need for support.



Content

Emergency departments are often areas of high activity, excitement and emotion, and this commences at triage.¹³¹ Imagine a busy department: patients lining up at the desk; ambulances bringing in more patients on trolleys; relatives, crying children and other staff seeking advice and information. The Triage Nurse is often the common link in all this activity, and must be able to communicate effectively with relatives, ambulance officers, medical and other nursing staff, and clerical staff and visitors, as well as establish a functional communication process to allow effective patient assessment.

As the Triage Clinician, you must make a needs-based assessment based on the information you obtain during the triage encounter. Effective communication is **essential** to obtaining accurate information, and therefore making an accurate assessment, at this time. When problems occur within the communication process, the ability of the Triage Nurse to gather the required information may be compromised. It is **vital** for the Triage Nurse to be aware of the potential barriers to effective communication in the triage environment¹³¹ and to minimise their impact upon the triage encounter.

So, what do we do if verbal communication is impossible, as in the case of a patient who is unconscious? In such instances, having a sound skill base in physical assessment is paramount, as the collection of data by which to identify physiological predictors and thus determine urgency becomes our primary triage method. Remember, too, that in some instances communication through a third person, such as a relative, caregiver or interpreter, may contribute to the assessment process. In such cases communication may also be challenging, as the message sent from the third person is their own interpretation of events, which provides another potential barrier.

Communication is a process of sending and receiving messages between individuals within a dynamic context. Each individual carries responsibilities as both sender and receiver of messages. The entire communication encounter is influenced by a range of factors and stimuli.¹³²

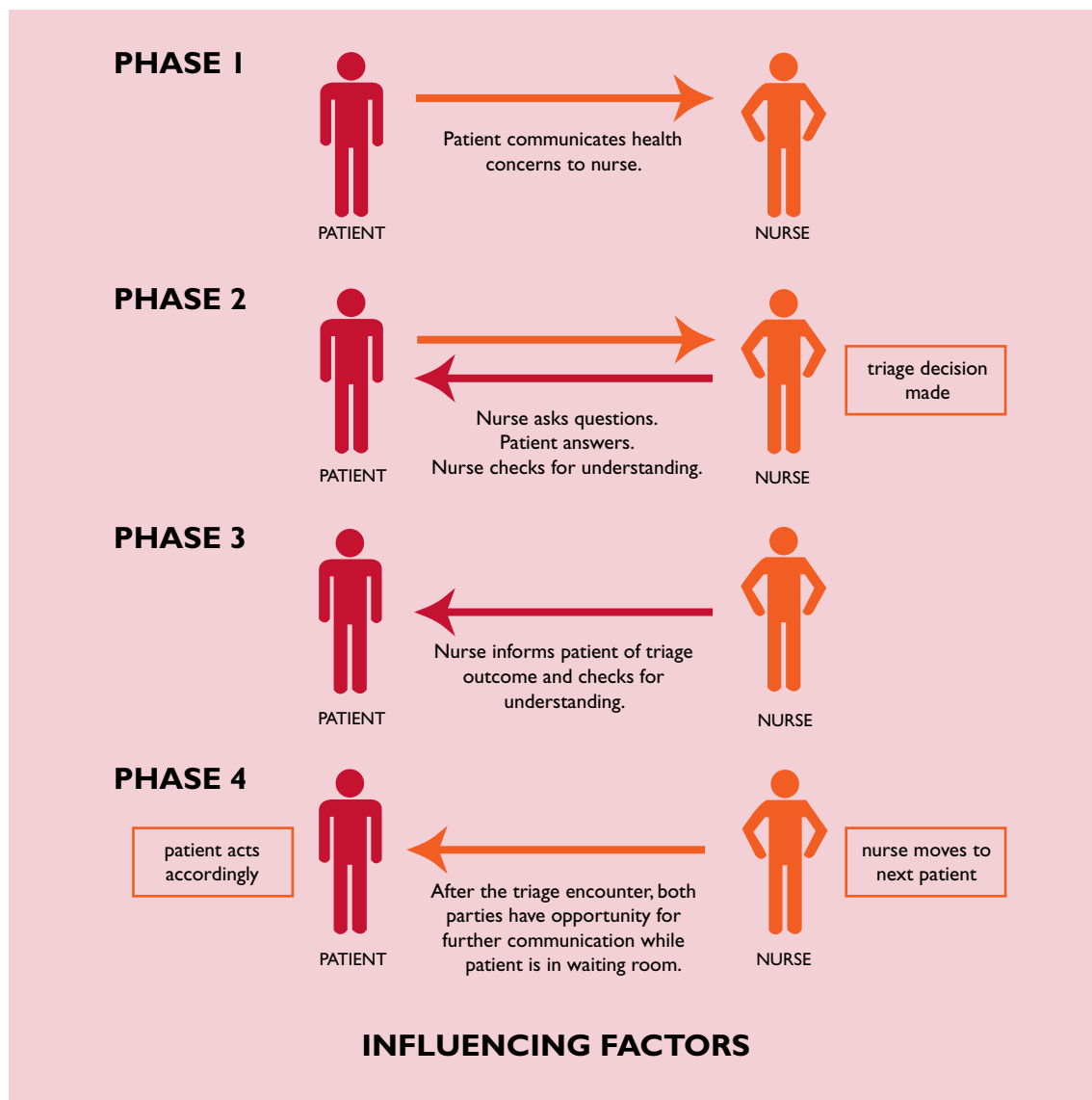
There are important issues related to the patient, the nurse and the environment that may impact upon the complexity of the communication process. Communication literature commonly refers to such influencing factors as 'noise': external or physical noise, internal or psychological noise, and semantic or interpretational noise.¹³³⁻⁵ One of the most important considerations here is that the patient may experience difficulty fulfilling their responsibilities as a sender and receiver of communication, due to the 'noise' that is inherent within triage. This means that the Triage Nurse will often carry the responsibility of recognising and managing the influencing factors for both themselves and the patient.



Factors that impact upon the communication process at triage

The complex process of communication always occurs within a range of influencing factors, as illustrated in Diagram 3.1. The more the Triage Nurse understands these factors that influence the effectiveness of communication, the better the communication and the quality of data gathered.

Diagram 3.1: Simplified image of communication at triage





Factors to be aware of include:

- **Physical environment:** The presence of barriers such as bullet-proof glass, desks, lack of privacy, distracting noise and movement of people throughout the area all impact on the triage communication process. It is often the effort displayed by the Triage Nurse that will overcome these barriers, and reassure the patient that their communication with the nurse is private, thorough and confidential.
- **Time constraints:** The triage assessment generally should take no more than two to five minutes with a balanced aim of speed and thoroughness being the essence.²
- **Language use:** The use of jargon, be it medical jargon or 'street talk', can result in misinterpretation as profound as that which would occur between two people actually speaking different languages.
For example, 'voiding' is a term commonly used in medicine, but may mean something completely different to a layperson, whereas 'doing a wee' would be understood by most people.
- **Non-verbal behaviours:** Body language, facial expressions and tone of voice in both the patient and the nurse during the encounter are equally significant aspects of communication.
- **Cultural diversity:** These include differences in age, gender, ethnicity, language, religion, socioeconomic status and life experience. For example, an elderly man may be reluctant to discuss some issues with 'a lass who looks younger than his granddaughter', so effort must be put into building a professional rapport.
- **Nature of the health concern:** Health concerns that are highly sensitive, embarrassing or anxiety-producing will influence the way in which the information is communicated by both the patient and the Triage Nurse. The avoidance of key terms and the use of euphemisms may lead to distortion of the messages sent and received.
- **Expectations and assumptions:** Individuals present to triage with expectations of what will happen. These expectations are influenced by their perception of the urgency of the health concern and by their past health care experiences, and may at times be unrealistic. The Triage Nurse's familiarity with the triage environment and with patients, together with the attitudes and behaviours of other emergency staff, can all have both positive and negative influences. Although such influences can aid in early symptom recognition, they can also potentially lead to inappropriate assumptions and bias.
- **Emotions:** Individuals – including both patients and nurses – react to stress and anxiety in different ways and with varying intensity. These reactions can impact upon the person's ability to provide coherent information and their ability to answer questions clearly. The Triage Nurse's ability to remain calm and achieve effective communication within this environment is paramount.



Challenging communication encounters

Often, people presenting with challenging communication behaviour are unwittingly expressing an unmet basic human need.¹³⁵ Understanding what underpins challenging communication behaviours, together with being aware of the behaviours that trigger an emotional response within them¹³¹, can assist the Triage Nurse to respond to the issue behind the behaviour rather than to the behaviour itself.

Developing a basic strategy to interpret communication behaviour quickly may assist in minimising the effects of challenging communication behaviours upon the triage assessment. Table 3.1 outlines the four basic human needs, common signals that may indicate that a need is not being met, and some basic strategies to overcome this, as suggested by Martin (2001).¹³⁵

Table 3.1: Identifying and dealing with the four basic human needs¹³⁵

Basic human need	Common signals that this need is not being met	Suggested strategies to fulfil this need
To be understood	Repeating the same message; speaking slowly and/or loudly; getting angry; bringing a support person to speak for them.	Separate emotions from content. Ask questions, shifting the focus from the emotion to exploring the health concern. Acknowledge their feelings; empathise with their concerns. Reflect back your understanding. Inform them of what will happen and why. Do not take expressions of anger personally. Check your own reactions.
To feel welcome	Looking around before entering; looking lost or unsure.	Provide a warm and friendly welcome. Use appropriate language. At the end of the triage encounter, keep communication lines open.
To feel important – one’s self-concept	Drawing attention to themselves; getting angry; appearing helpless; loss of control.	Call the person by their name; acknowledge their concerns; tune into their individual needs. Allow anger to diffuse – listen; say nothing; allow the person to release their emotions. Try not to react to the emotion.
Need for comfort – psychological and physical	Appearing ill at ease, nervous or unsure; requesting assistance/help.	Explain the procedures carefully and calmly; reassure.

Teaching resources

Further reading

- Conflict Resolution Network [Online] [cited 2007 Feb 2]. Available from:
URL: <http://www.conflictresolutionnetwork.org>

This Australian-based website provides free access to a range of training resources related to communication and conflict management and is a useful resource for educators.

- Cultural Diversity in Health [Online] [cited 2007 Feb 2]. Available from:
URL: <http://www.diversityinhealth.com/welcome/index.htm>

This website was developed by the Postgraduate Medical Council of NSW (now part of the NSW Institute of Medical Education and Training), and includes a lot of specific information regarding various migrant groups.

- DeVito JA. Human Communication: the basic course. 8th edn. New York: Longman, 2000.

This title addresses generic communication principles.

- Higgs J, Sefton A, Street A, McAllister A, Hay I. Communicating in the health and social sciences. South Melbourne: Oxford University Press, 2005.

This is an Australian text that revises the basics of communication within the health context. Recommend chapters are 1, 23, 24, 25 and 26.

- NSW Refugee Health Service [Online] [cited 2007 Feb 2]. Available from:
URL: http://www.swsahs.nsw.gov.au/areaser/refugeehs/resources_guides.asp

This website is a rich source of reference material and learning resources for people caring for refugees.

- Queensland Government Multicultural Health. A guide to identifying and responding to cross-cultural issues in health care delivery [Online] [cited 2007 Feb 2]. Available from:
URL: <http://www.health.qld.gov.au/multicultural/guidelines/communicating.asp>

This website has very clear and relevant guidelines for communication with people from culturally and linguistically diverse (CALD) backgrounds, and is very



straightforward and easy to read.

- Stein-Parbury J. Patient & person: Interpersonal skills in nursing. 3rd edn. Sydney: Elsevier, 2005.

This Australian text, which aims to develop nurses' interpersonal skills, includes a large range of learning activities, including role-play and reflective practice activities, which can be contextualised to the triage environment. A useful resource for both learners and educators, the recommended chapters are 3, 4, 5, 6 and 7.

- Verderber R, Verderber K. Communicate! 13th edn. Belmont, CA: Wadsworth, 2005.

This book addresses generic communication principles. Student workbooks and interactive CDs are also available for guided study.

Teaching strategies

The activities included in this chapter are designed for a range of learning situations. Eleven learning activities are provided, and a selection may be chosen to support either individual or facilitated group learning. It is recommended that at least five of these activities be undertaken to reinforce and build upon the chapter content.

Learning activity 1

Consider Diagram 3.2 'Communication problems at triage'. What factors might cause these difficulties at each phase? Discuss the impact(s) that the identified communication problems at each phase may have on the assessment of urgency and on the use of the ATS.

Learning activity 2

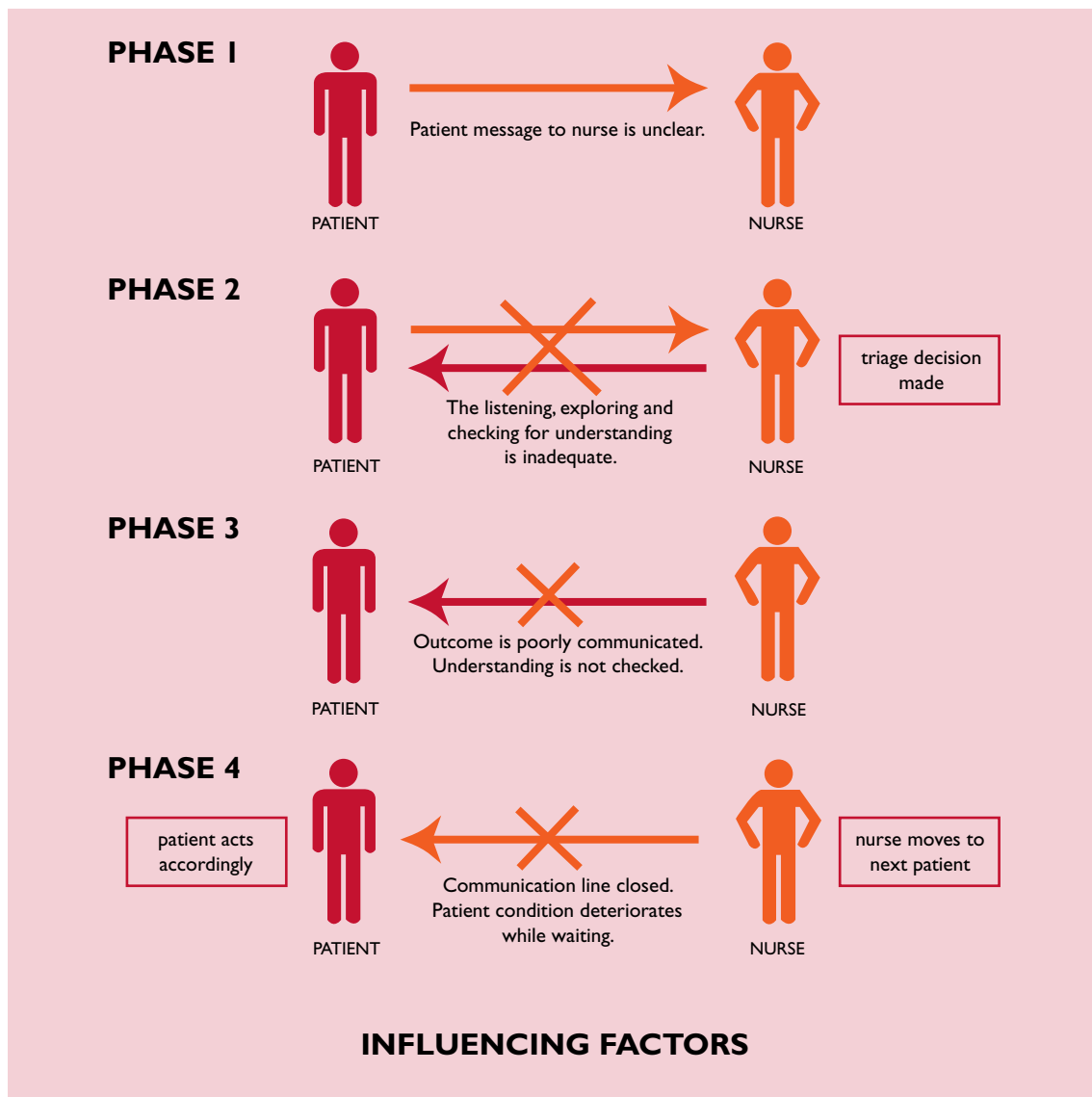
In Diagrams 3.1 (see page 18) and 3.2 there is a comment in Phase 4 that states 'Patient acts accordingly'. Compare and contrast the communication process in the two diagrams. Discuss the differing patient behaviour that you predict may be evidenced with each process.

Learning activity 3

Review the chapter content and create a list of influencing factors that are potential barriers to communication within your workplace. Identify realistic measures that can be taken to overcome these barriers.

Learning activity 4

An elderly woman well known to the department is brought into triage via ambulance. The ambulance officer states 'We've brought in Mavis again. She's complaining of the usual'. What factors do you need to be aware of to ensure that your assessment of Mavis is complete?

Diagram 3.2: Communication problems at triage

Learning activity 5

Two men present with central chest pain. One is obviously terrified and is pleading for help, while the other is loudly and angrily demanding immediate attention. Discuss the different strategies you would use to extract indicators of urgency from each man. Identify and discuss your reactions to the different behaviours and how these reactions may influence your ability to assess urgency.

Learning activity 6

Recall a communication situation at triage that you found challenging. Describe the event. What emotions were being expressed? What aspects did you find most challenging and why? What was your reaction? How did the patient's emotions and your reaction impact on the assessment process?



Now, using the same communication situation, refer to Table 3.1 within this chapter. Which of these four needs were potentially being expressed by the patient? On reflection, what strategies could have been implemented to address these potential needs?

Learning activity 7

As a group, discuss what communication strategies might be effective when dealing with each of the following patients at triage:

- an intoxicated person;
- a verbally abusive person;
- a confused elderly person;
- a prisoner in police custody;
- a two-year-old child;
- an intellectually disabled person;
- a person who does not speak English;
- a young woman who has been sexually abused; and
- a hysterical mother on the telephone.

Note: The involvement of an experienced Triage Nurse in this exercise will allow provision of constructive feedback and sharing of effective communication styles.

Learning activity 8

This activity is a role play requiring two people to play the central roles and others to create distractions.

Person 1 tells a story about a patient encounter at triage, for a maximum time of two minutes. During this story, other people create various distractions common to a triage environment.

Person 2 listens to the story only, and asks no questions. Person 2 can make notes during the story.

At the end of the story, all participants listen as Person 2 recalls as much of Person 1's story as possible. How accurate was this recall? Was there any added, deleted or distorted content? How did the distractions affect the interaction for both Person 1 and Person 2? Discuss this interaction in terms of the practice of gathering verbal data during an actual triage assessment.



Learning activity 9

This activity is a role play designed to encourage participants to think about the ways in which we use voice to express the meaning behind our words.

Working in pairs or small groups, ask one person to read the following statements using different intonations in their voice to portray different meanings, while the others listen.

- I am trying to help you.
- What is the problem today?
- I don't understand what you mean.
- You will need to wait.

What meanings did the listeners identify? Did these identified meanings match the intent of the speaker? Discuss this activity. Consider not just what is being said, but also how it is being said.

Learning activity 10

Read the following letter to the editor of a local newspaper and then discuss the questions below.

Letters to the Editor		
Thumbs down to local hospital		
I took my three-year-old child to the local emergency department last Saturday evening and was not impressed. My son had suffered a major head injury after falling from his bike, and I was told by the girl at the desk that I	would have to wait at least two hours to see the doctor. Thankfully, I was able to contact my local GP who arranged to see and treat my son immediately and we were back home within half an hour.	I am surprised that critically ill children are not considered a priority by the hospital. Signed, Disgusted.

- What does this letter tell you about the triage encounter?
- What do you think happened?

Identify some strategies a Triage Nurse could implement to avoid this type of scenario.



Learning activity 11

Read the following two scenarios and answer the questions that follow.

A 28-year-old Aboriginal man presents to triage in your hospital, looking grey, sweaty and complaining of 'being hit in the chest with a nulla-nulla'. There are no signs of injury, and he denies any recent violence.

A 35-year-old male English tourist presents to the triage desk, complaining of 'an elephant sitting on his chest'. He is ashen, sweaty and anxious.

- Consider the communication issues inherent in these two cases.
- Did you look for an elephant in the second case? Why or why not?
- How can we work to ensure that the message sent is, in fact, the message received?

Use some of the websites in the 'Further reading' list to inform your discussion.



Emergency

CHAPTER 4: TRIAGE BASICS

Statement of purpose

The purpose of this chapter is to provide a comprehensive outline of the physiological predictors underpinning the allocation of urgency using the Australasian Triage Scale (ATS).

Learning outcomes

After completing this chapter, participants will be able to describe the process of triage assessment and identify the clinically important factors influencing the allocation of a triage code using the ATS.

Learning objectives

1. Describe triage assessment techniques under the following headings:
 - (a) Environmental hazards
 - (b) General appearance
 - (c) Airway
 - (d) Breathing
 - (e) Circulation
 - (f) Disability
 - (g) Environment.
2. Differentiate predictors of poor outcome from other data collected during the triage assessment.
3. Identify patients who have evidence of or are at high risk of physiological instability.
4. Assign an appropriate ATS category in response to clinical assessment data.

Key points

- Identifying and manage risks to self, patients and the environment is the first principle of safe triage practice.
- First impressions of general appearance should always be considered when making a triage decision.
- Always ask the question 'Does this person look sick?'
- The primary survey approach is used to identify and correct life-threatening conditions at triage.
- Other conditions in which timely intervention may significantly influence outcomes (such as thrombolysis, an antidote or management of acid or alkali splash to eye) must also be detected at triage.
- Timely access to emergency care can improve patient outcomes.
- Early identification of physiological abnormality at triage can inform focused ongoing medical assessment and investigation.



Content

Background

The presence of a physiological abnormality, failure to recognise and treat it, and age greater than 65 years are known risk factors for poor outcomes. Timely responses to abnormal clinical findings have been shown to reduce morbidity and mortality in critically ill patients.

The ATS clinical descriptors are informed by research into predictors of outcome in critical illness/injury and clinically relevant assessment criteria. The correct application of this information is also critical to the timely recognition and treatment of patients who have deteriorated and thus warrant re-triage.

The primary survey approach is recommended to identify and correct life-threatening conditions at triage. Table 4.1 provides a summary of adult physiological discriminators for the ATS, using the primary survey format.

Table 4.1: Summary of adult physiological predictors for the ATS

	Category 1 Immediate	Category 2 10 minutes	Category 3 30 minutes	Category 4 60 minutes	Category 5 120 minutes
Airway	Obstructed/ partially obstructed	Patent	Patent	Patent	Patent
Breathing	Severe respiratory distress/absent respiration/ hypoventilation	Moderate respiratory distress	Mild respiratory distress	No respiratory distress	No respiratory distress
Circulation	Severe haemodynamic compromise/ absent circulation Uncontrolled haemorrhage	Moderate haemodynamic compromise	Mild haemodynamic compromise	No haemodynamic compromise	No haemodynamic compromise
Disability	GCS <9	GCS 9–12	GCS >12	Normal GCS	Normal GCS

Risk factors for serious illness/injury – age, high risk history, high risk mechanism of injury, cardiac risk factors, effects of drugs or alcohol, rash and alterations in body temperature – should be considered in the light of history of events and physiological data. Multiple risk factors = increased risk of serious injury/illness. Presence of one or more risk factors may result in allocation to a triage category of higher acuity.

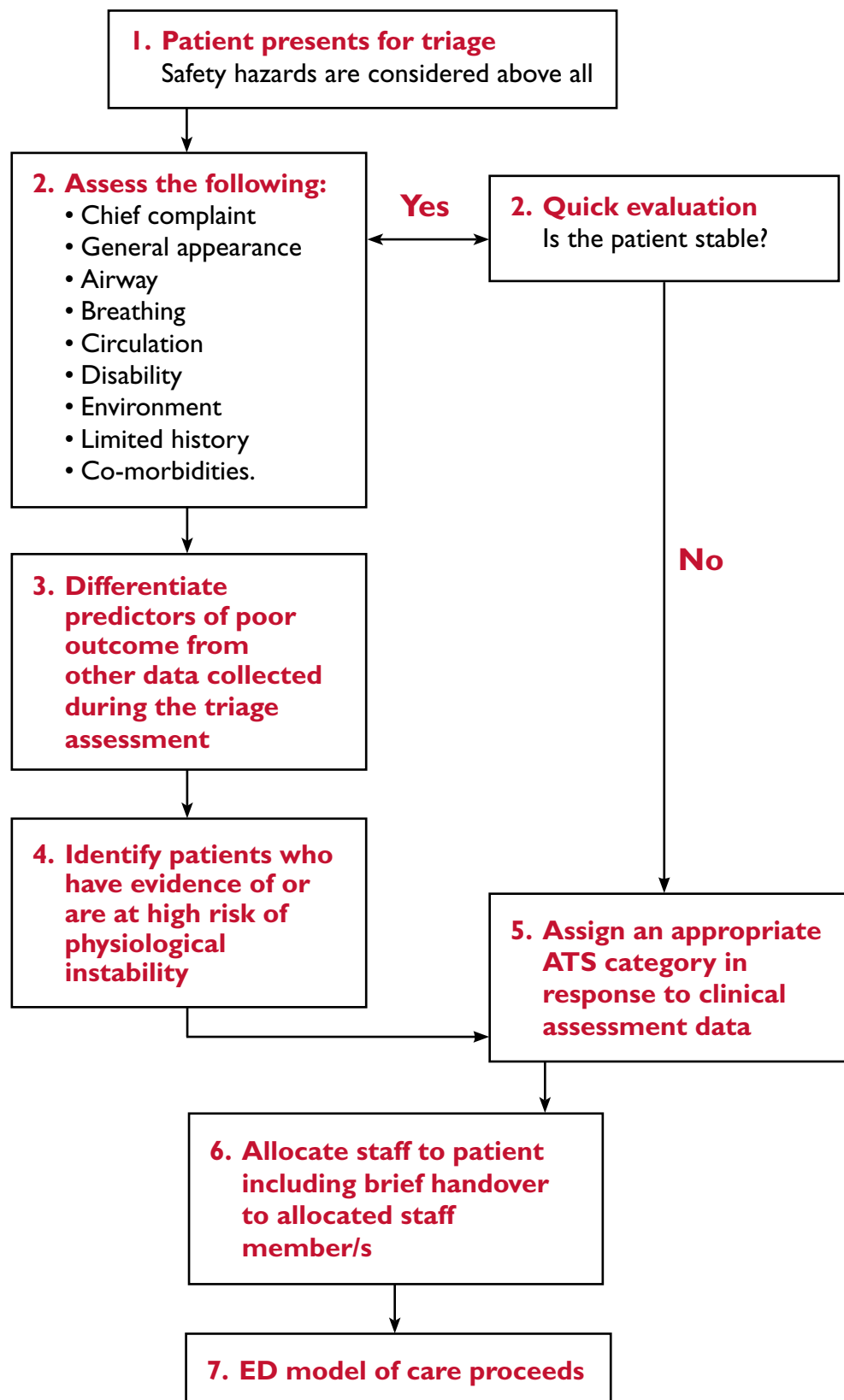
The collection of physiological parameters at triage requires the clinician to make the best use of their senses to detect abnormalities (i.e. look, listen, feel and smell).

Triage Nurses must ensure that patients with physiological abnormalities are not delayed by the triage process and are allocated to a clinical area that is equipped to provide ongoing assessment and treatment of their condition.

Diagram 4.1 illustrates the recommended triage method.



Diagram 4.1: Recommended triage method





Assessment techniques for safe triage

Assessment of environmental hazards

This is the first step to safe practice at triage. The Triage Nurse must be aware of internal security response protocols. In addition, the Triage Nurse should observe standard precautions whenever there is potential for exposure to blood or other body fluids. The Triage Nurse should be aware of the risks associated with leaving the triage area to retrieve patients from vehicles or reception areas of the hospital. Local policy will determine practice in this regard, but a general principle is that the triage desk should never be left unattended and that staff members should never place themselves in a situation in which additional help cannot be mobilised.

As part of maintaining a safe environment, the Triage Nurse must ensure that equipment for basic life support (bag-valve mask and oxygen supply) is available at triage. Likewise, equipment which complies with standard precautions is required. At the beginning of each shift, the Triage Nurse should conduct a basic safety and environment check of the work area to optimise environmental and patient safety.

General appearance

This is an essential component of the triage assessment. Observation of the patient's appearance and behaviour when they arrive tells us much about the patient's physiological and psychological status. Take particular notice of the following:

- Observe the patient's mobility as they approach the reception area. Is it normal or restricted? If it is restricted, in what way?
- Ask yourself the question 'Does this patient look sick?'
- Observe how the patient is behaving.

The primary survey underpins safe practice in the ED. When an assessment of the environment and general appearance is complete (this should take seconds), the primary survey should begin.

Airway

Always check the airway for patency, and consider cervical spine precautions where indicated.

An occluded airway or an immediate risk to airway must be allocated ATS category I (this includes unresponsiveness with GCS of <9 and ongoing or prolonged seizure).

In adults, stridor occurs when in excess of 75 per cent of the airway lumen has been obstructed: these patients have failed their primary survey and require definitive airway management, so warrant allocation to a high triage category (ATS I).



Breathing

Assessment of breathing includes determination of respiratory rate and work of breathing. Patients with evidence of respiratory dysfunction during the triage assessment warrant allocation to a high triage category (see Table 4.1).

Patients allocated to lower triage categories (ATS 4 or 5) should have normal respiratory function.

It is important to detect hypoxaemia. This can be detected using pulse oximetry.

Circulation

Assessment of circulation includes determining heart rate, pulse and pulse characteristics, skin indicators, oral intake and output. It is important that hypotension be detected during the triage assessment to facilitate early and aggressive intervention. Although it may not be possible to measure blood pressure at triage, other indicators of haemodynamic status should be considered, including peripheral pulses, skin status, conscious state and alterations in heart rate.

Patients with evidence of haemodynamic compromise (hypotension, severe hypertension, tachycardia or bradycardia) during the triage assessment warrant allocation to a high triage category (see Diagram 4.1).

Patients allocated to lower triage categories (ATS 4 or 5) should have normal circulatory function.

Disability

This assessment includes determining AVPU (see Figure 4.1) GCS and/or activity level, assessing for loss of consciousness, and pain assessment. Altered level of consciousness is an important indicator of risk for serious illness or injury. Patients with conscious-state abnormalities should be allocated to a high triage category (Diagram 4.1).

Figure 4.1: AVPU scale¹⁴³

- A** = Alert
- V** = Responds to voice
- P** = Responds to pain
 - Purposefully
 - Non-purposefully
 - Withdrawal/flexor response
 - Extensor response
- U** = Unresponsive

Eye injuries warrant careful assessment and are based on the mechanism of injury and the potential for ongoing visual impairment. Table 4.2 shows considerations for triaging eye injury using the ATS descriptors.



Table 4.2: Summary of ophthalmic emergency predictors for the ATS

Category 1 Immediate	Category 2 10 minutes	Category 3 30 minutes	Category 4 60 minutes	Category 5 120 minutes
	<ul style="list-style-type: none"> • Penetrating eye injury • Chemical injury • Sudden loss of vision with or without injury • Sudden onset severe eye pain 	<ul style="list-style-type: none"> • Sudden abnormal vision with or without injury • Moderate eye pain, e.g. <ul style="list-style-type: none"> – blunt eye injury – flash burns – foreign body 	<ul style="list-style-type: none"> • Normal vision • Mild eye pain, e.g. <ul style="list-style-type: none"> – blunt eye injury – flash burns – foreign body 	<ul style="list-style-type: none"> • Normal vision • No eye pain

Environment

Assess temperature. Hypothermia and hyperthermia are important clinical indicators and need to be identified at triage.

Other considerations

Other risk factors should be considered during the triage assessment. In the patient who has normal physiological parameters at triage, these include the following:

- Extremes of age (very young or very old) entail physiological differences that increase the risk of serious illness and injury, as such patients have decreased physiological reserve and altered physiological responses, and may present with non-specific signs and symptoms.
- High-risk features including chronic illness, cognitive impairment, communication deficit, multiple co-morbidities, poisoning or severe pain may warrant allocation to a high ATS category.
- Patients with high risk alerts, such as a history of violence.
- Trauma patients should be allocated an ATS category based on clinical urgency. There are specific mechanisms of injury associated with risk of life-threatening injury that need to be incorporated in triage decisions. Examples include vehicle rollover, death of same-vehicle occupant, ejection from a vehicle, and fall from a height greater than three metres.
- The presence of a rash may also alert the Triage Nurse to the possibility of serious illness such as anaphylaxis or meningococcal disease; however, these types of presentations will usually have concurrent primary-survey abnormality.
- Re-triage – see definition in Chapter 1.



The Challenge of Triage⁶

Case Number: 1829/02
Case Precis Author: A. Charles

A previously well 18-year-old male presented to a peripheral suburban ED in the early hours of the morning with a 24 hour history of being generally unwell with lethargy, headache and vomiting. He was triaged as a category 4. After waiting for approximately four hours later he 'felt a bit better' so he left the ED without being assessed by a medical practitioner. He had, however, been reviewed by the triage nurse on three separate occasions. Five hours after arriving home he was found by his family to be agitated with an altered conscious state and to be developing a purpuric rash. He was returned to the same emergency department by ambulance where advanced life support was commenced, including endotracheal intubation and

ventilation. He was thereafter transferred to a tertiary hospital Intensive Care Unit. Meningococcal septicaemia was diagnosed and despite aggressive treatment he deteriorated and died 4 days later.

Coronial Investigation
The issues raised by the patient's family were:

- (1) a perceived deficiency in the triage process and
- (2) the delay in being seen by a doctor during the first presentation.

Coronial Findings
The Coroner found that the emergency department was particularly busy on the evening that the patient first presented. The triage nurse's assessment of the patient indicated non-specific flu like symptoms and therefore an appropriate triage category allocation had been given. Neck

stiffness and photophobia had been examined for. The delay in the patient being seen could not be definitively connected to his death.

Recommendation
The Coroner recommended that consideration be given to formalising a process where a patient is always reassessed by the triage nurse once the triage time has expired. In this case that would mean a formal nurse review one hour after initial assessment, it was noted that this was in fact performed informally on three occasions in this case.

Hospital Response
The hospital reviewed its triage processes and procedures and concluded that any patient who presented with similar symptoms should be triaged as a ATS Category 3 (to be seen within 30 minutes of presentation).

Note: Triage category allocation is independent of local policies dictating activation of response teams, such as trauma team activation.

Prioritisation of multiple patients at triage

Although there is no research relating to triage of multiple patients who present simultaneously, a primary-survey approach theoretically prioritises patients in order of life threat. This approach means that patients with airway problems should take precedence over patients with breathing problems, who take precedence over patients with circulation problems. Table 4.1 outlines such a primary survey approach to prioritising patients.



Teaching resources

Further reading

The following is an evidenced-based education program that was developed for Victorian EDs. It contains a number of useful teaching and learning activities.

- Considine, J, LeVasseur, S, Charles, A. Consistency of Triage in Victoria's Emergency Departments: Guidelines for triage practice and education. Monash Institute of Health Services Research. Report to the Victorian Department of Human Services [Online] 2001 [cited 2007 Feb 2]. Available from:
URL: <http://www.health.vic.gov.au/archive/archive2006/hdms/edupack.pdf>³⁵

The articles listed below are peer-reviewed publications relevant to the chapter content. The first two are Australian publications.

- Considine J, Botti M. Who, when and where? Identification of patients at risk of an in-hospital adverse event: implications for nursing practice. *International Journal of Nursing Practice* 2004; 10(1): 21–31.³⁶
- Crispin C, Daffurn K. Nurses' responses to acute severe illness *Australian Critical Care* 1998; 11(4):131–3.³⁷
- Tippins E. How emergency department nurses identify and respond to critical illness. *Emergency Nurse* 2005; 13(3): 24–32.³⁸

The following reading provides background information about the physiological predictors of critical illness.

- McQuillan P, Pilkington S, et al. Confidential inquiry into quality of care before admission to intensive care. *British Medical Journal* 1998; 316(7148):1853–8.41

Teaching strategies

Discussion points

After completing the prescribed reading, consider the following questions and discuss your answers with your peers and/or your educator/supervisor.

1. What are the elements of the primary survey and how can you assess them at triage?
2. For each of the following physiological abnormalities, discuss their significance, how they would change your triage decision and the actions you would take following allocation of an ATS category.



- (a) tachypnoea
 - (i) respiratory rate 22/minute
 - (ii) respiratory rate 28/minute
 - (iii) respiratory rate 36/minute
- (b) tachycardia
 - (i) heart rate 106/minute
 - (ii) heart rate 128/minute
 - (iii) heart rate 152/minute
- (c) hypotension
 - (i) systolic blood pressure 90 mmHg
 - (ii) systolic blood pressure 70 mmHg.

Patient scenarios

1. A 32-year-old male presents with two hours of increasing shortness of breath. He has audible stridor and is unable to speak. He has a respiratory rate of 36 breaths per minute, maximal use of accessory muscles and oxygen saturation of 92 per cent despite supplemental oxygen at 10 litres per minute. His heart rate is 132 and his skin is pale, cool and moist. What features of this patient's presentation would make him an ATS category 1?
2. A 22-year-old male presents with a painful, deformed left shoulder. The patient states that he was helping friends to move house when a bookcase fell on him. He has a respiratory rate of 26 breaths per minute and no use of accessory muscles. His heart rate is 118 and his skin is pale, cool and moist. What features of this patient's presentation would make him an ATS category 2?
3. A 68-year-old female presents with three hours of increasing abdominal pain. She has a respiratory rate of 24 breaths per minute and oxygen saturation of 93 per cent on room air. Her heart rate is 108 per minute and her skin is pale, warm and dry. What features of this patient's presentation would make her an ATS category 3?
4. A 28-year-old female presents with two days of vomiting, diarrhoea and lower abdominal pain. She has a respiratory rate of 18 breaths per minute and a heart rate of 94 per minute. Her skin is pale, cool and dry and her mucous membranes are moist. She states that her pain is 3/10. What features of this patient's presentation would make her an ATS category 4?
5. A 40-year-old male presents with a minor laceration to his right forearm. The patient states that he was renovating his kitchen and cut his hand on a piece of wire. The laceration is one centimetre in length, is well approximated and is not bleeding. He has a respiratory rate of 16 breaths per minute and his heart rate is 76. What features of this patient's presentation would make him an ATS category 5?



6. A 20-year-old male presents with a history of asthma and complains of feeling short of breath. What features of this patient's presentation would make him:
 - (a) an ATS category 1?
 - (b) an ATS category 2?
 - (c) an ATS category 3?
 - (d) an ATS category 4?
 - (e) an ATS category 5?

7. A 70-year-old male presents with left loin pain radiating into the groin. What features of this patient's presentation would make him:
 - (a) an ATS category 1?
 - (b) an ATS category 2?
 - (c) an ATS category 3?
 - (d) an ATS category 4?
 - (e) an ATS category 5?



CHAPTER 5: MENTAL HEALTH TRIAGE

Statement of purpose

The purposes of this chapter are to:

- Describe the clinical indicators for mental illness in the context of a generalist ED; and
- Discuss the clinical descriptors for each of the five ATS categories for patients presenting to the ED with acute behavioural disturbance and/or mental illness.

Learning outcomes

After completing this chapter, participants will be able to describe the rapid assessment of mental illness related problems at triage, identify mental illness risk factors pertinent to triage, and apply an ATS category that reflects the person's need for emergency intervention.

Learning objectives

- Describe common mental health related presentations for different life stages (youth, adult, elderly) that may be seen at triage in a generalist ED.
- Identify specific risk factors associated with mental illness for ED triage.
- Apply the principles of mental health assessment in this context.
- Relate common types of mental health presentations with the descriptors provided within the ATS.
- Analyse approaches to mental health assessment in terms of strengths and weaknesses.
- Consider strategies that may improve mental health assessment at triage in your workplace.

Key points

- The usual primary-survey approach to assessing all incoming patients should be complete prior to commencing mental health assessment.
- Mental health triage is based on assessment of appearance, behaviour and conversation.
- The allocation of a triage code must be based on clinical criteria that are consistent with the ATS descriptors for acute behavioural disturbances and risk of harm to self or others.



Content

Background

Since the late 1990s a number of tools have been developed and refined to optimise consistency of triage for patients presenting to EDs with acute behavioural disturbance or primary mental illness. For example, in New South Wales, Sutherland Hospital developed mental health triage guidelines for EDs.⁴² In Tasmania, Smart, Pollard and Walpole (1999)⁴³ introduced a four-point mental health triage rating scale to be used in conjunction with the ATS. In Victoria, further evaluation of the Tasmania tool found differences in use according to specialist training, and suggested that further education was needed to improve the utilisation of the tool.³⁵ Later, the New South Wales Department of Health implemented guidelines for the management of mental health presentations to the ED.³⁶ South Eastern Sydney Area Health Services (SESAHS) went on to develop a five-point mental health triage tool to enhance consistency of triage in EDs for mental health presentations.³⁷ Referenced as best practice by the National Institute of Clinical Excellence, the SESAHS tool has been further refined by Broadbent et al.⁴⁷⁻⁴⁹ and was recently implemented in all Victorian EDs.⁴¹

Approach

There are two steps that are vital in determining time to treatment for people with mental health illness: obtaining accurate assessment data and applying an appropriate ATS code. These two steps should be conducted with an awareness of risk factors for harm (self-harm and harm to others).⁴³ In particular, high risk is attached to those with pre-existing impairment from either severe or acute mental illness.⁴⁴

Assessment

Patients may be brought to the ED by police, ambulance, community mental health workers or family members, as well as coming in by themselves.

The usual primary-survey approach to assessing all incoming patients should be completed prior to commencing a mental health assessment. This involves asking the patient why they are in the ED today, and who brought them. It is important to be open, listen for verbal cues, clarify, and not be judgemental. The assessment is not intended to make a diagnosis, but to determine urgency and identify immediate needs for treatment.

Psychotic illness, depressive illness, attempted suicide, suicidal thoughts, anxiety, acute situational crisis, substance-induced disorders, and physical symptoms in the absence of illness are the most common mental health presentations at triage.

Always maintain your safety and the safety of others. If a patient's behaviour escalates, withdraw and seek assistance immediately.



Be aware also that not all aggressive behaviour is associated with mental illness. Some aggressive behaviour is associated with organic illnesses such as hypoglycaemia, delirium, acquired brain injury or intoxication. These organic causes of unusual or disturbing behaviour may look like mental illness when in fact they are not. The interplay of biological, psychological and socio-cultural factors related to ageing sometimes makes it difficult to clearly identify mental health problems.

The ABCs of mental health assessment⁴⁴

The ABCs of a mental health assessment are as follows.

Appearance

What does the patient look like?

- Are they dishevelled, unkempt or well presented?
- Are they wearing clothing appropriate for the weather?
- Do they look malnourished or dehydrated?
- Are they showing any visible injuries?
- Do they appear intoxicated, flushed, with dilated or pinpoint pupils?
- Are they tense, slumped over, displaying bizarre postures or facial grimaces?

This information provides cues when assessing the person's mood, thoughts and ability to self-care.

Affect

What is your observation of the patient's current emotional state?

- Are they flat, downcast, tearful, distressed or anxious?
- Is their expression of emotion changing rapidly?
- Is their emotion inconsistent with what they are talking about?
- Are they excessively happy?

This information provides cues when assessing the person's mood.

Behaviour

How is the patient behaving?

- Are they restless, agitated, hyperventilating or tremulous?
- Are they displaying bizarre, odd or unpredictable actions?
- Are they orientated?

How is the patient reacting?

- Are they angry, hostile, uncooperative, over-familiar, suspicious, guarded, withdrawn, inappropriate or fearful?
- Are they responding to unheard voices or sounds, or unseen people or objects?
- Are they attentive or refusing to talk?

Possible questions:

- 'This must be distressing for you. Can you tell me what is happening?'
- 'I can see that you are very anxious. Do you feel safe?'
- 'I can see that you are angry. Can you tell me why?'
- 'Are your thoughts making sense to you?'
- 'Are you taking any medication?'



Conversation and mood

- What language is being spoken?
- Is an interpreter needed?

Conversation

How is the patient talking?

Does their conversation make sense?

- Is it rapid, repetitive, slow or uninterruptible, or are they mute?
- Are they speaking loudly, quietly or whispering?
- Are they speaking clearly or slurring?
- Are they speaking with anger?
- Are they using obscene language?
- Do they stop in the middle of a sentence?
- Do you think the patient's speech is being interrupted because they are hearing voices?
- Do they know what day and time it is and how they got to the ED?

Mood

How does the patient describe their mood? Do they say they feel:

- Down, worthless, depressed or sad?
- Angry or irritable?
- Anxious, fearful or scared?
- Sad, really happy or high?
- Like they cannot stop crying all the time?

What do you think is the risk of suicide/homicide?

For example, does the patient tell you that they are thinking about suicide, wanting to hurt others, worrying about what people think about them, worrying that their thoughts don't make sense, afraid that they are losing control, feeling that something dreadful is going to happen to them, and/or feeling unable to cope with everything that has happened to them lately in relation to recent stressors?

Possible questions:

- 'Do you feel hopeless about everything?'
- 'Do you feel that someone or something is making you think these things?'
- 'Are you being told to harm yourself and/or others?'
- 'Do you feel that life is not worth living?'

Presentations to the ED for self-harm or risk of self-harm are very common and are increasing, in all age groups. Regardless of the motivation or intent, these behaviours are associated with a high risk of death. Consider the use of the Mental Health Act 2000 and risk assessments (such as removal of weapons and close observation).



Possible questions:

- ‘How often do you have these thoughts?’
- ‘Do you have a plan of what you might do?’
- ‘Do you have access to tablets/a gun?’

Other Considerations

Other considerations within the mental health assessment include the following:

Dementia

Dementia is a common problem. It is not a diagnosis rather a cluster of progressive symptoms, the most common being:

- memory loss and confusion
- intellectual decline
- personality changes.

Subtypes include:

- vascular dementia
- Alzheimer’s disease
- alcoholic dementia.

Complications of dementia include:

- delirium
- physical illness
- depression
- psychotic symptoms.

Delirium

Delirium is not a disorder but a clinical syndrome. It is the cause of much distress and disability and contributes greatly to morbidity and mortality. It is a reversible organic condition characterised by:

- fluctuations in conscious state
- psychomotor agitation
- disorganised thinking
- perceptual disturbances, for example, hallucinations.



Youth

Depression is the most common mental health problem for young people and is a well-recognised risk factor for suicidal behaviour.

Young people with depression may:

- Feel worthless
- Cry a lot
- Stop enjoying their life
- Feel miserable all the time
- Become very irritable
- Be secretive
- Take risks that are out of character (such as binge drinking and/or substance abuse)
- Drop out of school or quit their job.

Psychostimulants

Psychostimulants are a group of drugs that stimulate the central nervous system, causing feelings of false confidence, euphoria, alertness and energy. Common psychostimulants include methamphetamines (meth, crystal meth, ice, base), which are amphetamine (speed) derivatives.

Psychostimulants may produce symptoms similar to paranoid psychosis, including delusions of persecution, ideas of reference, bizarre visual and auditory hallucinations, and violent outbursts. Symptoms are not related to the time of ingestion or the dose taken.

Assessment and rapid and safe management of **acute behavioural disturbance** and medical complications is the priority.

Applying the ATS

The evidenced-based guidelines presented in Table 5.1 extend on those provided in the ATS, and should be used in conjunction with the ATS.⁴⁷

Table 5.1: Mental health triage tool 50

Triage code – Treatment acuity	Description	Typical presentation	General management principles*
<p>1 – Immediate</p>	<p>Definite danger to life (self or others) Australasian Triage Scale¹ states:</p> <ul style="list-style-type: none"> – Severe behavioural disorder with immediate threat of dangerous violence 	<p>Observed</p> <ul style="list-style-type: none"> – Violent behaviour – Possession of weapon – Self-destruction in ED – Extreme agitation or restlessness – Bizarre/disoriented behaviour <p>Reported</p> <ul style="list-style-type: none"> – Verbal commands to do harm to self or others, that the person is unable to resist (command hallucinations) – Recent violent behaviour 	<p>Supervision Continuous visual surveillance 1:1 ratio (see definition below)</p> <p>Action</p> <ul style="list-style-type: none"> – Alert ED medical staff immediately – Alert mental health triage or equivalent – Provide safe environment for patient and others – Ensure adequate personnel to provide restraint/detention based on industry standards <p>Consider</p> <ul style="list-style-type: none"> – Calling security +/- police if staff or patient safety compromised. May require several staff to contain patient – 1:1 observation – Intoxication by drugs and alcohol may cause an escalation in behaviour that requires management.
<p>2 – Emergency Within 10 minutes</p>	<p>Probable risk of danger to self or others AND/OR Client is physically restrained in emergency department AND/OR Severe behavioural disturbance Australasian Triage Scale¹ states:</p> <ul style="list-style-type: none"> – Violent or aggressive (if): – Immediate threat to self or others – Requires or has required restraint – Severe agitation or aggression 	<p>Observed</p> <ul style="list-style-type: none"> – Extreme agitation/restlessness – Physically/verbally aggressive – Confused/unable to cooperate – Hallucinations/delusions/paranoia – Requires restraint/containment – High risk of absconding and not waiting for treatment <p>Reported</p> <ul style="list-style-type: none"> – Attempt at self-harm/threat of self-harm – Threat of harm to others – Unable to wait safely 	<p>Supervision Continuous visual supervision (see definition below)</p> <p>Action</p> <ul style="list-style-type: none"> – Alert ED medical staff immediately – Alert mental health triage – Provide safe environment for patient and others – Use defusing techniques (oral medication, time in quieter area) – Ensure adequate personnel to provide restraint/detention – Prompt assessment for patient recommended under Section 9 or apprehended under Section 10 of Mental Health Act. 2000. <p>Consider</p> <ul style="list-style-type: none"> – If defusing techniques ineffective, re-triage to category 1 (see above) – Security in attendance until patient sedated if necessary – Intoxication by drugs and alcohol may cause an escalation in behaviour that requires management

Table 5.1: Mental health triage tool⁵⁰ (cont)

Triage code – Treatment acuity	Description	Typical presentation	General management principles*
3 – Urgent Within 30 minutes	<p>Possible danger to self or others</p> <ul style="list-style-type: none"> – Moderate behaviour disturbance – Severe distress <p>Australasian Triage Scale¹ states:</p> <ul style="list-style-type: none"> – Very distressed, risk of self-harm – Acutely psychotic or thought-disordered – Situational crisis, deliberate self-harm – Agitated/withdrawn 	<p>Observed</p> <ul style="list-style-type: none"> – Agitation/Restlessness – Intrusive behaviour – Confused – Ambivalence about treatment – Not likely to wait for treatment <p>Reported</p> <ul style="list-style-type: none"> – Suicidal ideation – Situational crisis <p>Presence of psychotic symptoms</p> <ul style="list-style-type: none"> – Hallucinations – Delusions – Paranoid ideas – Thought disordered – Bizarre/agitated behaviour <p>Presence of mood disturbance</p> <ul style="list-style-type: none"> – Severe symptoms of depression – Withdrawn/uncommunicative and/or anxiety – Elevated or irritable mood 	<p>Supervision Close observation (see definition below)</p> <ul style="list-style-type: none"> – Do not leave patient in waiting room without support person <p>Action</p> <ul style="list-style-type: none"> – Alert mental health triage – Ensure safe environment for patient and others <p>Consider</p> <ul style="list-style-type: none"> – Re-triage if evidence of increasing behavioural disturbance i.e. <ul style="list-style-type: none"> – Restlessness – Intrusiveness – Agitation – Aggressiveness – Increasing distress – Inform security that patient is in department – Intoxication by drugs and alcohol may cause an escalation in behaviour that requires management
4 – Semi-urgent Within 60 minutes	<p>Moderate distress Australasian Triage Scale¹ states:</p> <ul style="list-style-type: none"> – Semi-urgent mental health problem – Under observation and/or no immediate risk to self or others 	<p>Observed</p> <ul style="list-style-type: none"> – No agitation/restlessness – Irritable without aggression – Cooperative – Gives coherent history <p>Reported</p> <ul style="list-style-type: none"> – Pre-existing mental health disorder – Symptoms of anxiety or depression without suicidal ideation – Willing to wait 	<p>Supervision Intermittent observation (see definition below)</p> <p>Action Discuss with mental health Triage Nurse</p> <p>Consider</p> <ul style="list-style-type: none"> – Re-triage if evidence of increasing behavioural disturbance i.e. <ul style="list-style-type: none"> – Restlessness – Intrusiveness – Agitation – Aggressiveness – Increasing distress – Intoxication by drugs and alcohol may cause an escalation in behaviour that requires management

Table 5.1: Mental health triage tool⁵⁰ (cont)

Triage code – Treatment acuity	Description	Typical presentation	General management principles*
5 – Non-urgent Within 120 minutes	No danger to self or others <ul style="list-style-type: none"> – No acute distress – No behavioural disturbance Australasian Triage Scale¹ states: <ul style="list-style-type: none"> – Known patient with chronic symptoms – Social crisis, clinically well patient 	Observed <ul style="list-style-type: none"> – Cooperative – Communicative and able to engage in developing management plan – Able to discuss concerns – Compliant with instructions Reported <ul style="list-style-type: none"> – Known patient with chronic psychotic symptoms – Pre-existing non-acute mental health disorder – Known patient with chronic unexplained somatic symptoms – Request for medication – Minor adverse effect of medication – Financial, social, accommodation, or relationship problems 	Supervision General observation (see definition below)
			Action <ul style="list-style-type: none"> – Discuss with mental health triage – Refer to treating team if case-managed

Management Definitions²

Continuous visual surveillance = person is under direct visual observation at all times

Close observation = regular observation at a maximum of 10 minute intervals

Intermittent observation = regular observation at a maximum of 30 minute intervals

General observation = routine waiting room check at a maximum of 1 hour intervals

* Management principles may differ according to individual health service protocols and facilities.

¹ Australasian College of Emergency Medicine (2000). Guidelines for the implementation of the Australasian Triage Scale (ATS) in Emergency Departments.

² South Eastern Sydney Area Health Service Mental Health Triage guidelines for Emergency Departments

Acknowledgements

NICS acknowledges existing triage tools provided by Barwon Health



Teaching resources

Further reading

- De Guio A. Training manual for non-mental health trained staff to work with mental health patients in hospital emergency departments. South Eastern Sydney Area Health Service. Unpublished manuscript: 1999.⁵⁵
- Lipowski ZJ. Delirium in the Elderly Patient. *New England Journal of Medicine* 1989; 320:578–82.
- Patterson WM, Dohn HH, Bird J, Patterson GA Evaluation of suicidal patients: The SAD PERSON Scale. *Psychosomatics* 1983;24(4):343–9.

The following Australian journal articles describe the development of various approaches to mental health triage in the emergency context.

- Broadbent M, Jarman H, Berk M. Emergency department mental health triage scales improve outcomes. *Journal of Evaluation in Clinical Practice*. 2004; 10(1):57–62.⁴⁹
- Broadbent M, Jarman H, Berk M. Improving competence in emergency mental health triage. *Accident and Emergency Nursing*. 2000; 10:155–62.⁴⁷
- Jenner L, Spain D, Whyte I, Baker A, Carr VJ, Crilly J. Management of Patients with Psychostimulant Toxicity: Guidelines for Emergency Departments. Canberra: Department of Health and Ageing; 2006.
- Smart D, Pollard C, Walpole B. Mental health triage in emergency medicine. *Australian and New Zealand Journal of Psychiatry*. 1999; 33:57–66.⁴³

Teaching strategies

Discussion points

1. Reflect on the mental health presentations you have encountered in clinical practice.
 - (a) What communication techniques did you use to gather your assessment data?
 - (b) What cues did you use to identify that the patient had a primary mental health problem?
2.
 - (a) Identify any difficulties you may have had in the identification and assessment of mental illness at triage.
 - (b) On reflection, would using any of the strategies identified have assisted you in making the triage decision?



3. Discuss the assessment of risk of self-harm at triage.
 - (a) What are the key risk factors for suicide and in what ways would you assess these at triage?
 - (b) What features of a patient's presentation would make them the following ATS categories and what immediate actions would need to be taken?
(You may wish to refer to Table 5.1.)
 - (i) ATS category 1
 - (ii) ATS category 2
 - (iii) ATS category 3
 - (iv) ATS category 4
 - (v) ATS category 5.

Patient scenarios

1. A 40-year-old woman, Betty, calls an ambulance and is transported to hospital. She reports feeling suicidal. She has tablets and has written a suicide note to her daughter, but she changed her mind and wants help. When she arrives at triage the most notable feature is that Betty is quite inebriated and loud. She wants to be in hospital where she can 'get help and feel safe'. She reports that she 'cannot cope with her family'. She admits to drinking 'a bit too much lately'. She also gives quite a few symptoms suggestive of recent anxiety and depression. She then begins to get very agitated and says she will kill herself if she can't get help.
 - (a) What clinical factors would make Betty:
 - (i) an ATS category 1?
 - (ii) an ATS category 2?
 - (iii) an ATS category 3?
 - (iv) an ATS category 4?
 - (v) an ATS category 5?
 - (b) For each of the above categories, what general management principles would guide practice? For example, supervision requirements, communication techniques and referrals.
2. A well-known farmer, aged 52, presents to your medical centre because he is afraid he will act on his suicidal thoughts. He has been married for 32 years, and his wife left him 10 days ago. The local community believes that she is visiting her ill mother in the city. He has managed to function effectively until recently. Two days ago he had to destroy his stock due to drought conditions. That morning he visited his daughter and grandchild to say goodbye, and they became concerned and brought him to the centre. He has access to guns.
 - (a) What immediate action would need to be taken if you assigned him to:
 - (i) an ATS category 1?
 - (ii) an ATS category 2?
 - (iii) an ATS category 3?
 - (iv) an ATS category 4?
 - (v) an ATS category 5?



3. An elderly woman is brought to the ED by a concerned neighbour. She had been found wandering in a soiled nightdress, wearing high-heeled shoes and a string of pearls. She is odorous, with cracked lips and a rosy complexion. On questioning she is unable to recognise the neighbour (whom she had known for 16 years) and insists that she was at the hairdressers for her weekly appointment.
 - (a) What clinical factors would make this person:
 - (i) an ATS category 1?
 - (ii) an ATS category 2?
 - (iii) an ATS category 3?
 - (iv) an ATS category 4?
 - (v) an ATS category 5?

4. A 72-year-old man is brought to the ED complaining of feeling weak. His wife has recently died. He has a history of COPD and hypertension. At triage, he is distractible and restless.
 - (a) Discuss your triage assessment of this patient. What additional information would facilitate an informed triage decision?

 - (b) After 30 minutes he begins to shout and remove his clothes. What do you do next?



CHAPTER 6: RURAL AND REMOTE TRIAGING

Statement of purpose

The purpose of this chapter is to examine the unique characteristics of the rural and remote emergency nursing environment and discuss how these characteristics may impact upon the assessment of clinical urgency in triage practice. Through reading the content and participating in the learning activities, nurses will identify strategies to promote accurate and consistent use of the ATS within the rural context.

Learning outcomes

After completing this chapter, participants will have enhanced knowledge of the rural and remote emergency nursing environment and of how this environment differs from the urban context, as well as an ability to perform accurate and consistent assessment of clinical urgency using the ATS within the rural and remote context.

Learning objectives

- Identify unique differences between urban and rural triage practices.
- Discuss how these differences and challenges may impact, negatively or positively, on the performance of triage in a rural environment.
- Identify and discuss strategies to support the rural triage practitioner in the accurate and consistent use of the ATS in their environment.
- Demonstrate accurate and consistent application of the ATS within the rural and remote context.

Key points

- The triage process always involves the same skills and decision-making processes, regardless of where it is performed.
- The contextual factors of rural or remote nursing practice may influence or impact upon the triage assessment process.
- The ATS 'time-to-treatment' recommendations refer to the ideal maximum time that a patient in that category should wait for assessment and treatment. Local inability to meet these recommendations does not change the patient's triage category, which is allocated according to the need for, not the availability of, emergency care.
- Rural triage is often a role undertaken as part of the general responsibilities of the rural nurse.
- Although the numbers and the casemix of patients that present to rural and remote EDs may be smaller than those in urban EDs, the full range of conditions and urgency may present.



Content

The terms 'rural' and 'remote' refer to the 34 per cent of Australians who live outside a major city. The core difference between rural and remote nursing practice and its urban equivalent is the generalist advanced-practice role.¹³⁶

Bushy & Bushy (2001)¹³⁷ describe the role of the rural nurse as an 'expert generalist' who is often expected to be a Geriatric Nurse, a Trauma Nurse and an Acute Care Nurse simultaneously, and who often functions without the immediate support of a medical practitioner.

Rural and remote emergency departments/services

It is appreciated that rural and remote triage may occur with very different levels of available resources from those available to an urban ED. Despite this, the principles of triage still apply. It may be, however, that the rural and remote Triage Nurse has a greater reliance on local practice and treatment guidelines.

Within major urban EDs there is a multidisciplinary team available to provide the skill-mix required to ensure that each patient receives adequate assessment and care, and to support the novice Triage Nurse. In rural and remote areas, such support may not exist, and the Triage Nurse may need to provide immediate assessment and care without any support from other health professionals.

One way to define a rural or remote ED is to describe it as one without on-site medical staff.¹³⁸⁻⁴⁰ Current practice within rural facilities often involves patient care initiated by nurses. Therefore, a number of work practices have developed in response to local circumstances. These may include extension of the nursing role to initiate patient management while the doctor is en route. Some rural EDs have an arrangement with the local doctor whereby patients with non-urgent problems are asked to return at a later time. These practices rely heavily on the assessment skills, judgement and experience of the nurses in the rural facility. Some rural and remote EDs have developed local clinical guidelines for such situations; however, this is still the exception rather than the rule.¹³⁹

It is important to note that while the volume of patients in a rural ED is generally lower than that of an urban setting, and the caseload also varies, the range of presenting complaints is the same as that seen in urban EDs.¹⁴¹

The ATS is applicable in rural and remote settings; however, the emphasis is on time until treatment is initiated, rather than time until seen by a doctor.¹³⁹

Triage in the rural context, therefore, does not just involve assessment of acuity; it may also involve early management decisions and treatment. The important principle to remember, however, is that although the boundaries or scope of triage practice may be different between rural and urban triage environments, these differences should not impact upon the consistent and accurate application of the ATS.



Rural and remote nursing issues

Although the ATS is applicable in the rural and remote triage contexts, and the expectation is of consistent and accurate application Australia wide, many factors impacting upon rural and remote nursing practice must be understood in order to ensure that this occurs. These factors may include access to continuing education, recruitment and retention issues, isolation and educational preparation for the generalist role.

Rural Triage Nurses face unique issues that need to be recognised and considered. Features of the rural environment, and of the community and small local hospital services, may exacerbate these issues, and need to be considered as influencing factors for rural triage. Some of the issues confronting rural Triage Nurses are listed below.³⁰

- **Multiple jobs:** Due to the spasmodic nature of the need for triage, rural Triage Nurses often have other jobs as well. Unlike their metropolitan counterparts, rural nurses do not dedicate their time to the triage desk. This can impact upon their opportunities for learning and maintaining skills through consistent practice.
- **Lack of a 'safety net':** The Triage Nurse in a rural or remote environment may well be alone in the facility, with no one around to provide support or advice.
- **Lack of other options for care:** Patients in this environment cannot easily be triaged elsewhere in the immediate term. When the decision to triage elsewhere is made, consideration must include the distance, and the safest way for the patient to travel.
- **Time issues:** The initial 'wait' time for patients is often not the key issue in this environment; rather, it may be the time it takes to get them to the hospital, and, once they have arrived, how to get them the most appropriate care in the fastest possible time.
- **Delivery of initial emergency care:** This can be a source of anxiety for staff. Dealing with the unexpected, with limited support or specialised back-up, means that the rural Triage Nurse needs a broad range of knowledge and skills.
- **Personal and departmental safety:** This can be a potential problem. Triage without security, often without even another nurse, or a local police station, is a major source of anxiety in rural and remote triage practice.
- **The triage process may occur outside the hospital setting:** For example, the triage process may occur as part of a district nursing community health care role, or via telephone, as patients try to avoid the inconvenience of travelling long distances to access health care advice or treatment. However, it must be emphasised here that the ATS is a face-to-face tool, and local protocols must guide other triage types.
- **Lack of anonymity within the community:** This may result in a nurse being contacted at home, or within a social setting, to perform a triage assessment, and can present issues related to confidentiality. It may result in a nurse caring for a friend, acquaintance or relative. Personal relationships can also be unwittingly abused by patients seeking special treatment, which may make triage decisions more difficult to make.



- **Decisions may carry enormous financial or social ramifications for patients and their families:** This may be the case especially when a decision is made to triage away from the local health facility.
- **Decisions may carry collegial ramifications:** This may be the case especially if a decision concerns the local doctor in a one-GP town, as a working relationship must still be maintained.
- **Awareness of budgetary pressures:** Within a small facility this can be heightened, due to there being fewer buffers between hospital administration and the nurse.
- **Knowledge of the community:** It can be easy to make assumptions when you know the community and the individual community members well. The triage nurse needs to be very careful to obtain detailed and clear information concerning the patients that they are triaging and the history of their current complaint.

It is vital that Triage Nurses in rural and remote emergency service areas are aware of the difficulties that these differences may present when assessing a patient using the ATS scale. Identifying strategies to preserve privacy, enhance communication and facilitate provision of appropriate emergency care are as important as ensuring that the nurse is supported in the role by having access to education and support. The latter may not be provided locally, but may be addressed through national initiatives such as this guide or through professional collegial memberships.



Teaching resources

Further reading

- Australian College of Emergency Medicine (ACEM). Statement on Emergency Department Role Delineation [Online] revised 2004 [cited 2007 Feb 2]. Available from: URL: <http://www.acem.org.au/infocentre.aspx?docId=7>

This clearly written document provides further definition of the differences between urban and rural emergency care facilities.

- Central Australian Rural Practitioners Association. CARPA Standard Treatment Manual. 4th edn. Alice Springs: CARPA; 2004.

This is a comprehensive rural-focused manual on rural and remote assessment and treatment issues.

- Department of Health, Government of Western Australia. Remote Area Nursing Emergency Guidelines. 4th Edition [Online] 2005 [cited 2007 Feb 2]. Available from: URL: http://www.ocno.health.wa.gov.au/policy/docs/Remote_Area_Nursing_Emergency_Guidelines.pdf

This online resource is very relevant to rural and remote areas, addressing initial assessment and management.

- Hegney D. Dealing with Distance: rural and remote area nursing. In: Daly J, Speedy S, Jackson D. editors. Contexts of Nursing. 2nd ed. Sydney: Elsevier; 2006. p. 213–28.

Chapter 16 of this text provides an informative overview of the nature of Australian rural and remote communities, and a discussion of how this impacts upon nursing practice.

- Hegney D, Fahey P, Nanka A. General practitioners' perceptions of after hours primary medical care services: a Toowoomba, Queensland, Australia study. The International Electronic Journal of Rural and Remote Research, Education, Practice and Policy, 287 [Online] 2004 [cited 2007 Feb 2]. Available from: URL: <http://rrh.deakin.edu.au/articles/showarticlenew.asp?ArticleID=287>

This is an interesting article that explores options for after-hours emergency care in rural Australia.

- NSW Department of Health. Triage in NSW rural and remote Emergency Departments with no on-site doctors [Online] 2004 [cited 2007 Feb 2]. Available from: URL: http://www.health.nsw.gov.au/pubs/2004/pdf/triage_rural_remote.pdf

This is an informative document that makes a number of clear recommendations regarding rural emergency triage.



- Rural Doctors Workforce Agency. Rural After Hours Triage Education Resource [Online] 2005 [cited 2007 Feb 2]. Available from: URL: <http://www.ruraldoc.com.au/publications/papers/inprogress/rahter.asp>¹⁴²

This is an excellent and comprehensive introduction to rural triage that incorporates information and learning activities. It is suitable for both group and self-directed learning.

Teaching strategies

The activities included with this chapter are designed for a range of learning situations. Ten learning activities are provided, and a selection may be chosen to support individual or facilitated group learning. It is recommended that at least five of these activities be undertaken to reinforce and build upon chapter content.

Learning activity 1

Relate the issues listed in this chapter to your workplace. Consider, individually or as a group, whether you have had any of these issues impact upon your clinical decision-making in the triage role.

Reflect on what happened in that situation. In what way was your decision influenced and what was the outcome? Were any lessons learned?

Learning activity 2

Using the headings from the 'Rural and remote nursing issues' section in this chapter as discussion points, ask participants to identify the issues, differences and challenges related to their own triage context, and to list the skills required of the nurse to manage these on a daily basis.

Learning activity 3

Discuss the following scenario.

A man presents in the ED complaining of chest pain, and collapses while you are taking his history. There is no on-site medical officer in this emergency facility. Discuss his ATS classification and the differences in the role of the Triage Nurse from this point between a rural facility and a busy tertiary ED.

Learning activity 4

Nurses identify various benefits and drawbacks in rural ED practice. Consider the issues presented in this chapter, and discuss the potential benefits that they may offer to emergency nursing practice.



Learning activity 5

Reflect upon your role in the rural facility as the expert generalist. List the true range of roles and responsibilities that you fill. Reflect on how prepared, educationally and clinically, you are to fulfil this role. What resources can you identify to further support your practice?

Learning activity 6

Read the document *Triage in NSW rural and remote Emergency Departments with no on-site doctors*, which is available from:

URL: http://www.health.nsw.gov.au/pubs/2004/pdf/triage_rural_remote.pdf

On page 5 on this document, there is a paragraph stating that 40 per cent of ATS category I patients who presented in the New England Health Service Area in rural New South Wales presented to emergency areas without an on-site doctor.

Discuss this statistic, exploring issues such as facilities, funding, personnel, skill-mix and skill maintenance.

Learning activity 7

Discuss the following scenario.

It is a Sunday night at a hospital after an extremely busy weekend, and your general practitioner has been present almost around the clock. The staff is aware that he is exhausted and he has stated that he only wants to be called if 'it's really an emergency!'.

Reflect on or discuss as a group, the impact that this information puts on the Triage Nurse and the potential influence it may have on the consistent allocation of urgency using the ATS.

Learning activity 8

Consider the following scenario.

The mother of one of your children's school friends presents to the triage desk. You know that she has five children and that her husband is working away from the town. She says to you, 'I just want to nip in and ask the doctor a quick question. I won't be long as I've got to go and meet the school bus. Can you please squeeze me in first? Thanks so much!'.

Discuss as a group how this situation could be handled.



Learning activity 9

Either individually, or as a group, create two lists highlighting the differences between triage in an urban setting and triage in a rural ED with no on-site medical practitioner. The lists may include physical, geographical, individual and professional issues.

Learning activity 10

Imagine that a student nurse approaches you and tells you that after she graduates she wants to work in a small rural facility. She is seeking your advice as to what skills or further studies she needs to develop to prepare her for this role.

Work together as a group to identify skills and resources that would help this nurse prepare for rural or remote area practice.



CHAPTER 7: PAIN ASSESSMENT AT TRIAGE

Statement of purpose

The purposes of this chapter are to:

- Provide a description of the physiological and behavioural indicators related to pain and pain assessment at triage; and
- Identify the importance of providing early assessment of pain.

Learning outcomes

After completing this chapter, participants will be able to describe the assessment and measurement of pain, and to discuss how this informs triage decision-making.

Learning objectives

- Describe the factors influencing the perception and expression of pain.
- Analyse the application of commonly used and validated pain assessment strategies in a triage setting.
- Correlate possible pain assessment findings to the physiological discriminators used to guide triage acuity classification.
- Construct and evaluate strategies to improve pain assessment and pain management from a triage perspective.

Key points

- Humane practice mandates the prompt assessment and relief of pain.
- Pain is the reason most people present to the ED.
- Pain is as severe as the patient reports.
- Severity of pain influences triage category.



Content

Pain is the most common symptom reported by patients who present to the ED. Early assessment of pain enables effective management and relief of suffering.

Pain is the response to actual or potential tissue damage, and involves physiological, behavioural and emotional responses. The patient's self-report is regarded as the gold standard for measuring pain.⁵⁷

The experience of pain is recognised as being subjective, personal and as severe as the patient reports. However, this recognition does not currently extend into clinical practice, particularly in EDs, with numerous studies demonstrating that pain is often under-recognised, poorly assessed, and inappropriately treated.⁵⁹

Pain can be acute or chronic. Chronic pain differs from acute pain in that it has usually been present for more than three months. Chronic pain has a potential for under-treatment.⁵⁸ The incidence of chronic pain is increasing in Western populations, with an estimated one-third of the Australian population experiencing chronic pain, and is commonly associated with the elderly.

The ATS has included the severity of pain as a factor in determining the triage code. The inclusion of pain severity as a physiological discriminator in triage assessment is in recognition both of the humane factors associated with providing care to members of the community, and of the physiological effects of pain.⁶¹ These latter effects include increased risk of infection, delayed healing, and increased stress on cellular function and on organ-system stability.

Assessment of pain

Assessment should attempt to determine the mechanisms producing the pain, other factors influencing the pain experience, and how pain has affected physical capacity, emotions and behaviour.

As with the experience of pain itself, the assessment of pain requires a multifaceted approach, with no single tool able to provide an objective measurement of pain.

Elements to be included in assessing pain include:

- Descriptors and verbal expressions used by the patient
- Information obtained from the patient relating to location, intensity, time factors such as onset and duration, and alleviating and aggravating factors
- Heart rate, respiratory rate, blood pressure and other physiological parameters
- Facial expressions and body language displayed by the patient
- Pain severity scales.



Self-reporting is considered the most reliable method of determining the severity of pain. Several tools have been created to assist with measuring a patient's pain through self-report. However, no single tool is appropriate for the assessment of all patients, and nurses should have knowledge and skills in using a range of pain tools that can be applied as required, depending on age and cultural factors such as language.

Suitable pain severity scales for use in a triage setting include a numerical rating scale (NRS), which is also known as a verbal pain score (VPS), and a visual analogue scale (VAS). These tools provide either a 100-point scale (NRS/VPS), or a 100-mm scale (VAS). For some patients, a verbal descriptor scale may be more suitable, using terms such as 'no pain', 'mild pain', 'moderate pain' and 'severe pain', or other appropriate descriptors as identified by the patient.

For young children, the Wong-Baker FACES Rating Scale is a commonly used tool.⁶² This scale has also been adapted for use in other populations, for example in patients with limited ability to communicate in English; however, this practice has attracted criticism as it may be construed as being demeaning to the adult patient. Several culture-specific tools for both adult and paediatric patients have been developed with the recognition that care should be sensitive and responsive to cultural issues. Indeed, cultural variations need to be considered in the application of pain assessment tools.^{63,64}

The Abbey Pain Scale ('the Abbey') is an Australian tool that has been designed to measure the severity of pain in people who have dementia and cannot verbalise their experience.⁶⁵ This tool provides a systematic approach to measuring the severity of pain at triage. A total score is calculated from responses to six items, each with a maximum score of three points (absent pain = 0; severe pain = 3). From a possible total of 18 points, a score of 0–2 is rated 'no pain', 3–7 is rated 'mild', 8–13 is rated 'moderate', and >14 is rated 'severe'.⁶⁶

Pain severity scales can also be used to categorise self-reported pain into mild, moderate or severe pain. These categorisations can assist in determining an appropriate analgesia through the development of analgesic algorithms for paediatric and adult patients.⁶⁷



Application of a triage category

The descriptive terms listed in Table 7.1 should be used as a guide to acuity for the ATS.

Table 7.1: Determining a triage category²

Descriptor	ATS category
Very severe	2
Moderately severe	3
Moderate	4
Minimal	5

Validated methods for quantitative assessment of pain⁷¹

Visual analogue scale

Use a 100 mm line as shown below.

0	100
No pain	Maximum pain

Ask the patient to mark their level of pain on the line.

Numerical rating scale

The patient is asked to state a number that equates to their level of pain, where 0 = no pain, and 10 = the most severe pain, as shown in Table 7.2. (This scale is also known as the verbal analogue scale.)

Table 7.2: The numerical rating scale

Descriptive term	Quantitative value
Severe pain	7–10
Moderate pain	4–6
Mild pain	1–3
No pain	0

Effective management of pain

In a triage setting, musculoskeletal pain can be effectively reduced through simple measures such as rest, ice, compression and elevation (RICE).^{61,63,23} The administration of pharmacological agents within the triage area can be problematic. This practice needs to be supported by institutional policies and procedures, and should be considered by individual departments, taking into account the physical organisation of the triage area and the ability to reassess, monitor and evaluate patients.



Teaching resources

Further reading

The following document brings together the best available evidence for the management of pain in a range of contexts. Specific sections are dedicated to the assessment and management of pain in EDs, and pain management in opioid-tolerant patients.

- Australian and New Zealand College of Anaesthetists. Acute pain management: scientific evidence. 2nd edn. Melbourne: Australia; 2005. Sections: 9.9 Acute pain in emergency departments: p. 178–82; and 10.8.3 Managing acute pain in opioid tolerant patients; p. 258–9.⁶³

The following readings have been selected from peer-reviewed journals. They cover issues related to the assessment and management of pain in the emergency setting, and in particular the triage environment.

- Boyd RJ, Stuart P. The efficacy of structured assessment and analgesia provision in the paediatric emergency department. *Emergency Medicine Journal* 2005;22(1):30–2.⁶⁸
- Dann E, Jackson R, Mackway-Jones K. Appropriate categorisation of mild pain at triage: a diagnostic study. *Emergency Nurse* 2005;13(1):28–32.⁶⁹
- Fry M, Ryan J, Alexander N. A prospective study of nurse initiated panadeine forte: expanding pain management in the ED. *Accident and Emergency Nursing* 2004;12(3):136–40.⁷⁰
- Lee JS. Pain measurement: understanding existing tools and their application in the emergency department. *Emergency Medicine* 2001;13(3):279–87.⁵⁷
- Lyon F. The convergent validity of the Manchester pain scale. *Emergency Nurse* 2005;13(1):34–8.⁶⁴
- Nelson B, Cohen D, Lander O, Crawford N, Viccellio A, Singer A. Mandated pain scales improve frequency of ED analgesic administration. *American Journal of Emergency Medicine* 2004;22(7):582–5.⁷¹
- Puntillo K, Neighbour M, O’Neil N, Nixon R. Accuracy of emergency nurses in assessment of patients’ pain. *Pain Management in Nursing* 2003; 4(4): 171–5.⁷²
- Rupp T, Delaney KA. Inadequate analgesia in emergency medicine. *Annals of emergency medicine*. 2004;43(4):494–503.⁵⁸
- Seguin D. A nurse-initiated pain management advanced triage protocol for ED patients with an extremity injury at a level I trauma centre. *Journal of Emergency Nursing* 2004;30(4):330–5.⁷⁴



- Teanby S. A literature review into pain assessment at triage in accident and emergency departments. *Accident and Emergency Nursing* 2003;11(1):12–17.⁷⁵
- Todd K. Influence of ethnicity on emergency department pain management. *Emergency Medicine* 2001;13(3):274–8.⁷³

Teaching strategies

Discussion points

Ask each participant to select a reading from the 'Further reading' list for this chapter and critically evaluate it in preparation for group discussion. The selection of readings should be coordinated to ensure that there is a reasonable distribution across the group.

1. What strategies are currently used at triage to assess pain in your hospital? Facilitate participant discussion of the advantages and disadvantages of these strategies. Consider methods that could be used to improve pain assessment strategies.
2. Identify physiological, behavioural and descriptive indicators of pain, and relate each of these to triage categories. Discuss the implications for consistency of triage classification that may arise.
3. Reflect on the following statements related to pain, pain assessment and pain management:
 - Analgesia will conceal underlying pathology.
 - Patients who receive narcotic medications are at risk of addiction/dependency.
 - Treatment with opioids will mask deteriorating neurological function.
 - Patients fear that they will be labelled a 'problem patient', and this may affect their self-reporting of pain.
 - People with chronic pain become 'used' to their pain, and hence have a higher pain tolerance.
 - People with chronic pain are reporting severe pain due to psychological issues rather than the severity of pain itself.

(a) What does the best available evidence tell us about these myths and misconceptions?

(Refer to section 9.9 Acute pain in emergency departments (pages 178–82) and section 10.8.3 Managing acute pain in opioid tolerant patients (pages 258–9) in *Australian and New Zealand College of Anaesthetists 2005. Acute pain management: scientific evidence. 2nd edn.*

(b) How may these myths and misconceptions about pain influence triage decision-making?



CHAPTER 8: PAEDIATRIC TRIAGE

Statement of purpose

The purpose of this chapter is to provide a framework for applying the ATS to infants, children and adolescents.

Learning outcomes

After completing this chapter, participants will be able to identify the physiological and behavioural factors that inform the diagnosis of urgency in this population.

Learning objectives

- Discuss the application of the ATS to a paediatric population.
- Identify the features of serious illness in children.
- Compare available assessment tools and consider their value to triage decision-making for this population.
- Use a physiological approach to define clinical urgency and to apply the ATS to children presenting to the ED.

Key points

- The clinical priorities and the principles of urgency for infants, children and adolescents are the same as those for adults.
- Determining urgency will require recognition of serious illness, some features of which may be different in infants and children.
- The value of parents and their capacity to identify deviations from normal in their child's level of function should not be underestimated.



Content

Infants and small children differ from adults physiologically and psychologically. Children and adolescents are also developmentally different from adults. The principles of paediatric assessment are the same as those for adult assessment; however, age influences the pattern of presentation, assessment and management, as children are prone to rapid deterioration.

Consistency of triage is optimised for this population when age, historical data and clinical presentation are all included in the triage assessment.²

History-taking in paediatrics relies on information provided by primary carers and sometimes by the child or young person. It is important to develop a rapport with the patient and the carer in order to elicit the maximum amount of information in a relatively short timeframe.

Interpreting the meaning of the information provided by carers is an additional challenge when triaging children, as the information that is given in this context will be influenced by the carer's own knowledge and experience.⁸⁰

The importance of privacy for parents, children and young people at triage should not be ignored. Simple health problems may be an opportunity for parents to seek assistance regarding more sensitive issues.

Young people have high mental and emotional needs and require greater privacy. They may wish to discuss their health concerns without the presence of their parents. (Refer to Chapter 5 for triage guidelines relating to mental health issues.)

Clinical urgency

A number of clinical features have been found to be significantly predictive of serious illness in infants and young children.⁸¹⁻⁸⁹

Hewson et al (1990)⁹⁰ demonstrated the value of several easily assessed parameters in positively identifying infants with serious illness, including activity levels, alertness, skin temperature, feeding patterns and fluid output. In particular, the following parameters were predictive of serious illness:

- Decreased feeding (<½ normal intake in preceding 24 hours)
- Breathing difficulty
- Having fewer than four wet nappies in the preceding 24 hours
- Decreased activity
- Drowsiness
- Being pale and hot
- Febrile illness in a child under three months old.

Several assessment tools use these known markers of serious illness in infants and young children as the basis for triage decision-making. These include the Triage Observation Tool⁹¹ and SAVE A CHILD.⁹² The Yale Observation Scale is another tool that may be helpful in detecting occult bacteraemia in infants.⁹²⁻⁹⁴ A brief summary of each of these tools is provided in the 'Teaching resources' section of this chapter.



Physiological approach to triage assessment and decision-making

General appearance

Clinical data to contribute to the assessment of urgency can be gained from observing the general appearance of a child presenting to the ED. This is particularly significant in cases in which examination is likely to upset the infant or young child, making further examination difficult.

Airway

Evaluation of the airway will concentrate on determining airway patency.

Stridor is an indicator of airway obstruction, and therefore implies a high level of urgency.

Evaluation of the extent of the airway obstruction in infants and young children should be made by assessing work of breathing.

Cervical spine management forms a component of airway evaluation where the presentation is the result of trauma.

Assessment and management of likely cervical injury in children is particularly challenging and may increase the relative urgency of the presentation.

Breathing

It is widely recognised that infants and young children tolerate respiratory distress poorly, and increased work of breathing has been shown to be an indicator of serious illness in infants.^{82,95}

Work of breathing and mental status are the most useful indicators of the severity of asthma. These parameters are also thought to be predictive of severity for most respiratory presentations in infants and young children.^{96,97}

Although the presence of elevated respiratory rate, retraction, nasal flaring and a range of other clinical signs are an indication of significant illness, their absence may not always be a negative predictor of serious illness.^{88,98,99}

Triage Nurses are encouraged to use a number of parameters to make a respiratory assessment.

Circulation

Hypotension is a very late sign of haemodynamic compromise in infants and children. Initial assessment should be dependent upon general appearance, pulse and central capillary refill.

- Onset of pallor in infants is a significant finding and an indicator of serious illness.^{82,95}
- Capillary refill time is an indicator of central perfusion and therefore an indirect measure of cardiovascular function.¹⁰⁰
- Estimation of the level of dehydration is important – see Table 8.1.



Table 8.1: Assessment of dehydration levels in infants¹⁴²

Signs	Severity		
	Mild	Moderate	Severe
General condition	Thirsty, restless, agitated	Thirsty, restless, irritable	Withdrawn, somnolent or comatose; rapid deep breathing
Pulse	Normal	Rapid, weak	Rapid, weak
Anterior fontanelle	Normal	Sunken	Very sunken
Eyes	Normal	Sunken	Very sunken
Tears	Present	Absent	Absent
Mucous membranes	Slightly dry	Dry	Dry
Skin turgor	Normal	Decreased	Decreased with tenting
Urine	Normal	Reduced, concentrated	None for several hours
Weight loss	4–5%	6–9%	>10%

Disability

An abnormal conscious level always requires urgent assessment. An alteration in the level of activity can be an indicator of serious illness in infants and children.^{82,95}

Decreased conscious level can be a result of serious derangement of oxygenation or circulation.

The different developmental levels of children will complicate conscious state and neurological assessment. The AVPU scale is a good method to assess level of consciousness at triage.

Never underestimate the contribution of the parents or carer. They will often be able to identify subtle deviations from normal which you may not be able to detect clinically.

Pain assessment should also form a component of the neurological assessment. Assessment of pain in children may require adaptation of pain measurement tools, and will be dependent on the child's age. For example, behavioural tools would be appropriate for pre-verbal children, faces scales for early verbal children and visual analogue scales for older children.^{113,114}



History of presenting complaint

History can be gathered from a number of sources, including the child and/or the caregiver.

Children suffer different patterns of injury from adults in trauma. Mechanism of injury is an important part of assessment, as it is in adults, and can be used to predict patterns of injury. For example, a greenstick fracture is typical in a young child suffering from a fall. Child protection issues must be a consideration (see Chapter 10 – Mandatory reporting).

It is important to ascertain recent potential contact with infectious diseases, such as chicken pox.

Past history

Co-morbid factors should be evaluated for the likely effect on their acute condition and therefore clinical urgency. For example, premature infants or children with congenital heart or lung disease have a greater propensity to developing significant cardiorespiratory dysfunction from respiratory infections.

Paediatric past history should also consider perinatal and immunisation history.

Table 8.2 shows paediatric physiological discriminators for the ATS using the primary survey method.

Table 8.2: Paediatric physiological discriminators¹¹⁸

	Category 1 – Immediate	Category 2 – Emergency Within 10 minutes	Category 3 – Urgent Within 30 minutes	Category 4 – Semi-urgent Within 60 minutes	Category 5 – Non-urgent Within 120 minutes
Airway	Obstructed Partially obstructed with severe respiratory distress	Patent Partially obstructed with moderate respiratory distress	Patent Partially obstructed with mild respiratory distress	Patent	Patent
Breathing	Absent respiration or hypoventilation	Respiration present	Respiration present	Respiration present	Respiration present
Circulation s/s dehydration ↓ LOC/activity cap refill <2 sec dry oral mucosa sunken eyes ↓ tissue turgor absent tears deep respirations thready/weak pulse tachycardia ↓ urine output	Severe respiratory distress, e.g. – severe use accessory muscles – severe retraction – acute cyanosis. Absent circulation Significant bradycardia, e.g. HR <60 in an infant Severe haemodynamic compromise, e.g. – absent peripheral pulses – skin pale, cold, moist, mottled – significant tachycardia – capillary refill >4 secs. Uncontrolled haemorrhage	Moderate respiratory distress, e.g. – moderate use accessory muscles – moderate retraction – skin pale. Circulation present	Mild respiratory distress, e.g. – mild use accessory muscles – mild retraction – skin pink. Circulation present	No respiratory distress – no use accessory muscles – no retraction. Circulation present	No respiratory distress – no use accessory muscles – no retraction. Circulation present
Disability	GCS <8	GCS 9–12 Severe decrease in activity, e.g. – no eye contact, – decreased muscle tone.	GCS >13 Moderate decrease in activity, e.g. – lethargic – eye contact when disturbed.	<3 s/s dehydration Normal GCS or no acute change to usual GCS. Mild decrease in activity, e.g. – quiet but eye contact – interacts with parents.	No s/s dehydration Normal GCS or no acute change to usual GCS. No alteration to activity, e.g. – playing – smiling.

Table 8.2: Paediatric physiological discriminators¹¹⁸ (cont)

	Category 1 – Immediate	Category 2 – Emergency Within 10 minutes	Category 3 – Urgent Within 30 minutes	Category 4 – Semi-urgent Within 60 minutes	Category 5 – Non-urgent Within 120 minutes
		Severe pain, e.g. <ul style="list-style-type: none"> – patient/parents report severe pain – skin, pale, cool – alteration in vital signs – requests analgesia. 	Moderate pain, e.g. <ul style="list-style-type: none"> – patient/parents report moderate pain – skin, pale, warm – alteration in vital signs – requests analgesia. 	Mild pain, e.g. <ul style="list-style-type: none"> – patient/parents report mild pain – skin, pink, warm – no alteration in vital signs – requests analgesia. 	No or mild pain, e.g. <ul style="list-style-type: none"> – patient/parents report mild pain – skin, pink, warm – no alteration in vital signs – declines analgesia.
		Severe neurovascular compromise, e.g. <ul style="list-style-type: none"> – pulseless – cold – nil sensation – nil movement – ↓ capillary refill. 	Moderate neurovascular compromise, e.g. <ul style="list-style-type: none"> – pulse present – cool – sensation – movement – ↓ capillary refill. 	Mild neurovascular compromise, e.g. <ul style="list-style-type: none"> – pulse present – normal/↓ sensation – normal/↓ movement – normal capillary refill. 	No neurovascular compromise

Risk factors for serious illness or injury

These should be considered in the light of history of events and physiological data.

Multiple risk factors = increased risk of serious injury.

The presence of one or more risk factors may result in allocation of triage category of higher acuity.

Mechanism of injury, e.g. <ul style="list-style-type: none"> • penetrating injury • fall > 2 – height • MCA >60 kph • MVA/cyclist >30 kph • pedestrian • ejection/rollover • prolonged extrication (>30 minutes) • death same car occupant • explosion. 	Co morbidities, e.g. <ul style="list-style-type: none"> • Hx prematurity • respiratory disease • cardiovascular disease • renal disease • carcinoma • diabetes • substance abuse • immuno-compromised • congenital disease • complex medical Hx. 	Age <3 months and <ul style="list-style-type: none"> • febrile • acute change to feeding pattern • acute change to sleeping pattern Victims of violence, e.g. <ul style="list-style-type: none"> • child at risk • sexual assault • neglect. 	Historical variables, e.g. events preceding presentation to ED <ul style="list-style-type: none"> • apnoeic/cyanotic episode • seizure activity • decreased intake • decreased output • red current jelly stool • bile stained vomiting. • Parental concern 	Other, e.g. <ul style="list-style-type: none"> • rash • actual/potential effects of drugs/alcohol • chemical exposure • envenomation • immersion • alteration in body temperature.
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Teaching resources

Further reading

Triage Observation Tool

- Browne GJ, Gaudry PL, Lam LA. Triage observation scale improves the reliability of the National Triage Scale. *Emergency Medicine Australia* 1997; 9:283–8.⁹¹

The Triage Observation Tool is a more extensive tool than the ATS and focuses on approximately 15 assessment parameters. It addresses history of presenting problem (activity, feeding, output, etc.) and prompts a brief examination (breathing, crying, signs of dehydration, circulation, etc.) and collection of vital signs (heart rate, RR, SpO₂, temperature and blood pressure).

Yale Observation Scale

- McCarthy P, Sharpe M, Spiesel S, Dolan T, Forsyth B, DeWitt T, et al. Observation scales to identify serious illness in febrile children. *Paediatrics* 1982; 70⁵: 802–9.⁹³
- McCarthy P, Sharpe M, Spiesel S, Dolan T, Forsyth B, DeWitt T, et al. Yale Observation Scale. In: *Family Practice Note Book* [Online] 1982 [cited March 24 2007]. Available from:
URL: <http://www.fpnotebook.com/ID468.htm>⁹⁴

The Yale Observation Scale is a six-point instrument that predicts serious infection and toxic appearance in children from 3 to 36 months of age. Variables include quality of cry, reaction to parents, state variation (arousal), colour, hydration and social response. A total score of 30 is possible, with scores <10 associated with a 2.7 per cent incidence of serious illness, scores of 11–15 with a 26 per cent chance of serious illness, and scores >16 with a 92.3 per cent incidence of serious illness.

Additional reading

- Bromfield L, Higgins D. National comparison of child protection systems. *Child Abuse Prevention Issues* 2005 Autumn;22.
- Gorelick MH, Shaw KN, Murphy KO. Validity and reliability of clinical signs in the diagnosis of dehydration in children. *Paediatrics* 1997; 99(5): e6.
- Hewson, P, Poulakis, Z, Jarman, F, Kerr, J, McMaster, D, Goodge, J, et al. Clinical markers of serious illness in young infants: a multimeter follow-up study. *Journal of Paediatrics & Child Health*; 2000, 36(3):221–5.¹¹⁶



Teaching strategies

Multiple-choice questions

Select one answer only.

1. The primary aim of paediatric triage decision-making is to ensure that:
 - (a) ED care is delivered according to clinical need
 - (b) children do not wait in the waiting room
 - (c) children are seen more urgently than adults
 - (d) children do not deteriorate.
2. A physiological approach to triage assessment can be used to evaluate children presenting to the ED because:
 - (a) the priorities of assessment and care are the same regardless of age
 - (b) this approach does not rely on the evaluation of vital signs which differ vastly with age
 - (c) the differences between adults and children can be accounted for in assessment and interpretation of findings using this approach
 - (d) both (a) and (d).
3. A mother presents to the ED with a three-month-old baby with fever and poor feeding. Your first priority of assessment is:
 - (a) evaluation of the infant's hydration status
 - (b) assessment of airway patency
 - (c) establishing the colour of the child's skin
 - (d) measuring the child's temperature.
4. The following sign is negatively predictive for serious illness:
 - (a) feeding within normal limits
 - (b) smiling
 - (c) fever
 - (d) alterations in activity or conscious state.
5. A two-year-old child with a soft stridor, mild increase in work of breathing, pink and warm skin who is playful during assessment should be allocated the following urgency category:
 - (a) ATS 1
 - (b) ATS 2
 - (c) ATS 3
 - (d) ATS 4.

Critical discussion

After completing the lesson and the prescribed reading, discuss the following:

1. What (national or local) policies exist to influence paediatric triage practice, and why have they been implemented?
2. How do these policies impact on other patients presenting to the ED and on the effectiveness of the triage system?





CHAPTER 9: PREGNANCY AND TRIAGE

Statement of purpose

The purposes of this chapter are to:

- Provide an outline of the physiological adaptations that occur in pregnancy; and
- Discuss the factors that influence the triage code allocation for pregnant women.

Learning outcomes

After completing this chapter, participants will be able to state the main physiological changes that occur in pregnancy and explain how these adaptations will influence the allocation of a triage code. Participants will also be able to identify common and life-threatening complications that present to triage and discuss how urgency is determined for these conditions.

Learning objectives

- Outline the physiological changes in pregnancy that may modify triage decision-making.
- Describe the relevant questions to ask about a woman's obstetric history.
- Discuss common non-obstetric conditions that may adversely impact on a pregnant woman and the unborn child.
- Explain the maternal factors that may alert the Triage Nurse that urgent foetal assessment is required.
- Discuss significant obstetric complications of pregnancy that impact on the pregnant woman and the unborn child.

Key points

- All women of child-bearing age should be considered to be pregnant until proven otherwise.
- An assessment of urgency must be made on the basis of both the woman and the foetus.
- An elevated BP is an ominous sign: the higher the BP the more urgent the review.
- Pregnant women are at an increased risk of a number of conditions, including cerebral haemorrhage, cerebral thrombosis, severe pneumonia, atrial arrhythmias, venous thrombosis and embolus, spontaneous arterial dissection, cholelithiasis and pyelonephritis, than non-pregnant women of child-bearing age.
- Presentations may include concerns about normal manifestations or progression of pregnancy.



Content

Triage and the pregnant patient

A pregnant woman presenting to an ED raises a number of unique challenges to the Triage Nurse.

- The Triage Nurse needs to be aware of the normal physiological and anatomical adaptations of pregnancy because these will influence assessment.
- Triage should consider the wellbeing of both the mother and the foetus and potential threats to either.
- The pregnant woman may present with any disease.

The presentation of some diseases is modified by pregnancy and some diseases only occur in pregnancy.

Pregnancy and the primary survey

Airway

Any pregnant women presenting to the ED with a potentially compromised airway needs urgent medical attention. Pregnant women are often difficult intubations due to patient size, patient positioning and different induction agent requirements due to cardiovascular physiological changes.

Breathing

Progesterone is thought to be responsible for altering the sensitivity of the respiratory centre and increasing the drive to breathe.¹¹⁹

- Pregnant women commonly experience increased nasal and airway vascularisation and mucosal oedema. This presents as an increase in complaints about nasal congestion.
- About one-third of women with asthma suffer a deterioration of their illness during pregnancy.¹²⁰

Circulation

Pregnancy is described as a hyperdynamic state and physiological changes occur as early as 6–8 weeks gestation. Progesterone causes widespread vasodilatation and oestrogen is thought to contribute to a 40–50 per cent increase of blood volume. The diastolic blood pressure falls on average 6–17 mmHg, with BP lowest during the second trimester. Cardiac output (CO) increases by 30–50 per cent.

At 20 weeks gestation, the weight of the uterus compresses the inferior vena cava if the woman is lying on her back. The subsequent reduction in placental flow is enough to compromise foetal wellbeing and the drop in venous return reduces maternal CO and BP. Unspecified changes occur to blood vessels that predispose pregnant women to spontaneous arterial dissections.¹²¹



The splenic artery, subclavian artery and aorta, for example, have an increased tendency to spontaneous dissection, even in women with no previous medical history.

Domestic violence is more common during pregnancy and is associated with an increase in obstetric complications for the mother and adverse neonatal outcomes.¹²³

Important points to note:

- Pregnant women often describe palpitations during pregnancy, which is usually due to the hyperdynamic flow.
- The high volume and dynamic blood flow is thought to contribute to the increased likelihood of cerebral haemorrhage (especially sub-arachnoid haemorrhage (SAH)) in pregnancy.
- It is not uncommon for pregnant women to experience a sudden and serious deterioration of their condition therefore pregnant women showing signs of haemodynamic de-compensation require urgent medical assessment.¹²⁴
- All pregnant women >20 weeks gestation should have a left lateral tilt (wedge under their right hip, or whole bed tilted if wedge is contraindicated) if they are lying down.
- Pulmonary embolus is relatively common during pregnancy due to the changes in the coagulation system associated with pregnancy.
- In the setting of trauma, all usual trauma criteria should be considered. Additional considerations include trauma to the uterus, placenta or foetus, particularly in the third trimester when the foetus is viable. The maternal vital signs may remain stable even when loss of one-third of blood volume may have occurred.¹²⁵
- 'The best initial treatment for the foetus is the optimum resuscitation of the mother.'¹²⁵

Common conditions that present to ED according to gestational age

Problems occurring prior to 20 weeks

Pregnant women frequently present to the ED with vaginal bleeding. Common causes include the various types of miscarriage (i.e. threatened, inevitable, complete, incomplete and septic).

- Knowledge of the volume and colour of per vaginal (PV) loss will assist the Triage Nurse with categorising the urgency of the case.
- Bright red blood loss is usually indicative of active bleeding, while brownish red blood loss is usually old.
- Many women may also complain of associated abdominal pain that may be likened to severe period pain.
- Shoulder tip pain can be indicative of a bleeding ectopic pregnancy.
- The first and foremost diagnosis to exclude in the female of child-bearing age, including those who have undergone sterilisation procedures presenting with vaginal bleeding, is an ectopic pregnancy.¹²⁶



Abdominal pain is the most common symptom in ruptured ectopic pregnancy.¹²⁷ Non-ruptured ectopic pregnancies generally present with bleeding (brown being the most common) due to low progesterone and consequent shedding of the decidua.

Regardless of the diagnosis, vital signs that deviate from normal and severe pain (such as torsion or ruptured cysts) warrant prompt medical assessment.

Problems occurring from 20 weeks onwards

Pregnant women from 20 weeks gestation may present with the following obstetric conditions:

- Antepartum haemorrhage
- Preeclampsia (including eclampsia)
- Pre-term rupture of the membranes and labour.

Hypertension (>140/90) is a particularly important sign to alert the Triage Nurse to a more serious problem. The presence of the associated symptoms of severe preeclampsia warrants urgent medical assessment. These include:

- Headache
- Visual disturbances
- Epigastric pain
- Right upper quadrant (RUQ) pain
- Non-dependent oedema.

These women are at risk of fitting and placental abruption, and the foetus has a higher risk of placental insufficiency.

There is a correlation between the degree of hypertension and complications such as cerebral haemorrhage.

- Antepartum haemorrhage is defined as >15 mL of blood loss from the vagina from 20 weeks gestation.
- Common causes include placenta praevia and placental abruption.
- In placenta praevia, blood loss is usually visible PV and is not usually accompanied by pain.
- In placental abruption, the primary symptom is abdominal pain. The associated blood loss may be concealed between the placenta and uterus. Haemodynamic changes are only seen with big bleeds, smaller bleeds may be difficult to detect or more easily detected with an abnormal cardiotocograph (CTG). The main signs and symptoms are haemodynamic changes associated with hypovolaemic shock and abdominal pain.



Postnatal women may present with the following:

- Secondary postpartum haemorrhage \pm puerperal sepsis
- Mastitis
- Wound infection
- Eclampsia
- Postpartum cardiomyopathy
- Postnatal depression.

Urgent threats to foetal wellbeing

- Changes in oxygen saturations in the mother are of direct relevance to foetal wellbeing. A small reduction in maternal oxygenation can severely impact on foetal oxygenation because of the left shift in the oxyhaemoglobin dissociation curve associated with foetal haemoglobin.¹²⁹ Consider oxygen saturation at triage on all pregnant women.
- Major alterations in blood pressure (whether high or low) are not well tolerated by the foetus.
- Active vaginal bleeding at any gestation presents a risk to the foetus.
- Abdominal pain during pregnancy may represent a pathological process threatening the foetus.
- Pregnant women normally feel foetal movement from 18–20 weeks gestation. A regular pattern of foetal movement is a reassuring sign of foetal wellbeing. Absent or diminished foetal movements require prompt assessment.



Teaching resources

Further reading

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- DeLashaw MR, Vizioli TL, et al. Headache and seizure in a young woman postpartum. *Journal of Emergency Medicine* 2005;29(3):289–93.
- Fuschino W. Physiologic changes of pregnancy: impact on critical care. *Critical Care Clinics of North America* 1992;4(4):691–701.
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Teaching strategies

Multiple-choice questions

Select the correct response by circling one answer only.

1. The normal blood pressure changes that occur during pregnancy, develop:
 - (a) at about 20 weeks gestation
 - (b) from about 6–8 weeks gestation
 - (c) during the third trimester
 - (d) during the second trimester.
2. A 26-year-old woman in her third trimester presents to the ED with a severe headache. What are the primary pieces of information you need to make a triage decision?
 - (a) past medical history, presenting history
 - (b) conscious state and blood pressure
 - (c) what medications the woman has taken
 - (d) her gestation and presence of foetal movements



Short-answer questions

1. A 42-year-old woman presents with no foetal movements. Discuss the information you need to determine a triage category.
2. A 32-year-old woman presents with PV bleeding. She says that it is possible that she is pregnant, though she's not sure. Describe how you would assess this woman.
3. A 39-year-old woman who is 27 weeks pregnant presents to the ED with chest pain. What are the potential causes of this symptom, and how may they be distinguished?

Discussion points

After completing the prescribed reading consider the following questions. Discuss your answers with a peer or your educator.

1. What are the key questions you would ask about the pregnancy, when a pregnant woman presented to triage?
2. Acutely unwell pregnant women may remain haemodynamically stable until a sudden deterioration in condition takes place. Why may there be a delay in changes to vital signs in pregnant women?



Emergency



CHAPTER 10: MEDICO–LEGAL ISSUES

Statement of purpose

The purpose of this chapter is to outline the legal responsibilities associated with the professional practice of triage.

Learning outcomes

After completing this chapter, participants will be able to apply medico–legal concepts to triage practice.

Learning objectives

- Discuss the role of education and supervised practice in relation to triaging; and
- Describe the medico–legal responsibilities of the nurse performing the triage role including:
 - Informed consent
 - Duty of care
 - Negligence
 - Documentation
 - Confidentiality
 - Preservation of forensic evidence.

Key points

- Nurses performing the role of triage must have appropriate education and supervised practice prior to practicing independent triage.
- Documentation must be accurate and contemporaneous.
- There should be clear understanding of duty of care.
- Nurses must appreciate the importance of re-triaging.
- Policies and protocols should be readily accessible for the nurse performing the triage role.



Content

Role of the Triage Nurse

A nurse performing triage must have an appropriate level of knowledge and skills to perform the role. Nurses have a legal and professional duty to perform the role of Triage Nurse utilising a systematic approach.

Emergency Nurses, as professionals, are accountable for their practice. The accountability comes from the utilisation of available protocols, the completion of the correct documentation, and adherence to standards and quality guidelines. Protocols ideally help in the maintenance of a consistently high standard of care at the institution and can be utilised if necessary to provide evidence of the clinical practice encouraged at the health care facility.

The physiological discriminators and Australasian Triage Scale (ATS) are examples of the guidelines that are available for the nurse to utilise. It is not assumed that following protocols blindly will protect the nurse from any legal liability. With this in mind, consideration should also be given to the autonomy of the role, with use made of the Triage Nurses' independent judgement for each triage episode, and the ability to utilise his or her expertise to individualise the assessment of the patient.

Protocols should be viewed as the minimum standard of care required to be delivered. Position statements that describe the roles and responsibilities of the Triage Nurse including the minimum practice standard have been produced by the professional bodies.

All nurses should know some basic legal principles, which include consent, the elements of negligence, definition and sources of the standards of care, and how policies and guidelines can influence practice. There is an expectation that the nurse performing the role of the Triage Nurse will have had adequate experience, training and supervision to perform the role. The employing institution also has a responsibility to ensure that the staff are adequately prepared to perform the role.

Consent

The five elements of consent are as follows:

1. Consent must be given voluntarily.
2. A person must have the legal capacity to give consent.
3. Consent should be informed.
4. Consent must be specific.
5. Consent must cover what is actually done.



The absence of any one element renders the consent invalid. Consent may be given in several ways:

- **Implied consent:** Implied consent is the most straightforward. With implied consent, by virtue of the patient presenting at the triage area to be assessed does not necessarily imply consent, but consent is often implied by the patient's behaviour. This implied consent becomes less defined if the patient is confused or unable to communicate for any other reason.
- **Verbal consent:** This form of consent is more valid than implied consent. For example, if the Triage Nurse states that he or she is going to ask the patient a couple of questions, and the patient agrees to this, this implies verbal consent.
- **Written consent:** This form of consent is not something that is necessarily obtained by the Triage Nurse during his or her assessment, however there should be awareness of the local policies and procedures regarding obtaining of written consent.

Duty of care

By engaging with a patient as they present to the ED, the Triage Nurse enters into a health professional–patient relationship. The nurse shares the responsibility of the hospital to ensure that patients who present to the ED are offered an appropriate assessment of their treatment needs.

A 'duty' is an obligation that is recognised by law, and the nurse's duty to a patient is to provide the same level or degree of care that would be employed by a nurse practising under similar or the same circumstances. The Triage Nurse then has an obligation to try to protect the patient from any foreseeable harm or injury ensuring a reasonable standard of care. This reasonable standard of care may be informed by policies such as the Minimum Standards for Triage and other documents such as the Australian Nursing and Midwifery Council (ANMC) competencies.

Scales such as the ATS are also utilised to guide decision-making, remembering that the ATS are guidelines for care.

There are certain circumstances when the Triage Nurse may be forced to rapidly detain a patient because, if they leave they pose a risk of harming themselves or others in the community. Such action is covered by legislation (which is different in different jurisdictions) and may be initiated under the principle of necessity under common law. It is important that such circumstances are immediately referred to the senior clinician on duty.

The proportion of patients who do not wait for medical treatment in EDs may be up to 20 per cent of presentations. This is regarded as representing a failure to access the health system. Patients may choose to leave the hospital without being seen by the medical staff in the ED, and if the patient is competent the Triage Nurse cannot restrain them. However, the Triage Nurse has a responsibility to warn the patient of the consequences of such a decision, and appropriate documentation recording this decision should be completed by the patient and witnessed.



However, patients who have cognitive impairment from drug use, alcohol use or mental illness are at risk from adverse events in such situations. The Triage Nurse must therefore consider their duty of care in such cases.

The Triage Nurse must be aware of his or her responsibilities with these patients and abide by any local policies or protocols.

Negligence

Negligence laws vary between states and have recently undergone significant changes. Nurses have a responsibility to behave in a reasonable manner. If there is any breach from this responsible approach which results in some type of injury to another, this breach constitutes negligence.

For negligence to be proven it requires the establishment of all of the following elements:

- Duty to meet the standard of care
- Breach of the duty to meet the standard of care
- Breach of that duty which causes foreseeable harm
- Causing actual harm and injury
- Causing loss.

Documentation requirements

Communication with and by the staff leads to increased information shared and clear advice given. Medical records are a method of communication for health care team members and are a contemporaneous record of events. They must be accurate, clear and succinct. It is also expected that the records will be easily accessible and able to be understood.

Documentation of each interaction between the nurse performing triage and the patient and/or significant others are another area of accountability for practice. The Australasian College for Emergency Medicine (ACEM) is clear in its guidelines about the minimum information that is required to be recorded for any triage episode.

Documentation standards that are required by ACEM are:

- Date and time of triage assessment
- Name of the Triage Nurse
- Chief complaint/presenting problem
- Limited relevant history
- Relevant assessment findings
- Initial triage category allocated
- Re-triage category with time and reason
- Assessment and treatment area allocated
- Diagnostic, first aid or treatment initiated at triage.

Any change in the patient's condition should be documented clearly. This documentation should include the time of the re-triage, the reason for the re-triage and who was responsible for the performance of the re-triage. (See 'The Challenge of Triage' on page 33 of Chapter 4.)



The Triage Nurse should be aware of the management systems in place at the individual institutions to facilitate this documentation.

Similarly, if it is the practice of the institution to transfer the care of patients to other health care providers such as general practitioners, accurate and concise documentation of any treatment administered and any recommended course of action should be made.

Some patients choose to leave prior to medical assessment. If such a patient advises the Triage Nurse they are not waiting, the Triage Nurse should document this decision, as well as any advice given to the patient, including possible adverse outcomes.

Confidentiality

Health professionals must maintain any information that has been provided in-confidence to them. It is also expected that the patient is in receipt of privacy from health professionals. Safeguards are in place to protect patient's information. These include health legislation at both federal and state level.

The Triage Nurse also has a responsibility to ensure the patient's privacy is respected both during the triage assessment and while the patient waits in the waiting room. The hospital policy regarding patient's privacy and rights should also be readily accessible to the Triage Nurse.

A health care professional is obliged to treat the patient's medical information as private and confidential. However, in certain circumstances there is a legal requirement to override a patient's privacy and confidentiality; for example, children at risk. Otherwise, a breach of a patient's privacy constitutes a breach of the duty of care.

Mandatory reporting responsibilities

If there is any suspicion that a child or children may be in need of care or may be being maltreated, the nurse has a legal responsibility to report it to the relevant authorities and refer to their jurisdiction.

Although this reporting may not occur from the triage desk, the nurse needs to be aware of the legal requirements and of the procedures and documentation requirements of the hospital, in order to fulfil these obligations.

Preservation of forensic evidence

Nurses performing the triage role must be familiar with the hospital's procedures for dealing with the preservation of forensic evidence involving a patient who is a possible victim of crime (e.g. rape or assault). These procedures should include liaison with police officers as appropriate, with the patient's consent.



Teaching resources

Further reading

- Australasian College for Emergency Medicine. Guidelines for implementation of the Australasian Triage Scale in Emergency Departments. ACEM [Online] 2005 [cited 2007 Feb 2]. Available from:
URL: http://www.acem.org.au/media/policies_and_guidelines/G24_Implementation__ATS.pdf²
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- Wand T. Duty of care in the emergency department. *International Journal of Mental Health Nursing* 2004; 13(2): 135–9

This paper explores issues that relate to the management of deliberate self-harm in the ED from a New South Wales perspective. Tim Wand is a nurse practitioner in the ED at the Royal Prince Alfred Hospital.



Teaching strategies

Discussion points

1. Join with a colleague and role-play patient presentations to triage. Attempt to be as varied in your complaints as possible. Your colleague is to perform an accurate and succinct triage assessment, including the documentation of the assessment and the utilisation of the ATS. The documentation should take into consideration the objective assessment.
2. Identify what the requirements are of the health care facility for the documentation of patients who choose not to wait for treatment or who leave at their own risk.
3. Be familiar with the triage area including any extra resources such as protocols that may be available.
4. Observe an experienced nurse performing the triage role, including review of documentation.
5. Identify the policies/protocols for the individual health care facility that demonstrates the standard of care.
6. Use the following patient scenarios as a basis for discussion in tutorial groups.

Patient scenarios

1. John Oliver was a 25-year-old man who was a regular night clubber and had spent the night before out with friend until the early hours of the morning. Later that day he attended the local ED and was complaining of a headache. He was accompanied by a friend who waited with him in the waiting room. He was assessed as an ATS category 4 and was seated in the waiting room accompanied by his friend. After two hours, the friend spoke to the Triage Nurse about his concerns for his friend, but John made the decision not to wait to be seen by a doctor and went home. The next day he was found to have died at home.

Suggested areas for discussion include:

- The identification of the role/responsibility of the Triage Nurse to stop John from leaving the ED;
 - The documentation of any interactions with the patient or his friend; and
 - The procedure of documentation at the hospital.
2. A five-year-old girl is brought in by ambulance with moderately severe asthma. She is accompanied by her 14-year-old brother who is translating for her. Her mother is at home, being unable to attend as she is 38 weeks pregnant (and is looking after a three and seven year old). What issues does this presentation illustrate? Why?



3. A 15-year-old girl presents to triage in the presence of police, smelling of alcohol, stating that she was raped in the toilets of the local club. Outline your responsibilities as a Triage Nurse and describe local practices to manage this case.
4. A six-year-old presents with his mother with a deep laceration to his arm. His mother states that he fell over in the park. The wound is not actively bleeding, and you assign him an ATS category 4. You place him in the waiting room and 30 minutes later they are gone. You phone the mobile number they have given and find that it is disconnected. What do you do next?
5. A woman aged 40 is brought in by ambulance, having called it herself. She reports feeling suicidal, and states that she has the necessary tablets and that she wrote a suicidal note. But she says she changed her mind and wants help. She identifies multiple recent stressors.
 - (a) How would you go about triaging this person?
 - (b) Someone else has triaged the woman as an ATS category 3 and placed her in the waiting room. You go to call the patient but she has left.
6. Information about a patient is requested of the Triage Nurse by:
 - A police officer
 - A child protection worker
 - The media
 - The patient's employer
 - The driver of the other car involved in the accident
 - A concerned bystander or witness to the accident
 - The patient's parent
 - A relative of the patient
 - Another member of the hospital staff.
 - (a) What are your responsibilities?
 - (b) How would you deal with this situation?
7. Identify the risks associated with the note 'DNW' (did not wait) being the only documentation by a Triage Nurse of a patient who did not wait to be seen for medical treatment.



CHAPTER 11: CONSOLIDATION

Statement of purpose

The purposes of this chapter are to:

- Apply the principles learnt in Chapters 1–10 to a set of 63 triage scenarios;
- Use the tools contained within the ETEK to assist decision-making; and
- Assess your own level of decision making consistency by comparing your performance with the expected triage category for this scenario set.

Learning outcomes

After completing this chapter, participants will have consolidated the principles learnt in Chapters 1–10, and will be familiar with the application of the ATS guidelines to actual occasions of triage.

Learning objectives

Choose the most appropriate ATS category for each of the 63 triage scenarios.

Teaching resources

Australasian College for Emergency Medicine. Guidelines for Implementation of the Australasian Triage Scale in EDs. ACEM [Online] 2005 [cited 2007 Feb 2]. Available from: URL: http://www.acem.org.au/media/policies_and_guidelines/G24_Implementation_ATS.pdf

Mental Health Triage Tool – Table 5.1, page 43.

Paediatric Triage Tool – Table 8.2, page 68.

Teaching strategies

This activity will take approximately two hours, of which 30 minutes should be spent discussing answers and obtaining feedback on performance for the scenario set.

For each triage scenario, select the ATS category you think is most appropriate by ticking the box; choose one option only. Make notes in the comments section to justify your decisions. When you have finished, compare your answers with the answer guide (see Appendix E).

Discuss any disagreements with your triage instructor.



Triage scenarios

1. Ebony is a four-month-old girl who is brought to the ED by her mother at 4.00 pm. Her mother states that the child has had difficulty breathing for two days and has been worse overnight. The child has been coughing and feeding poorly. Her fluid intake has been approximately half that of a normal day and she has had a decrease in the number of wet nappies. She has a moist-sounding cough and no audible wheeze. She is tachypneic with a respiratory rate of 60 breaths per minute. Examination of her chest shows mild use of accessory muscles. On auscultation she has an expiratory wheeze. Her skin is pink and she has moist mucous membranes.

1	2	3	4	5
Comments:				

2. Laura is a 10-year-old girl who presents to the ED at 11.00 pm with her older sibling saying that she has had abdominal pain for the past few hours. She indicates that the pain is across the centre of her stomach and paracetamol has not helped. She complains of nausea and says that she has vomited once since the onset of pain. When asked, she states that she has had normal bowel motions. She is able to give her own history while leaning over onto the desk, holding her stomach. Her skin is pink and she is not short of breath.

1	2	3	4	5
Comments:				

3. Graham is a 55-year-old male who presents to the ED accompanied by his partner. He states that he has been 'bleeding from the back passage' since the previous night. He is very anxious about the bleeding and reports that it was 'bright red' in colour and 'filled the toilet bowl' on two occasions. His blood pressure is 155/100; his heart rate is 102 beats per minute; his respiratory rate is 20 breaths per minute.

1	2	3	4	5
Comments:				



4. Louisa is a 24-year-old female who presents to the ED with her friend after ‘fainting’ in the toilet at home. She is complaining of left-sided abdominal pains, which she has had ‘on and off’ for several months. She previously attended the ED two weeks ago for the same problem. An abdominal ultrasound was performed at that time but identified no abnormalities. She rates her pain as ‘six out of ten’. Her heart rate is 82 beats per minute and her respiratory rate is 18 breaths per minute. Her skin is cool and dry. She looks pale and uncomfortable.

1	2	3	4	5
Comments:				

5. A mother presents to the ED at 9.20 pm with her nine-week-old son, Christopher, stating that he has had a fever since 4.00 pm that afternoon. She gave him paracetamol at 5.00 pm. She says that he normally vomits after feeds but has vomited once this evening between feeds. Christopher is breast-fed; he has fed less frequently this evening. Christopher’s mother also informs you that he had his first immunisation two days ago. He is in his mother’s arms and is crying. He appears slightly pale. His hands are warm but his feet are cold. Capillary refill is about two seconds and he has moist mucous membranes and normal skin turgor. His anterior fontanelle is not bulging.

1	2	3	4	5
Comments:				

6. Kimberley is 32 years of age. She was sent to the ED following an accident at work. She was carrying a pot of hot oil and slipped, spilling it on her upper legs. She immediately removed her clothing and stood under a cool shower for 15 minutes. On arrival in the ED she is in considerable pain (‘nine out of ten’). You estimate that she has approximately eight per cent burns to her anterior thighs. Her heart rate is 110 beats per minute and her respiratory rate is 24 breaths per minute.

1	2	3	4	5
Comments:				



7. Michaela is a three-week-old infant who is brought to the ED at 9.30 pm by her parents. She has been referred by her local doctor. Her parents state that Michaela has been feeding poorly for several days and that her weight gain has been poor. The infant seems lethargic. The parents have not noticed a fever. The infant is sleeping in her mother's arms and her skin is pale. Her peripheries are cool and her eyes slightly sunken. Painful stimulus is required to wake the child, who then wriggles and cries vigorously.

1	2	3	4	5
Comments:				

8. Toby is an 18-month-old boy who presents to triage at 6.00 pm with his parents. They state that he has been 'unwell' for two days; he started vomiting 48 hours ago, developed diarrhoea yesterday and has had seven loose stools today. He has had episodes of 'crying and drawing up his legs'. He is drinking small amounts. He appears lethargic and uninterested in his surroundings. He is pale and his capillary refill is approximately three to four seconds.

1	2	3	4	5
Comments:				

9. Edward is a 36-year-old male with a past history of alcoholism. He presents to triage at 5.30 pm. He has a referral letter from the nearby drug and alcohol service and an escort. The referral letter states that the patient has 'suicidal ideation and homicidal thoughts'. The letter requests a psychiatric assessment and states that the patient is 'possibly experiencing alcohol withdrawal'. He states that his last drink was at 9.00 am.

1	2	3	4	5
Comments:				

10. Rae, a 24-year-old university student, comes to the ED with a friend. She has a four-hour history of generalised abdominal pain now localised to the right iliac fossa. She has vomited twice and had one episode of diarrhoea about two hours ago. Her heart rate is 92 beats per minute and her temperature is 38.2°C.

1	2	3	4	5
Comments:				



11. A father presents to the ED at 8.00 pm with his three-and-a-half-year-old daughter, Savannah, stating that she has had a sore throat for 'a day or two'. It started with a runny nose and a fever, and then yesterday she began complaining of a sore throat. She has no cough or stridor, she demonstrates no shortness of breath and her skin is pink and warm.

1	2	3	4	5
Comments:				

12. Baz, 34 years old, was installing a ceiling fan with the assistance of a friend in his own home. He received a 240 volt charge to his right hand, and was thrown back against the roof. His friend immediately switched the power off and called an ambulance. Baz had a brief period of loss of consciousness, but was alert when the ambulance crew arrived. His heart rate is 80 beats per minute and irregular; his respirations are 20 breaths per minute. He has a five centimetre blackened area to his right hand. No exit wound is seen.

1	2	3	4	5
Comments:				

13. Hannah is a 41-year-old woman who presents via ambulance with an altered conscious state following collapse. She is 30 weeks pregnant (G₃P₁) and is normally well. She was out shopping with a friend when she suddenly collapsed. Ambulance officers report a fluctuating conscious state. At the scene she tolerated an oropharyngeal airway but spat it out en route. She is in a lateral position on the ambulance trolley with supplemental oxygen via a mask. Her respiratory rate is 10 breaths per minute. Her SpO₂ is 93 per cent; her heart rate is 130 beats per minute. Her skin is pale, cool and moist. Her blood pressure is 190/110. Her Glasgow Coma Score is 10 out of 15. Her temperature is 36.3°C.

1	2	3	4	5
Comments:				



14. Mr J is a 74-year-old man who is brought to the ED by ambulance at 5.10 am. He has acute shortness of breath and a history of left ventricular failure. His heart rate is 112 beats per minute and irregular, his blood pressure is 180/100 and his respiratory rate is 30 breaths per minute, with accessory muscle use. His SpO₂ is 89 per cent, but the pulse oximetry display is giving a poor trace. Oxygen is being administered at 100 per cent via bag-valve-mask. Mr J is trying to remove the mask and is very agitated.

1	2	3	4	5
Comments:				

15. Bo is a 16-month-old boy who presents to triage at 11.00 am with his mother. She states that he has had 'a cold for over a week' which 'has not improved'. Since last night he has had a fever and a cough and has seemed 'more congested'. He was restless over night, is tired today and is drinking less than usual. He is resting against his mother and doesn't protest when examined. No cough, stridor or grunting is heard. He is tachypneic and demonstrates mildly increased work of breathing. His skin is flushed and warm. His capillary refill is less than two seconds and his mucous membranes are moist.

1	2	3	4	5
Comments:				

16. Luka is a nine-year-old boy who presents to triage with his father at 3.00 pm. He has an injured elbow as a result of a fall playing football. He is distressed and is clutching his arm, which is in a sling. He tells you that his pain is 'ten out of ten'. His left elbow is markedly swollen and deformed. He has a strong radial pulse, and sensation distal to the injury is intact. He is pale, slightly diaphoretic and tachycardic.

1	2	3	4	5
Comments:				



17. Albert, 62 years old, often attends your ED. Today he says he is constipated. His bowels have not opened for 'at least two weeks'. He says he has pain and feels bloated. When you ask him to score his pain he is not sure what to say and just answers 'it's really bad'. His vital signs are within normal limits and his skin is warm and dry.

1	2	3	4	5
Comments:				

18. Sebastian is a 16-year-old boy who is brought to the ED by a passer-by, who found him crying and banging his head against the footpath in a small laneway. After bringing Sebastian to the triage the accompanying adult leaves the ED. Sebastian has superficial lacerations to both wrists, and is dishevelled and unkempt. He is upset about having being brought to the ED, and is saying, 'just leave me alone – why don't you just piss off'. He admits trying to hurt himself, and says that he will do so again as soon as he can.

1	2	3	4	5
Comments:				

19. Anne-Marie is a 22-year-old female who is brought to the ED by her flatmates, who are concerned about her bizarre behaviour. She had been talking to herself for several days, turning the television off and on because it is sending her messages, yelling out at night and not sleeping. Her flat mates are concerned that she will come to some harm without help.

1	2	3	4	5
Comments:				

20. Mohammed is a 24-year-old Somali man who is brought to the ED by police. He is crying and lying on the floor, rocking. He smells of alcohol, and police say he is a refugee who has recently been released from a detention centre. He has committed no crime, but was apprehended 'directing traffic' in the middle of a busy city highway.

1	2	3	4	5
Comments:				



21. Damien is a 36-year-old male who is brought to the ED by his friend. He has had a recent marriage break-up, which involved a lengthy custody and property court case. He has had symptoms of depression for several weeks, including low mood, ruminations, poor sleep and appetite, feelings of hopelessness and agitation. Since receiving the outcome of the Family Court hearing three days ago, Damien has been using the amphetamine 'ice', and is now 'obsessed with plotting revenge' on his former spouse. He has been awake for more than 48 hours, and presents as angry, rambling in speech, volatile and disordered in his thinking.

1	2	3	4	5
Comments:				

22. Chloe is a 15-year-old girl who is brought to the ED from a friend's house after taking an overdose. The circumstances are unclear, however, she admits to having taken 12 paracetamol tablets and 'some 'other things', including alcohol. She is known to the ED, having presented 12 months ago following an episode of self-harm. She is cooperative, coherent and not drowsy. Her breath smells of alcohol.

1	2	3	4	5
Comments:				

23. Leonie is a 29-year-old woman who presents to triage with her mother. She has had three days of abdominal pain and vomiting. She tells you she is 32 weeks pregnant (G2P1) and is an insulin-dependent diabetic. Her main reason for coming to the ED is that she couldn't get an appointment with her obstetrician and the pain is 'worrying' her. She appears a little short of breath and her respiratory rate is 28 breaths per minute. Her SpO₂ is 98 per cent. Her heart rate is 128 and her skin is pale, warm and dry. She is alert and oriented and her Glasgow Coma Score is 15 out of 15. Her temperature is 37.2°C (tympanic).

1	2	3	4	5
Comments:				



24. Paul is a 47-year-old male. He has a painful left shoulder, and received treatment in the ED for the same problem two days ago. There is no history of injury, but Paul tells you that his shoulder is stiff and keeps 'seizing up'. He tells you that he was prescribed some pain killers that worked initially, but that the pain is back and is 'much worse now'. He is crying in pain. His left hand is pale and cool; a weak radial pulse is noted. His right hand is pink and warm.

1	2	3	4	5
Comments:				

25. Gillian is a 26-year-old woman who presents via ambulance with palpitations. She is 34 weeks pregnant (G₁P₀) and is normally well. She tells you that she was out shopping when her palpitations started. She does not have any associated chest pain or shortness of breath. Her respiratory rate is 20 breaths per minute. Her SpO₂ is 98 per cent. Her heart rate is 108 beats per minute and her blood pressure is 120/80. Her skin is pale, warm and dry. Her Glasgow Coma Score is 15 out of 15.

1	2	3	4	5
Comments:				

26. Mal is a 28-year-old male who presents to triage saying that he has been bitten by 'some sort of insect'. He was clearing rubble from a building site about two hours ago when he felt a sudden burning sensation in his right hand. He said 'I flicked something off but I didn't see what it was'. Over a period of two hours his right arm has become increasingly painful and he is sweating. He is complaining of a frontal headache. He is alert and oriented to time, place and person. His heart rate is 98 beats per minute and his respiratory rate is 22 breaths per minute.

1	2	3	4	5
Comments:				



27. Thuy, a 44-year-old woman, presents to the ED with back pain. She has had the problem on and off for many years. This current episode was brought on after lifting a light shopping bag from her car four hours ago. She has taken Nurofen with little improvement. Currently she has no general practitioner so she 'didn't know where else to go when the pain happened'. Her vital signs are within normal limits and she is not sure how to rate her pain but says it is 'very bad'.

1	2	3	4	5
Comments:				

28. Patty is a 53-year-old female who presents to triage complaining of right-sided abdominal pain. She states that the pain has been constant for two days now. She has not had any nausea or vomiting. She tells you that the pain is worse when she is sitting still. She states that she has had this pain before and that her doctor thought it might be gall stones. Prior to coming to the ED she took two paracetamol with minimal effect. She rates the pain as 'five out of ten'. Her blood pressure is 145/84, her heart rate is 96 beats per minute and her respiratory rate is 18 breaths per minute. Her temperature is 36.4°C.

1	2	3	4	5
Comments:				

29. Emil is a five-year-old boy with a seven-day history of diarrhoea and vomiting. He presents to the ED with his mother at 9.30 pm. He has been unable to keep food or fluids down today. He is pale, lethargic and drowsy. His heart rate is 124 beats per minute and his respiratory rate is 20 breaths per minute.

1	2	3	4	5
Comments:				

30. Catherine is a four-year-old girl who is brought to the ED at 4.30 pm with a 12-hour onset of being unwell. In the past four hours she has developed a petechial rash on her abdomen. She also has a runny nose and a fever (her temperature is 37.8°C per axilla). She has been tolerating sips of oral fluid but now seems drowsy.

1	2	3	4	5
Comments:				



31. Lee is a 20-year-old female who presents to the ED with her mother. Her mother reports that she has had paranoid hallucinations and that since yesterday she has not taken any fluids. She states that her reason for not drinking is that she believes that there are 'spiders and poison around'.

1	2	3	4	5
Comments:				

32. Candy, a three-month-old female, presents to the ED with her mother. She has been referred by the maternal child and health nurse. According to her mother, the infant has been 'crying a lot' and has 'bad colic'. The baby was born prematurely at 36 weeks, and was delivered by emergency caesarean section due to preeclampsia. Since birth, the baby has gained weight and her mother says that apart from the colic she 'is doing OK'. When you examine the baby you note green/yellow bruising and red welts on her upper arms.

1	2	3	4	5
Comments:				

33. Nathan is a 45-year-old man who presents to the ED with his wife and child. He asks to see a psychiatrist because he has been having problems managing his anxiety about his work situation, and he doesn't know how to get a referral. He reports that he once saw a psychiatrist, four years ago, and that it helped him sort out his troubles, but that he can not remember the doctor's name. He is on no medication and has no active thoughts of harming himself; he says that he 'just needs to sort out his anxiety'.

1	2	3	4	5
Comments:				

34. Brian is a 39-year-old male who walks to the triage desk. He says he fell in his driveway and now has left shoulder pain. On examination his shoulder is very swollen and painful on movement. His arm is already in a sling. His left hand is warm and a radial pulse is present.

1	2	3	4	5
Comments:				



35. Bianca is 24 years old. She has a history of a perianal abscess, which underwent drainage two days ago. She continues to have pain ('six out of ten') and was seen by her local doctor today. She has taken Panadeine Forte with no relief and is also on oral antibiotics.

1	2	3	4	5
Comments:				

36. Craig is an 18-year-old male patient who presents saying he feels 'suicidal' and requesting admission. He makes a verbal threat to 'cut up' if he is not admitted.

1	2	3	4	5
Comments:				

37. Karen, a 36-year-old female, presents to triage accompanied by a social worker. She has come from the plaster clinic. She has increasing pain in her left foot from a fractured right fibula which she sustained yesterday morning. A lower-leg plaster was applied in the ED last evening. The social worker tells you that the patient has a history of depression and has said that she wants to 'end it all'.

1	2	3	4	5
Comments:				

38. Ida is a 66-year-old female who presents to the ED alone. She states that she is on Aropax and is having 'suicidal' ideation. She tells you that she has two possible plans to harm herself. She says she is having an anxiety attack and reports poor sleeping and eating patterns for the past two weeks.

1	2	3	4	5
Comments:				



39. A 52-year-old male presents to triage. He has a history of schizophrenia. He is currently on medication for his condition but can not recall the name of the medication, or the name of his case manager. He says that he has been having suicidal thoughts and that ‘there are voices’ urging him to ‘step in front of a train’.

1	2	3	4	5
Comments:				

40. Rohan, a 50-year-old male, has been brought to the ED by the district nurse. The nurse states that he has a history of alcohol abuse and that he is feeling ‘suicidal’. She notes also that over the past week he has been neglecting his general care. The patient has a history of an intracerebral bleed (two years ago) and he is deaf.

1	2	3	4	5
Comments:				

41. While playing volley ball, Gary, 47, hurt his left wrist. He has a good range of movement but reports pain when asked to rotate his left hand.

1	2	3	4	5
Comments:				

42. Janine is a 56-year-old woman who presents to the ED with her partner at 2.30 am. She has pain in the epigastric region which has been increasing since yesterday. The pain radiates to her lower abdomen and she says that she has been vomiting clear fluid tonight. Her bowels last opened two days ago. She is on Oridus and has a history of hypertension.

1	2	3	4	5
Comments:				



43. Mr D, 84, has a chronic leg ulcer. The district nurse has sent him to the ED because she believes the wound is infected. Mr D has a history of hypertension and ischemic heart disease. He lives with his daughter, who normally helps him out with his daily living, but she has gone to Queensland for a holiday. The wound is covered when you see him, but the bandage is soiled with what appears to be haemo-serous ooze. His temperature is 35.9°C and his vital signs are within normal limits.

1	2	3	4	5
Comments:				

44. Nic, a 38-year-old arborist, has cut his left arm with a chain saw. He was brought to the ED by a workmate. He has a deep laceration of about ten centimetres to the inner aspect of his arm. The wound was bleeding 'quite a bit', but the blood loss has been controlled with a firm bandage. He tells you that the wound is 'not that painful', but he looks pale and is sweating. His heart rate is 84 beats per minute and his respiratory rate is 20 breaths per minute. His workmate reports that the dressing was changed once, half an hour ago, because it was soaked with blood.

1	2	3	4	5
Comments:				

45. Liam is a 23-year-old male who presents to triage after being seen by a locum doctor. He is backpacking around Australia and has been staying in a boarding house near the hospital. His partner has brought him to the ED. He has a six-hour history of fever and lethargy. He has been vomiting, and complains of a headache. The doctor gave him intramuscular Maxalon, with some effect. His temperature is 38.4°C, and his partner points out a fine petechial looking rash on his torso. He is drowsy but oriented to time, place and person.

1	2	3	4	5
Comments:				

46. Ashley, a 23-year-old university student, fell off her bicycle two days ago and was seen in another ED. She is complaining of stiffness and pain to her left wrist. Her left hand is swollen but she has full range of movement; her left hand is pink and warm.

1	2	3	4	5
Comments:				



47. Remo is a 43-year-old male who presents with a two-week history of right renal stones. He now has pain, which he describes as ‘colicky’ in nature. He rates the pain as ‘four out of ten’. He has had no pain relief today.

1	2	3	4	5
Comments:				

48. Angie is a 27-year-old woman who presents via ambulance following a high-impact motor vehicle accident. She is 38 weeks pregnant (G₂P₁) and is normally well. She was a passenger in a car that collided head-on with another vehicle in an 80 kph zone. The ambulance officers report significant damage to both vehicles. Angie was wearing a seatbelt and the passenger airbag was deployed. She has good recall of events but complains of a painful chest and abdomen and has visible seatbelt marks. She also has a facial abrasion and lacerations to both her knees. She has a cervical collar on; oxygen is at 10 litres per minute via mask and 500mls crystalloid fluid in progress intravenously. Her respiratory rate is 28 breaths per minute, her SpO₂ is 93 per cent and her heart rate is 134 beats per minute. Her skin is pale, cool and dry. Her Glasgow Coma Score is 15 out of 15. Her blood pressure is 100/R. Her pain is ‘six out of ten’. She has no PV loss.

1	2	3	4	5
Comments:				

49. Norm is a 60-year-old man who arrives at triage at 9.20 am. He is ambulating using a walking stick. When asked what is wrong he points to his abdomen and chest and says, ‘This is as tight as billy-o. I got stirred up yesterday – I had a barney with a bloke up home, and then the tightness got worse, like a vice’. On examination you find that his heart rate is within normal limits and is regular. His skin is warm and dry. He is not short of breath. His SpO₂ is 95 per cent on room air.

1	2	3	4	5
Comments:				



50. Ann is a 16-year-old female who walks to triage with her mother. She reports that she injured her left wrist while playing volley ball. On examination you note good range of movement but she still has some pain. She says the pain is 'three out of ten'.

1	2	3	4	5
Comments:				

51. Mr A is a 54-year-old man who has been sent to the ED by his local doctor. He is unsteady on his feet and requires the assistance of his son to walk. His referral letter reads:

Dear Doctor,
 Please assess this man who was recently admitted to your hospital with left renal calculi. He has been complaining of dizziness and headache for several days. No focal weakness, visual disturbance or confusion. Seen for same 2/7 ago no improvement with Stemitil. PMx, IHD, NIDDM, renal calculi, hypertension. Blood pressure: 215/130. Please assess.

Via translation through his son, Mr A tells you that he is 'very dizzy', feels 'weak all over', has pain in his back and his abdomen and has vomited twice today.

1	2	3	4	5
Comments:				

52. Jake, 46 years of age, presents to triage with his carer. He is crying because he has abdominal pain and has a recent history of a small bowel obstruction (six months ago). Jake has an intellectual disability, and lives in a community residential unit with three other adults and supervisory staff. His carer says that he is 'normally able to attend to his activities of daily living under supervision', and that he 'usually tolerates a lot of pain before he will let staff know he is unwell'. In fact, his carer says that 'last time he was hospitalised he had been ill for quite a while before staff actually realised that there was a problem with his health'. His heart rate is 120 beats per minute and his respirations are 26 breaths per minute. His skin is pale, cool and moist.

1	2	3	4	5
Comments:				



53. Jane is a 17-year-old girl who was sent to the ED by her local doctor. On her way home from school her boyfriend noticed that she had become drowsy, 'she kept asking where she was, and appeared disoriented'. She was seen by her local doctor who told her to 'go straight to the ED'. He did not provide her with a letter of referral. Her Glasgow Coma Score is 14 out of 15.

1	2	3	4	5
Comments:				

54. Jonny, 34 years of age, has an abscess under his tooth. He presents to the ED at 1.30 am. He is in pain ('six out of ten') despite having taken Panadeine and Nurofen regularly. He has an appointment with his dentist tomorrow, but has not been able to sleep because of the pain. He is afebrile.

1	2	3	4	5
Comments:				

55. Rose is a 47-year-old female who presents to triage with a letter from her local doctor. She makes no eye contact when you speak to her. The letter reads:

Dear Doctor,
Please assess Rose, a 47-year-old woman who lives alone. She has a history of cholelithiasis and schizophrenia. She has some burns on her inner thigh which require your attention.

On questioning, Rose tells you that her burns occurred two days ago, and that they are red and itchy. When you ask her how she sustained the burns she says she isn't sure.

1	2	3	4	5
Comments:				

56. Adrian is a 13-year-old boy who presents to the ED via ambulance at 10.00 am. The ambulance officer states that he was hit by a car with a bull bar, and was thrown several metres. He is complaining of pain in his neck and legs. He has a cervical collar in place. He looks pale. He is tachycardic and tachypneic. He answers questions appropriately and is able to move all limbs on request.

1	2	3	4	5
Comments:				



57. Edna is 93 years old. She has been transferred to the ED via ambulance from a nearby aged care facility. For the past two weeks she has not been eating much, and yesterday was only taking small amounts of oral fluids. Today she was found to be semi-conscious and with a fever (39.8°C). She has a history of ischemic heart disease, heart block and hypertension. She has a dual-chamber pace maker. She also has a three-year history of dementia. On arrival her respiratory rate is 28 breaths per minute; her heart rate is 68 beats per minute. Her skin is hot and moist, and her Glasgow Coma Score is 9 out of 15.

1	2	3	4	5
Comments:				

58. Rodney is 43 years old. He was escorted to the ED by police, having been apprehended climbing out of a window of an abandoned warehouse. While trying to escape he cut his right hand on some broken glass. He has a deep, six centimetre laceration to the palm of his right hand. There has been minimal blood loss, but he says he can not feel his right index or second finger at all.

1	2	3	4	5
Comments:				

59. Mr G is a 53-year-old male who walks to the triage desk unassisted. He is short of breath. He states that he was recently a patient of this hospital. He has cancer of the liver and had a peritoneal tap 10 days ago for ascites. He also tells you that he 'needs draining again'. His respiratory rate is 24 breaths per minute and his heart rate is 92 beats per minute.

1	2	3	4	5
Comments:				



60. Heidi, a 17-year-old female, presents to the ED complaining of a sore throat. She has a hoarse voice and her friend states that she also has muscular pain to her neck, shoulders and back. She has been unwell for a few days, but has come to the ED today because she is having trouble swallowing. You ask her to open her mouth and note that her breath is foul-smelling. Her tonsils appear to be covered in pus. Her temperature is 39.4°C.

1	2	3	4	5
Comments:				

61. Over the past four weeks Gregory, 56, has attended your ED 14 times. Today he says he has a problem with a tattoo that was applied 'by a mate' two weeks ago. The wound looks red and is oozing pus. Gregory has a history of alcohol and intravenous drug use, hepatitis C and type 2 diabetes. His vital signs are within normal limits.

1	2	3	4	5
Comments:				

62. Larry, 62, stubbed his right big toe on the corner of a fireplace. The nail has lifted right off and the toe is now covered with a blood-soaked tea-towel. Larry walks into the ED assisted by his son. He tells you that he takes Warfarin, so 'thought it best to come to hospital rather than see the local doc'. His son tells you that the tea-towel has not been changed since the injury, but that there was 'blood all over the floor'.

1	2	3	4	5
Comments:				

63. Carole, 48 years, is brought to the ED by her husband. She is vomiting and has severe epigastric pain. She ate at a local restaurant and tells you she thinks that she has 'food poisoning'. Her heart rate is 98 beats per minute; her respiratory rate is 26 breaths per minute. Her skin is pale and moist to touch. She says that the pain comes and goes: she rates it as 'eight out of ten' at the worst point and 'two out of ten' at the lowest point'. She has vomited semi-digested food more than six times in the past hour. Now the vomit is clear fluid.

1	2	3	4	5
Comments:				



CHAPTER 12: SELF-TEST

Statement of purpose

The purposes of this chapter are to:

- Apply the principles learned in Chapters 1–11 to a set of 92 paper-based scenarios; and
- Test participants own level of decision-making consistency by comparing performance with the expected triage category for this scenario set.

Learning outcomes

After completing this chapter, participants will be able to apply the principles learnt in Chapters 1–11 to a set of triage scenarios and demonstrate consistency of triage using the ATS guidelines for the scenarios in the self-test.

Learning objectives

Choose the most appropriate ATS category for each of the 92 triage scenarios.

Teaching resources

Australasian College for Emergency Medicine. Guidelines for Implementation of the Australasian Triage Scale in EDs. ACEM [Online] 2005 [cited 2007 Feb 2].

Available from:

URL: http://www.acem.org.au/media/policies_and_guidelines/G24_Implementation_ATS.pdf

Mental Health Triage Tool – Table 5.1, page 43.

Paediatric Triage Tool – Table 8.2, page 68.

Teaching strategies

For each triage scenario, select the ATS category you think is most appropriate by ticking the box; chose one option only. Make notes in the comments section to justify your decisions. When you have finished, compare your answers with the answer guide (see Appendix E).

Discuss any disagreements with your triage instructor.



Triage scenarios

1. Albert, 44 years, was mowing the lawn on Sunday morning when a foreign body flicked up out of the mower and into his eye. His wife drove him to the hospital. On presentation at triage, his eye is tearing quite a bit, and he still has the sensation that 'something is there'. He says he has 'no pain' but the eye is 'uncomfortable'. A quick check of vision reveals that he has no problems with visual acuity.

1	2	3	4	5
Comments:				

2. Shane is a 30-year-old male who presents to the ED complaining of having a frontal headache. The patient states he has been thinking of harming himself and wants to 'get help'. If he can not sort out his problems, he says he will 'go and jump off a bridge'.

1	2	3	4	5
Comments:				

3. Violet is a 91-year-old female of non-English speaking background. She is brought to the ED in her son's car after seeing her local doctor. You are called to assist her to get out of the car. Her son tells you she is 'very sick'. You note that she is able to transfer to a wheelchair with minimal assistance. According to her son, Violet fell three days earlier and has bruised her right hip. She is able to walk, though the hip is very painful. She is not distressed when seated. Her blood pressure is 150/90, her heart rate is 88 beats per minute, and her respiratory rate is 20 breaths per minute. You are unable to ascertain her exact level of pain, though she tells you she is 'alright'.

1	2	3	4	5
Comments:				

4. Glen, 52 years, presents to the ED with 'bleeding haemorrhoids'. He has had this problem 'on and off for the past few months', but now it is 'getting worse'. He says he has considerable pain when he opens his bowels and bleeds 'quite a bit' (about half a cup at a time for the last two days). He states that he needs to be seen by a doctor 'as soon as possible' as he considers his problem is 'an emergency'.

1	2	3	4	5
Comments:				

5. Rebecca is a 17-year-old female who is brought to the ED by her friends following an all-night party, where she took two tablets of ecstasy. She can not stop crying, and says she wants to die. She has had two previous minor overdoses in the past year.

1	2	3	4	5
Comments:				

6. Charlie is a 15-month-old boy who presents to the ED via ambulance at 2 am following an episode of 'shaking and jerking' with a loss of consciousness. The episode lasted approximately four minutes. The ambulance officers state that he stopped fitting when they arrived but he had been 'very drowsy' during transport. His mother states that Charlie has never had an episode like this before. During the night, he had a fever and a runny nose. He has been sleeping poorly and is a little irritable. The child is flushed and his skin is very warm. He is tachypneic, but has no use of accessory muscles or retraction. He is crying and clinging to his mother.

1	2	3	4	5
Comments:				

7. Dianne is a 67-year-old lady who was out shopping with her daughter when she slipped and fell on her outstretched hand injuring the left wrist. She is not distressed by the pain and rates it as 'three out of ten'. Her wrist is tender, but not deformed. Radial pulse is present at 72 beats per minute.

1	2	3	4	5
Comments:				

8. Kate is 18 years. She attends triage at 12.30 pm with a work colleague. Her hand is wrapped in a tea towel and she appears pale and anxious. She tells you she has cut her hand with a carving knife. On examination you see a four centimetre laceration across her left palm. Tendons are on view and the wound is bleeding slowly. Kate tells you she is feeling quite nauseous and her pain is 'seven out of ten'. Movement and sensation to her fingers are intact.

1	2	3	4	5
Comments:				



9. Denise is a 34-year-old female who is transferred to the ED on a 40°C day via ambulance. According to bystanders, she was attending an outdoor barbeque and ‘collapsed in the heat’. Witnesses helped her to an upright position, and she was then observed having a ‘fit’ that lasted approximately two minutes. She was not incontinent and regained consciousness when she was placed in the supine position. Paramedics attended and inserted an intravenous cannula. Her Glasgow Coma Score is 15 out of 15; heart rate 112 beats per minute and respiratory rate 22 breaths per minute. Her skin is hot and moist.

1	2	3	4	5
Comments:				

10. Justin is a 22-year-old male who comes to the ED concerned about a mole on his back. He says that his girlfriend advised him to see a doctor and he is ‘worried that it might be a melanoma’. The mole is large and irregular in shape; he says it is sometimes itchy.

1	2	3	4	5
Comments:				

11. A young man is brought in to the ED by ambulance after having been dragged unconscious and not breathing from the sea in Far North Australia. He arrives with full CPR in progress and you note that he has red welts across his chest.

1	2	3	4	5
Comments:				

12. Fred, an 84-year-old man, presents to triage complaining of palpitations and central chest pains. He has a history of ischemic heart disease, coronary artery by-pass grafts and atrial fibrillation. He takes his anti-arrhythmic medications regularly and normally manages well at home. Today his skin is pale, cool and moist, and his heart rate is 142 beats per minute and irregular.

1	2	3	4	5
Comments:				



13. A man states that his three-week-old baby grandson, Kyle, is 'not breathing properly'. The baby is wrapped in a bunny rug held by his grandfather. On closer examination, you note the baby's eyes are open and his face is white/grey. Respiratory effort is poor.

1	2	3	4	5
Comments:				

14. Robyn is a 38-year-old woman with a history of asthma. She has required two admissions to the intensive care unit for her asthma in the past 18 months. She presents to triage at 8.30 pm following a 22-hour history of wheeze and shortness of breath. She has been self-administering Ventolin at home but has had a minimal response despite the use of three nebulisers in the past hour. On arrival to triage, her respiratory rate is 26 breaths per minute; she is speaking three-word sentences and has an audible wheeze.

1	2	3	4	5
Comments:				

15. Caroline is a 45-year-old female who presents to triage complaining of a 'cold' for the past four days. In the past two days, she has pain in her right upper quadrant. The pain is now increasing and she describes right thoracic 'back pain'. Caroline states that she has no diarrhoea, vomiting or urinary symptoms but has had 'difficulty breathing since yesterday'. Her skin is pale, hot and moist, and she has normal respiratory effort. Caroline says she has a fever and her heart rate is 112 beats per minute. Her respiratory rate is 26 breaths per minute and she says that her pain is currently 'seven out of ten'. The pain is worse on deep inspiration and movement.

1	2	3	4	5
Comments:				

16. Neil is a 74-year-old male who presents to triage following trauma to his left arm after slipping on a wet floor. He describes tenderness at his wrist, elbow and shoulder. He rates his pain as 'three out of ten'. No obvious deformity of the wrist is noted, but he has a decreased range of movement. His heart rate is 92 beats per minute.

1	2	3	4	5
Comments:				



17. Harry is a 48-year-old man who regularly attends your ED for various complications associated with his poorly controlled type 2 diabetes. He has no GP, lives in a special accommodation house but frequently sleeps out in a local park. Today he presents to triage complaining of a two-hour history of intermittent left-sided chest pain that is 'heavy' in nature. On further questioning you establish that his pain came on at rest and radiates down both arms. His heart rate is 66 beats per minute, respirations are 20 breaths per minute, and skin is cool and dry.

1	2	3	4	5
Comments:				

18. Mr Wallace, 57 years, works for an energy company reading gas meters. On his rounds today he was attacked by a dog and bitten on the upper left leg. On inspection you note six to seven square centimetres of skin loss. The wound is irregular, fat tissue is exposed and it looks dirty. There is a small amount of blood loss. Mr Wallace says the injury is 'a bit painful' but he is not overtly distressed.

1	2	3	4	5
Comments:				

19. Kira is a seven-year-old girl who presents with a school teacher having fallen from play equipment. Her mother is on her way to the ED. She fell onto her right arm and has been complaining of pain around her wrist. She 'did not hit her head' and does not complain of pain anywhere else. Her arm has been placed in a sling but she has not received any analgesia. Kira is tearful but states that her arm is only 'a little bit sore'. There is a small amount of swelling around her distal forearm; there is no deformity and no neurovascular impairment. She demonstrates tenderness over her distal radius and has a limited range of movement of her wrist. She has no other signs of injury.

1	2	3	4	5
Comments:				





20. A mother presents at midday with her nine-month-old son, Connor. She describes three days of fever, poor oral intake and a 'runny nose'. On the first evening of the episode he vomited once and had two loose stools overnight, but this has not reoccurred. Connor had 180 ml of fluid this morning (his usual intake is about 320 ml) and he had a normal number of wet nappies. He was previously well and he is fully immunised. He has signs of a runny nose, no cough is heard and he has no signs of increased work of breathing. His skin is slightly pale but warm and his mucus membranes are not dry. He is quiet but looking around at his surroundings.

1	2	3	4	5
Comments:				

21. Alanna is a ten-week-old infant who presents with her parents. She has a two-day history of increasing lethargy and poor feeding. Her mother indicates that she has become unsettled and less keen to feed over the past two days. She developed a fever yesterday and had to be woken for feeds overnight, which is unusual. She was born at term, has had her first immunisation and has no other health problems. She does not demonstrate increased work of breathing but is slightly tachypneic. Her skin is pale and her legs are mottled, a little cool and demonstrate a capillary refill of three to four seconds. She is lethargic but responds to painful stimuli.

1	2	3	4	5
Comments:				

22. A 76-year-old woman, Rita, is brought to the ED by her daughter who found her wandering in a 'dazed state' outside her house. The patient presents as agitated and confused, is picking at imaginary things on her cardigan and is unable to give an account of herself.

1	2	3	4	5
Comments:				



23. Liz is a 40-year-old woman who presents to triage with fever and productive cough. She says she is not short of breath and does not complain of any pain. She is 18 weeks pregnant (G₄P₃) and is normally well. Her respiratory rate is 24 breaths per minute, SpO₂ is 96 per cent, and heart rate is 98 beats per minute. Her skin is noted to be pale, warm and dry, Glasgow Coma Score is 15 out of 15, and her temperature is 38.2°C.

1	2	3	4	5
Comments:				

24. David is a 40-year-old male who presents to triage complaining of severe chest pain, saying he is having a 'heart attack'. He says he has no history of cardiac problems and his observations are within normal range. He appears highly anxious and is hyperventilating. Currently he says his pain is 'ten out of ten'. His skin is warm and moist.

1	2	3	4	5
Comments:				

25. Lionel, 68 years, is transferred to your ED from a nursing home. He has Alzheimer's disease and for the past two days has refused fluids. This morning his carer found him lying on the floor next to his bed yet the cot-sides were up. She thought that he had probably fallen because the blankets were also on the floor and he had been incontinent of urine. Last week he was able to mobilise with a frame and take himself to the toilet, but for the past two days he has not had the energy to move at all and has needed assistance going to the toilet. Since the fall he cannot stand up and he seems to be guarding his right hip. On arrival, he is lying on the trolley groaning. His heart rate is 122 beats per minute, respiratory rate 24 breaths per minute and blood pressure is 110/70.

1	2	3	4	5
Comments:				

26. Nicholas is a three-year-old boy who presents with increasing wheeze and shortness of breath. His mother indicates that he has a history of asthma and has been in hospital before. He developed a cold two days ago and he became increasingly wheezy yesterday. His mother gave him Prednisolone this morning and he has had hourly Ventolin at home. In the past two hours he has had three doses of Ventolin; the last dose was 15 minutes ago. He has a tight cough and a marked increase in work of breathing. Nicholas's skin is pale but warm; and he is distressed and restless.

1	2	3	4	5
Comments:				

27. Frankie is an 18-month-old boy who presents to the ED with his mother by ambulance. He has a barking cough and is having difficulty breathing. His mother describes a recent cold. He woke this morning with the cough and seemed distressed. His breathing is fast and noisy. He does not have a stridor but does have a barking (croup-like) cough and mild increase in work of breathing. His skin is pink and warm and he remains settled while with his mother.

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Comments:				

28. Parents present with their 13-month-old child, Oliver, who has a history of diarrhoea and vomiting. They state that he has been unwell for 'about six days'. It started with vomiting, which persisted for two to three days, but this has since stopped. Oliver developed diarrhoea on the second day, which has continued. He is willing to drink and has passed two loose stools today. He shows no shortness of breath, his skin is pink and warm and his mucous membranes are not dry. He is grabbing at your ID badge.

1	2	3	4	5
Comments:				



29. Mr Carver, an 87-year-old man, is brought to your ED in the early hours of the morning with acute shortness of breath. He is sitting upright on the ambulance trolley with a simple face mask in situ. He is receiving eight litres of oxygen per minute. His heart rate is 116 beats per minute and irregular; blood pressure is 170/90; jugular veins are visible and elevated. His skin is moist and pale. He is unable to talk but he does nod when asked if he has chest pain.

1	2	3	4	5
Comments:				

30. A father presents at 6.30 pm with his 22-month-old son, Jackson, who has cut his forehead after tripping and falling against the coffee table when he was playing at home. He cried after the event and received a large cut to his forehead. When you view Jackson he is not distressed but he does squirm away when attempts are made to examine his wound. He has a haematoma on the left side of his forehead and a full thickness laceration of one to two centimetres over his eye on the same side.

1	2	3	4	5
Comments:				

31. Adit is a 15-month-old boy with a two-hour onset of fever and breathing difficulty. He presents via ambulance with an audible stridor at rest.

1	2	3	4	5
Comments:				

32. Tahlia is an 18-month-old girl who arrives at the ED with her mother at midnight. About 24 hours prior she developed a 'barking cough' that became 'much worse at night'. She is also febrile (temperature is 38.4°C). Since becoming unwell, Tahlia has had two bottles of water but refuses food and milk. Both mother and child appear very anxious.

1	2	3	4	5
Comments:				



33. Kerri, a 31-year-old female, presents to triage with her boyfriend. She is complaining of a severe headache and has a history of migraine. She said she saw her GP two days ago for 'a sore throat' and was prescribed penicillin, which she is currently taking. Today she woke up with a headache and started to vomit. She is pale with a washed-out appearance; her skin is cool and moist. Kerri's heart rate is 98 beats per minute, respiratory rate 18 breaths per minute and her Glasgow coma score is 15 out of 15. She rates her pain as 'nine out of 10'.

1	2	3	4	5
Comments:				

34. Antony, 56 years, was opening a tin of paint stripper with a knife and some of the chemical splashed up into his right eye. He ran water from the tap over his eye for fifteen minutes, before his partner drove him to the ED. At triage he appears very uncomfortable; the eye is closed and there is blistering to the skin surrounding the right orbit.

1	2	3	4	5
Comments:				

35. Rosemary is a 40-year-old woman who presents to triage complaining of abdominal pain. She is 36 weeks pregnant (G₅P₃) and is normally well. She tells you she has had pain 'on and off' for one week but it has become more severe in the last day. It is difficult for the patient to be precise about the location, but the pain seems to be in the right upper quadrant. She says the pain is 'worse after eating' and today she has vomited twice. She says this pain 'does not feel like labour pains'. Her respiratory rate is 22 breaths per minute, SpO₂ is 98 per cent and heart rate is 106 beats per minute. Her skin is pale, warm and dry, and her Glasgow Coma Score is 15 out of 15. Temperature is measured at 37.8°C. Rosemary rates her pain as 'seven out of ten'. She tells you that she has had no PV loss.

1	2	3	4	5
Comments:				



36. Mary-Jane is a 36-year-old woman who presents to triage via ambulance following a fall from a ladder. She is 37 weeks pregnant (G₂P₁) and is normally well. She was hanging curtains in the nursery and standing the step second from the top when she overbalanced. She complains of a painful right wrist and pain in her right hip. Her respiratory rate is 20 breaths per minute, SpO₂ is 99 per cent, and her heart rate is 110 beats per minute. Her skin is pale, warm and dry. Her Glasgow Coma Score is 15 out of 15 and her blood pressure is 120/70. She rates her pain as 'six out of ten' and she reports no PV loss.

1	2	3	4	5
Comments:				

37. Connie is a 74-year-old female who presents to the ED via ambulance. Apparently she was an in-patient at your hospital five days ago. At that time she was managed for an acute bowel obstruction. Today the hospital-in-the-home nurse visited her and then called an ambulance. According to the ambulance officers, she has had increasing abdominal pain and vomiting during the night. Her bowels have not been opened for three days. You note her to be pale and distressed on the ambulance trolley. She complains that her abdomen is 'bloated'. Her blood pressure is 110/75, heart rate is 112 beats per minute, respiratory rate is 26 breaths per minute, and temperature is 37.2°C.

1	2	3	4	5
Comments:				

38. Ted, a 78-year-old male, is brought to the ED via ambulance. The patient attended the ED last night with a vague story of feeling dizzy and unwell. He was diagnosed with a viral illness and sent home. Throughout the night he was woken by heavy chest pains that 'came and went'. He took three of his Anginine, which did not relieve the pain. He is now short of breath and his lips have a frosted appearance. His heart rate is 92 beats per minute, respiratory rate 24 breaths per minute and blood pressure 160/90.

1	2	3	4	5
Comments:				



39. Macey is a 38-year-old female who presents to the ED with an injured right leg. She is brought to the triage desk in a wheelchair by her father who tells you she has multiple sclerosis. Today she was found by her father after falling down four steps at the front of her home. Normally she is able to walk using a walking stick, but since the fall she has not been able to walk at all. On examination you note that her right ankle is swollen and a right pedal pulse is palpable. She tells you that she has 'no pain' at the moment and is happy to wait to see a doctor.

1	2	3	4	5
Comments:				

40. A solidly built male of about 40 years of age and smelling strongly of alcohol starts shouting at another patient in the waiting room. He says he wants to see a doctor, but before you can establish what is wrong, he stands up and begins to threaten with a knife the other patients who are waiting.

1	2	3	4	5
Comments:				

41. Tomas is an eight-year-old boy presents to the ED with his mother, who had been called to the school to pick him up today. While playing at recess Tomas was involved in a fight, which resulted in him being hit in the face with a cricket bat. His mother says the school called her because the child was inconsolable after the event and he didn't want to go back to the classroom. There was no loss of consciousness reported, but the child has a three centimetre laceration to his left cheek.

1	2	3	4	5
Comments:				



42. Harley is an 18-month-old boy who was brought to the ED via ambulance. He was found face down in a swimming pool. His parents administered cardiopulmonary resuscitation at the scene and called the ambulance. On arrival the child is breathing spontaneously and receiving 100 per cent oxygen via a bag-valve mask. His heart rate is 140 beats per minute and his respiratory rate is 14 breaths per minute. The child's eyes are closed and he is lying still on the trolley. He is responding to painful stimuli.

1	2	3	4	5
Comments:				

43. Phillip, 44 years, was bitten by an ant two days ago. The bite site, which is located on his inner thigh, is red and itchy. There is a 15-centimetre area of cellulitis surrounding the bite. He has a temperature of 38.2°C.

1	2	3	4	5
Comments:				

44. Laurie has been referred to the ED from his local doctor on a Monday morning. He complains of increasing upper abdominal pains, associated nausea and constipation over weekend. He had a loose bowel action this morning. His appetite is normal, but his pain is sharp in nature and he rates it as 'eight out of ten'.

1	2	3	4	5
Comments:				

45. Mr Smyth, 77 years of age, is brought to the ED by his daughter. He is having difficulty passing urine and feels like his bladder 'is about to burst'. He tells you that he has had problems with 'the prostate' before. When asked about his pain he says it is 'about five out of ten'. You notice that he is unable to sit still because of the pain and he is sweating quite a bit.

1	2	3	4	5
Comments:				



46. Ned, a 28-year-old jockey, attends the ED after being kicked in the abdomen by a horse. He was assisting a colleague to guide the animal into a float when it reared up and kicked him. Ned was thrown some two metres and fell on the ground. He did not lose consciousness, but was 'winded from the kick'. At triage Ned appears pale and distressed. He tells you that he has pain and points to his left upper quadrant. His heart rate is 128 beats per minute, his respiratory rate is 26 breaths per minute and his skin is cool and moist.

1	2	3	4	5
Comments:				

47. Homer, 28 years, twisted his right knee playing basketball. The knee is very swollen and he is unable to weight-bear on it. The injury occurred about two hours prior to his arrival in the ED and an ice pack has been applied.

1	2	3	4	5
Comments:				

48. Carmel, 59 years, woke this morning with pain in her left eye. She then noticed a rash appearing above her brow and has developed severe pain in the left side of her face and eye. She says there is 'a lump' behind her ear. She has no past medical history but she did have an episode of flu-like symptoms two days ago. She describes the pain as 'hot and sharp'. She rates it 'eight out of ten'.

1	2	3	4	5
Comments:				

49. Gillian presents to the ED with generalised abdominal pain. She has been brought in by a work colleague. When questioned, she complains of six days of constipation. She is booked in for a colonoscopy at a private clinic tomorrow. She isn't on medication but she is bent over and crying in pain.

1	2	3	4	5
Comments:				



50. Martin presents to the triage desk on his own. He tells you he has pain in his left shoulder after he fell in a driveway. On examination you note that his left shoulder is very swollen. He has very limited range of movement, in fact he can not move the shoulder joint itself, and he rates his pain as 'seven out of ten'. His left radial pulse is present, but he has some 'numbness' around the shoulder area. His arm is in a sling and he smells of alcohol. He says the accident occurred 'a couple of hours ago'.

1	2	3	4	5
Comments:				

51. Beverly is a 57-year-old female who was originally sent from her local doctor to the outpatients department to make an appointment to see an orthopaedic surgeon. She was referred for an investigation of osteoarthritis in her right knee via an arthroscope. Today, when she presents at the ED, she is in severe pain and has difficulty weight-bearing on her right leg. She says that the pain does settle somewhat at rest. The clerk at outpatients said she needed to be seen in the ED today because of her pain. An orderly escorts her from outpatients to triage in a wheelchair.

1	2	3	4	5
Comments:				

52. Zane, 26 years of age, presents with an infected left arm. He has a recent history of injecting drug misuse. He tells you that he has been re-using and sharing needles. His cubital fossa is red and celluitic and there are several pus-filled sores on the arm. He is afebrile. He looks around the waiting room nervously and asks you how long it will be before he can get to see the doctor, as he 'has to be somewhere else in an hour'.

1	2	3	4	5
Comments:				

53. Hamish is an 18-year-old male who is sent to the ED from his local doctor with a sudden onset of right testicular pain. He has a history of partial testicular torsion two weeks ago and states that pain is the same as it was then. He is doubled over in pain at the triage desk.

1	2	3	4	5
Comments:				



54. Linda is a 35-year-old female with a past history of hepatitis B. Today she presents with right side abdominal pain. The pain has been getting worse over the past week and is currently 'four out of ten'. She has no vomiting; her skin is pink and warm.

1	2	3	4	5
Comments:				

55. Marion, 76 years, presents to the ED from a nursing home. She collapsed suddenly just before breakfast that morning. Ambulance officers attended and found her semi-conscious. Her blood glucose level was measured at 2.1 mmol and she was given intravenous dextrose (50 mls of 50 per cent dextrose). She is now sitting up on the ambulance trolley talking to staff.

1	2	3	4	5
Comments:				

56. Cassandra, 15 years, was riding her horse in the bush some 60 km away from town when the animal was startled and threw her about three metres. She was wearing a helmet but it broke in half when her head struck a tree. Her companions noted an initial loss of consciousness, after which she was drowsy and vomiting, but she did not appear to have any injuries elsewhere and she said she had no neck pain when asked. Cassandra was transferred to your ED in the back of a utility. On arrival she has a Glasgow Coma Score of 8 out of 15. Her respiratory rate is 24 breaths per minute and her heart rate is 62 beats per minute.

1	2	3	4	5
Comments:				

57. Lisa is an 18-year-old female who presents to the ED with her friends who state that she ingested an unknown quantity of tablets and drank a bottle of white wine about 40 minutes ago following a fight with her boyfriend. On further questioning you establish that the medication she took included 24 paracetamol tablets. Lisa appears drowsy at triage, is disorientated to place and time, and she smells strongly of alcohol. Her friends report that in the past 10 minutes she has been 'twitchy'.

1	2	3	4	5
Comments:				



58. Iris is a 64-year-old woman who is brought to the ED by her husband in private car. She states that she caught her leg on a garden seat while carrying the washing in from the clothes line. She was concerned that there was a fair amount of bleeding occurring and she described the gash as three centimetres long. She is not distressed.

1	2	3	4	5
Comments:				

59. Silvia, 66 years, is brought to the ED by her husband. She is complaining of a sudden onset of nausea and dizziness. She is normally fit and well and has no relevant history. She has not vomited and has no headache. Her blood pressure is 130/60, heart rate 64 beats per minute and her respiratory rate is 22 breaths per minute. She is afebrile. Her Glasgow Coma Score is 15 out of 15.

1	2	3	4	5
Comments:				

60. Luke, a 27-year-old wants to travel to India next week. He attends the ED for advice about the sorts of vaccinations he might need.

1	2	3	4	5
Comments:				

61. Pete, aged 28 years, presents to the ED at 9 pm on a Sunday night requesting a workers compensation certificate for a day he had off work in the previous week. He was seen at the hospital five days ago with a sprained wrist and had been given the certificate for one day off work at that time. However, he states that he has lost that certificate. He tells you that he is 'prepared to wait' as his boss has told him to get a new certificate by Monday morning or he would be 'in big trouble'. His wrist is no longer painful and he says he 'feels fine'.

1	2	3	4	5
Comments:				



62. Larry, 26 years, was in a fight last night. He attends the ED this morning at 6.30 am with a five centimetre deep laceration to his left ear. He says the injury was the result of a human bite which occurred at about 3 am. He smells of alcohol. When asked if he was knocked out he replies 'no'. He has no pain elsewhere. His vital signs are within normal limits and he is orientated to time, place and person.

1	2	3	4	5
Comments:				

63. Rudolf, 78 years, presents to triage via ambulance. He was at church, and when he went to stand up during the service, collapsed to the ground. He did not lose consciousness but did become very pale and sweaty. Paramedics attended and noted he was in heart block with a heart rate of 42 beats per minute and blood pressure of 80/60. They inserted an intravenous cannula and administered atropine (600 mcg) with no effect. On arrival to the ED he is conscious and states that he has no chest pain.

1	2	3	4	5
Comments:				

64. Betty is a woman in her 20s. She presents to the triage desk with her friend, who states that Betty has taken 25 Endep tablets. As you begin talking to her friend, Betty collapses to the floor and commences fitting. You summon help and staff arrive to lift her onto a trolley and take her into the ED.

1	2	3	4	5
Comments:				

65. Barry, a 43-year-old man, was using an angle-grinder today and now has a foreign body in his left eye. The eye is red and painful. He states that the pain is 'seven out of ten'.

1	2	3	4	5
Comments:				



66. Mario, a 67-year-old man, was putting some pesticide on his vegetable patch and he accidentally spilt it on his clothing. He had a shower at home immediately after the accident but has come to the ED some two hours later because he is nauseous, vomiting and has developed excessive sweating. His heart rate is 122 beats per minute and his respiratory rate 28 breaths per minute. He says he is not sure of the name of the chemical he was exposed to as he has had it in his shed for 'many years'.

1	2	3	4	5
Comments:				

67. Mr F is a 66-year-old man who was brought to the triage desk by his daughter. He states that he is confused and thinks that people are talking about him. He tells you that he has a history of 'heart failure, high blood pressure, renal failure, urinary tract infection and depression'. His skin is warm and moist, his respiratory rate is 20 breaths per minute, and his Glasgow Coma Score is 15 out of 15.

1	2	3	4	5
Comments:				

68. Hugh is a 54-year-old male who was seen in the ED with a fractured right radius and ulna four days prior. He presents again because he says the cast is too loose and needs to be replaced. He has no pain.

1	2	3	4	5
Comments:				

69. Sue, a 36-year-old female, presents with a two-day history of feeling generally unwell. She has an ache in her lower abdomen and describes having to go to the toilet more frequently than normal. On further questioning she states that she has had urinary frequency for 12 hours, and rates her pain as 'four out of ten'. She has a heart rate of 98 beats per minute and a temperature of 37.8°C. She appears to be quite pale.

1	2	3	4	5
Comments:				



70. Joanne is a 34-year-old female who walks to the triage desk at 10.50 am. When you ask her what is wrong she says 'I can't go to the toilet and my backside is painful'. When questioned further she says that she has not passed urine today but 'did last night and it was not painful'. She rates her current pain as 'four out of 10'.

1	2	3	4	5
Comments:				

71. Mrs W is assisted to the triage desk by her daughter around midday. Mrs W doesn't speak very good English so her daughter tells you her history. Last night Mrs W had an episode of palpitations and complained of nausea and feeling lethargic. Today 'the palpitations are back'. She has a history of coronary artery bypass grafts. When asked if she has chest pain, Mrs W says she is 'very sick'. Her heart rate is 108 beats per minute and her skin is cool and moist to touch.

1	2	3	4	5
Comments:				

72. Maree is a 32-year-old woman who presents via ambulance complaining of 'palpitations'. She is 30 weeks pregnant (G₃P₁) and is normally well. She was doing the vacuuming when her palpitations started. She complains of mild chest pain that is dull in nature and a mild shortness of breath.' Her respiratory rate is 24 breaths per minute; SpO₂ is 98 per cent; and heart rate is 162 beats per minute. Her skin is pale, cool and dry; blood pressure is 90/R; and Glasgow Coma Score is 15 out of 15. Her temperature is 36.3°C.

1	2	3	4	5
Comments:				



73. Kerry is a 36-year-old woman who presents to the ED with her husband via ambulance with a sudden onset of a headache. She tells you that she is 31 weeks pregnant (G₃P₁) and has been 'keeping well'. Her husband tells you that Kerry was making lunch when she suddenly complained of a severe occipital headache. Her respiratory rate is 20 breaths per minute, SpO₂ is 98 per cent, and heart rate is 124 beats per minute. Her skin is pale, cool and dry. The ambulance officers report that Kerry's blood pressure is 160/100 and she has a Glasgow Coma Score of 14 out of 15 (eyes open to voice). Her temperature is 36.3°C. When asked to score her level of pain, she tells you it is 'nine out of 10'.

1	2	3	4	5
Comments:				

74. Tricia, an 18-year-old female, is brought into the ED by a friend. Her friend states that she has had vaginal bleeding since her 'Depo injection 15 days ago'. Her friend states that Tricia is suicidal and wants to find 'peace'. Her friend also tells you that Tricia took a large quantity of herbal sedative last night and now feels 'weak and tired'.

1	2	3	4	5
Comments:				

75. Josie, 39, walks to the triage desk and complains of pain in her legs, stating; 'My feet and legs are swollen and sore' She has a history of intravenous drug use and heavy alcohol intake and she has hepatitis C. Currently Josie is not on any medication and is alert and orientated.

1	2	3	4	5
Comments:				

76. Jake is 28 years old. He attends the ED with his partner at 5.30 pm. He has abdominal pain radiating to his right loin, urinary frequency and dysuria. He saw his GP yesterday for the pain and was told he 'might have kidney stones'. The pain is worse now than yesterday ('seven out of 10') and he has noticed some blood in his urine the last time he voided.

1	2	3	4	5
Comments:				



77. Isaac is an 85-year-old male who presents to triage with his son. He has left loin pain and has recently undergone a lithotripsy for renal calculi. Today he has had pain for one-and-a-half hours which 'comes and goes'; the pain is now 'eight out of ten'.

1	2	3	4	5
Comments:				

78. Jess, 14 years, is brought to the ED by her mother. She is complaining of severe period pains and is doubled over in a wheelchair crying. Her mother tells you that Jess has not been able to go to school for the past week because of her menstrual problems and wants a referral to a specialist to 'sort out the problem'. When you talk to Jess you establish that the blood loss is moderate and the pain is in her abdomen, thighs and back. She seems to calm down after you speak to her and appears more comfortable when you wrap a blanket around her.

1	2	3	4	5
Comments:				

79. A 5-year-old boy is rushed into your ED by his parents on a hot summer day. He has been holidaying with his family in Far North Queensland and was wading in the sea. He has a raised red welt on his right leg and is crying in severe pain, He has a heart rate of 128 beats per minute and a blood pressure of 130/70.

1	2	3	4	5
Comments:				

80. Reese, 31 years, suffers from migraines. Today she has come to the ED with her sister. She has had an eight-hour history of a global headache, vomiting and visual disturbance. She has taken her usual medication (Imigran), but says it is 'not working'. Her heart rate is 96 beats per minute, respiratory rate 28 breaths per minute. She is afebrile and rates her pain seven out of ten.

1	2	3	4	5
Comments:				



81. India is a nine-year-old girl who arrives to the ED via a taxi accompanied by her mother. She fell while playing netball, injuring her right foot. She is transferred to the triage desk in a wheelchair as it is painful for her to weight bear.

1	2	3	4	5
Comments:				

82. Terry is a 53-year-old male who presents to the ED asking for a review of his blood pressure medication. He describes having had a ‘headache’ during the past week. It is two years since he saw a doctor about his medication. His Glasgow Coma Score is 15 out of 15 and his heart rate is 70 beats per minute; he has no nausea or vomiting and is currently pain free.

1	2	3	4	5
Comments:				

83. A mother presents with her six-month-old baby who she says won’t wake up. The child is breathing, but is floppy, can not be roused and has pin-point pupils.

1	2	3	4	5
Comments:				

84. Paddy is a 32-year-old male who presents to triage stating that he has vomited blood twice in the last six hours. He states that he has had dark bowel motions for the last three days and he normally drinks ‘12 stubbies of beer per day’. Paddy’s skin is pale, warm and dry. His heart rate is 108 and his respiratory rate is 20 breaths per minute. He doesn’t have any pain but does complain of nausea.

1	2	3	4	5
Comments:				



85. Amber is a 22-year-old woman who presents to the ED at 11 pm complaining of a 24-hour history of a sore throat and is feeling generally unwell. She had been attending a party nearby and decided to call into the hospital to get some antibiotics. She has no other symptoms, looks well and is afebrile.

1	2	3	4	5
Comments:				

86. You are called to assist a young woman getting her boyfriend out of the car that is pulled up in the ambulance bay. She tells you that Matt 'shot up' 30 minutes ago. On examination Matt appears to have vomited and is centrally cyanosed. He has irregular grunting respirations of 6 breaths per minute and his heart rate is 42 beats per minute.

1	2	3	4	5
Comments:				

87. Elliot is 27 years old. He injured his back yesterday lifting a heavy box at work. He had been managing the pain at home, however today it is 'much worse'. He was unable to get an appointment with his local doctor so he has come to the ED. He rates his pain 'five out of ten', and has taken two Panadeine Forte and two Nurofen tablets in the past hour.

1	2	3	4	5
Comments:				

88. Ambulance officers arrive without prior notice with a female aged 26. She was a front-seat passenger in a single motor vehicle crash that involved multiple rollovers. The ambulance officers state that the patient was walking around intoxicated at the scene and was abusive, complaining of abdominal pain and reluctant to come to hospital. On examination the patient is centrally cyanosed and not breathing.

1	2	3	4	5
Comments:				



89. Ron, the 50-year-old coach of a visiting interstate football team, presents to triage at 7 pm on Saturday night. His anti-hypertensive medications have run out and his GP had warned him that it would be dangerous for him to stop his medications. The man says that he realises that it is 'not completely appropriate' for him to attend the ED for a prescription, but says he doesn't know any GPs in the city and is quite prepared to wait for a prescription. His Glasgow Coma Score is 15 out of 15 and his skin is pink, warm and dry. He has no headache or pain elsewhere.

1	2	3	4	5
Comments:				

90. Noel, 29 years, is driven to the ED by friends following a fight at his cousin's party. You are called to retrieve Noel from the ambulance bay. While getting Noel out of the car, you learn that he was stabbed in the left side of his chest with a carving knife and see a two centimetre laceration below his left nipple. His skin is cool, pale and moist. He has a weak carotid pulse and a Glasgow Coma Score of 9 out of 15.

1	2	3	4	5
Comments:				

91. Brett is 27. He presents to triage via a private car following a fall from scaffolding at a construction site approximately 20 minutes prior to presentation. Brett fell more than 10 feet onto a concrete slab. He was observed by his work mates to be unresponsive for 'about five minutes' and then he regained consciousness, but he has been drowsy. He has vomited four times and has a large boggy haematoma on his occiput. Brett is complaining of a generalised headache. His Glasgow Coma Score is 13 out of 15, heart rate is 74 beats per minute, and respiratory rate is 14 breaths per minute.

1	2	3	4	5
Comments:				

92. An obviously pregnant woman presents to triage stating that she is in labour and that she thinks there is something hanging down between her legs. On cursory examination you see under her dress what appears to be an umbilical cord.

1	2	3	4	5
Comments:				



APPENDIX A: ACEM POLICY DOCUMENT

Guidelines for Implementation of the Australasian Triage Scale

General Principles

Function of triage

Triage is an essential function in Emergency Departments (EDs), where many patients may present simultaneously. Triage aims to ensure that patients are treated in the order of their clinical urgency and that their treatment is appropriately timely. It also allows for allocation of the patient to the most appropriate assessment and treatment area, and contributes information that helps to describe the departmental casemix. Urgency refers to the need for time-critical intervention – it is not synonymous with severity. Patients triaged to lower acuity categories may be safe to wait longer for assessment and treatment but may still require hospital admission.

The Triage Assessment

The features used to assess urgency are generally a combination of the presenting problem and general appearance of the patient, possibly combined with physiological observations. The triage assessment should generally take no more than two to five minutes, obtaining sufficient information to determine the urgency and identify any immediate care needs. This does not preclude the initiation of investigations or referrals at this point. There must be a balance between speed and thoroughness. The triage assessment is not necessarily intended to make a diagnosis, although this may sometimes be possible. Vital signs should only be measured at triage if required to estimate urgency, or if time permits. Any patient identified as ATS Category 1 or 2 should be taken immediately into the appropriate assessment and treatment area. A more complete nursing assessment should be done by the treatment nurse receiving the patient.

In Australia, triage is carried out by emergency nurses. As triage is so important to both the smooth running of an ED and the outcome of the patients, it should be carried out by staff who are both specifically trained and experienced.



Safety at triage

Triage is the first point of public contact with the ED. Patients with the whole spectrum of acute illness, injury, mental health problems and challenging behaviour may present there. Pain, anxiety and/or intoxication in patients or their relatives may provoke or magnify aggressive behaviour. These factors may create a risk of harm for the Triage Nurse and other reception staff. It is essential that all EDs plan for this potential risk by providing a safe but non-threatening physical environment, providing minimisation-of-aggression training to front-line staff, and having safe protocols and procedures for dealing with challenging behaviour. Where the safety of staff and/or other patients is under threat, staff and patient safety should take priority and an appropriate security response should take place prior to clinical assessment and treatment.

Time-to-treatment

The time-to-treatment described for each ATS category refers to the maximum time a patient in that category should wait for assessment and treatment. In the more urgent categories, assessment and treatment should occur simultaneously. Ideally, patients should be seen well within the recommended maximum times. Implicit in the descriptors of categories 1 to 4 is the assumption that the clinical outcome may be affected by delays to assessment and treatment beyond the recommended times. Further research is still required to describe the precise relationship between the time to treatment and the clinical outcome. The maximum waiting time for ATS Category 5 represents a standard for service provision.

The recommended performance thresholds represent realistic practice constraints in the clinical environment. However, there is no implied justification for prolonged delays for patients falling outside the required performance standards – all attempts should be made to minimise delays.

Document standards

The documentation of the triage assessment should include at least the following essential details:

- Date and time of assessment
- Name of Triage Officer
- Chief presenting problem(s)
- Limited, relevant history
- Relevant assessment findings
- Initial triage category allocated
- Re-triage category with time and reason
- Assessment and treatment area allocated
- Any diagnostic, first aid or treatment measures initiated.



Re-triage

If a patient's condition changes while they are waiting for treatment, or if additional relevant information becomes available that impacts on the patient's urgency, the patient should be re-triaged. Both the initial triage and any subsequent categorisations should be recorded, and the reason for the re-triage documented.

Clinical descriptors

The listed clinical descriptors for each category are based on available research data where possible, as well as consensus. However, the list is not intended to be exhaustive or absolute and must be regarded as indicative. Absolute physiological measurements should not be taken as the sole criterion for allocation of an ATS category. Senior clinicians should exercise their judgement and, where there is doubt, err on the side of caution.

Most urgent features determine category

The most urgent clinical feature identified determines the ATS category. Once a high-risk feature is identified, a response commensurate with the urgency of that feature should be initiated.

Practicality and reproducibility

The primary and most important role of triage is clinical. Therefore application of the ATS must occur in such a way that ensures patient safety and maximises flow through the emergency department. While it is desirable to attempt to maximise inter-rater reliability for reasons of inter-departmental comparisons and for casemix purposes, it must be recognised that no clinical coding system achieves perfect reproducibility. Acceptable levels of inter-rater agreement have been defined which allow for a realistic balance between clinical practicality and coding precision.

Specific conventions

In order to maximise reproducibility of ATS allocation between departments, the following conventions have been defined:

- *Paediatrics*

The same standards for triage categorisation should apply to all ED settings where children are seen – whether purely Paediatric or mixed departments. All five triage categories should be used in all settings. This does not preclude children being seen well within the recommended waiting time for the ATS category if departmental policy and operational conditions provide for this. However, for the sake of consistency and comparability, children should still be triaged according to objective clinical urgency. Individual departmental policies such as 'fast-tracking' of specific patient populations should be separated from the objective allocation of a triage category.



- *Trauma*

All victims of trauma should be allocated a triage category according to their objective clinical urgency. As with other clinical situations, this will include consideration of high-risk history as well as brief physical assessment (general appearance +/- physiological observations). Although individual departments may have policies that provide for immediate team responses to patients meeting certain criteria, these patients should still be allocated an objective triage category according to their clinical presentation. Again, departmental 'fast-tracking' policies or systems should occur separately to the objective allocation of a triage category.

- *Behavioural disturbance*

Patients presenting with mental health or behavioural problems should be triaged according to their clinical and situational urgency, as with other ED patients. Where physical and behavioural problems co-exist, the highest appropriate triage category should be applied based on the combined presentation.

While some acutely-disturbed patients may require an immediate clinical response (perhaps combined with a security response) to ensure their safety, it is recognised that some individuals entering an emergency department and posing an immediate threat to staff (eg brandishing a dangerous weapon) should not receive a clinical response until the safety of staff can be ensured. In this situation, staff should act so as to protect themselves and other ED patients, and obtain immediate intervention from security staff and/or the police service. Once the situation is stabilised, a clinical response can take place as (and if) required, and triage should then reflect clinical and situational urgency.



APPENDIX B: AUSTRALASIAN TRIAGE SCALE: DESCRIPTORS FOR CATEGORIES

ATS Category	Response	Description of Category	Clinical Descriptors (indicative only)
Category 1	Immediate simultaneous assessment and treatment	Immediately Life-Threatening Conditions that are threats to life (or imminent risk of deterioration) and require immediate aggressive intervention.	<ul style="list-style-type: none"> Cardiac arrest Respiratory arrest Immediate risk to airway – impending arrest Respiratory rate <10/min Extreme respiratory distress BP <80 (adult) or severely shocked child/infant Unresponsive or responds to pain only (GCS <9) Ongoing/prolonged seizure IV overdose and unresponsive or hypoventilation Severe behavioural disorder with immediate threat of dangerous violence
Category 2	Assessment and treatment within 10 minutes (assessment and treatment often simultaneous)	<p>Imminently Life-Threatening The patient's condition is serious enough or deteriorating so rapidly that there is the potential of threat to life, or organ system failure, if not treated within ten minutes of arrival</p> <p>OR</p> <p>Important Time-Critical Treatment The potential for time-critical treatment (e.g. thrombolysis, antidote) to make a significant effect on clinical outcome depends on treatment commencing within a few minutes of the patient's arrival in the ED</p> <p>OR</p> <p>Very Severe Pain Humane practice mandates the relief of very severe pain or distress within 10 minutes</p>	<ul style="list-style-type: none"> Airway risk – severe stridor or drooling with distress Severe respiratory distress Circulatory compromise <ul style="list-style-type: none"> – Glummy or mottled skin, poor perfusion – HR <50 or >150 (adult) – Hypotension with haemodynamic effects – Severe blood loss Chest pain of likely cardiac nature Very severe pain - any cause BSL <2 mmol/l Drowsy, decreased responsiveness any cause (GCS <13) Acute hemiparesis/dysphasia Fever with signs of lethargy (any age) Acid or alkali splash to eye – requiring irrigation Major multi trauma (requiring rapid organised team response) Severe localised trauma – major fracture, amputation High-risk history: <ul style="list-style-type: none"> – Significant sedative or other toxic ingestion – Significant/dangerous envenomation – Severe pain suggesting PE, AAA or ectopic pregnancy Behavioural/Psychiatric: <ul style="list-style-type: none"> – violent or aggressive – immediate threat to self or others – requires or has required restraint – severe agitation or aggression

ATS Category	Response	Description of Category	Clinical Descriptors (indicative only)
Category 3	Assessment and treatment start within 30 mins	<p>Potentially life-threatening The patient's condition may progress to life or limb threatening, or may lead to significant morbidity, if assessment and treatment are not commenced within thirty minutes of arrival</p> <p>Situational urgency There is potential for adverse outcome if time-critical treatment is not commenced within thirty minutes</p> <p>OR Humane practice mandates the relief of severe discomfort or distress within thirty minutes</p>	<p>Severe hypertension</p> <p>Moderately severe blood loss – any cause</p> <p>Moderate shortness of breath</p> <p>SpO₂ 90-95%</p> <p>BSL > 16 mmol/l</p> <p>Seizure (now alert)</p> <p>Any fever if immuno-suppressed eg. oncology patient, steroid Rx</p> <p>Persistent vomiting</p> <p>Dehydration</p> <p>Head injury with short LOC – now alert</p> <p>Moderately severe pain – any cause – requiring analgesia</p> <p>Chest pain likely non-cardiac and mod severity</p> <p>Abdominal pain without high risk features – mod severe or patient age >65 years</p> <p>Moderate limb injury – deformity, severe laceration, crush</p> <p>Limb – altered sensation, acutely absent pulse</p> <p>Trauma – high-risk history with no other high-risk features</p> <p>Stable neonate</p> <p>Child at risk</p> <p>Behavioural/Psychiatric:</p> <ul style="list-style-type: none"> – Very distressed, risk of self-harm – Acutely psychotic or thought disordered – Situational crisis, deliberate self harm – Agitated/withdrawn/potentially aggressive



ATS Category	Response	Description of Category	Clinical Descriptors (indicative only)
Category 4	Assessment and treatment start within 60 mins	<p>Potentially Serious The patient's condition may deteriorate, or adverse outcome may result, if assessment and treatment is not commenced within one hour of arrival in ED. Symptoms moderate or prolonged.</p> <p>Situational Urgency There is potential for adverse outcome if time-critical treatment is not commenced within the hour.</p> <p>OR</p> <p>Significant complexity or Severity Likely to require complex work-up and consultation and/or inpatient management.</p> <p>OR</p> <p>Humane practice mandates the relief of discomfort or distress within one hour.</p>	<p>Mild haemorrhage</p> <p>Foreign body aspiration, no respiratory distress</p> <p>Chest injury without rib pain or respiratory distress</p> <p>Difficulty swallowing, no respiratory distress</p> <p>Minor head injury, no loss of consciousness</p> <p>Moderate pain, some risk features</p> <p>Vomiting or diarrhoea without dehydration</p> <p>Eye inflammation or foreign body – normal vision</p> <p>Minor limb trauma – sprained ankle, possible fracture, uncomplicated laceration requiring investigation or intervention – Normal vital signs, low/moderate pain</p> <p>Tight cast, no neurovascular impairment</p> <p>Swollen “hot” joint</p> <p>Non-specific abdominal pain</p> <p>Behavioural/Psychiatric:</p> <ul style="list-style-type: none"> – Semi-urgent mental health problem – Under observation and/or no immediate risk to self or others
Category 5	Assessment and treatment start within 120 minutes	<p>Less Urgent The patient's condition is chronic or minor enough that symptoms or clinical outcome will not be significantly affected if assessment and treatment are delayed up to two hours from arrival.</p> <p>Clinico-administrative problems, such as: results review, medical certificates, prescriptions only.</p>	<p>Minimal pain with no high risk features</p> <p>Low-risk history and now asymptomatic</p> <p>Minor symptoms of existing stable illness</p> <p>Minor symptoms of low-risk conditions</p> <p>Minor wounds - small abrasions, minor lacerations (not requiring sutures)</p> <p>Scheduled revisit eg wound review, complex dressings</p> <p>Immunisation only</p> <p>Behavioural/Psychiatric:</p> <ul style="list-style-type: none"> – Known patient with chronic symptoms – Social crisis, clinically well patient



APPENDIX C: CENA TRIAGE NURSE POSITION STATEMENT

Position Statement

Triage Nurse

Introduction

The purpose of this position statement is to define the role of Triage Nurse and the minimum Triage Nurse practice standards in accordance with the best available evidence, to promote national triage consistency in the application of the Australasian Triage Scale (ATS). It is acknowledged that although triage may be performed in a number of settings other than an Emergency Department, CENA produces this position statement in the setting of the Triage Nurse working within an Emergency Department.

Triage is the first instance of clinical contact for all people presenting to the Emergency Department. It is the point at which emergency care begins. Triage is a brief clinical assessment that determines the urgency of treatment and the time and sequence in which patients should be seen in the Emergency Department. Although primarily a clinical tool for ensuring that patients are seen in a timely manner, commensurate with their clinical urgency, the ATS is also a useful casemix measure. The scale directly relates triage code with a range of outcome measures (inpatient length of stay, ICU admission, mortality rate) and resource consumption (staff time, cost). It provides an opportunity for analysis of a number of performance parameters in the Emergency Department, such as casemix, operational efficiency, utilisation review, outcome effectiveness and cost (ACEM, 2006).

Position

Triage is an autonomous nursing role and essential to the efficient delivery of emergency care. Clinical decisions made by Triage Nurses require complex cognitive processes. The Triage Nurse must demonstrate critical thinking skills and abilities in environments where data available to inform such decisions is limited, incomplete or ambiguous. The ability to formulate judgments and make decisions is critical, and the quality and accuracy of triage judgments and decision-making are central to appropriate clinical care. In some models of care, triage may include a medical officer in a triage team. CENA endorses the concept that Triage must be attended to by no less than a triage qualified Registered Nurse.



The Role of the Triage Nurse is to:

- a. Undertake patient assessment and allocate the ATS category
- b. Initiate appropriate nursing interventions and organisational guidelines (e.g. first aid and emergency interventions) to improve patient outcomes and secure the safety of patients and staff of the department
- c. Ensure continuous reassessment and management of patients who remain in the waiting room commensurate with their condition and time frames determined by the ATS category
- d. Provide patient and public education where appropriate to facilitate
 - a. health promotion and education
 - b. injury prevention
 - c. community resourcing and information
- e. Act as the liaison for members of the public and other health care professionals

The ability to undertake effective and efficient triage is dependent on extensive knowledge and experience with a wide range of illness and injury patterns. As such, it is the position of CENA that triage and the role of Triage Nurse be undertaken by specifically trained and experienced Registered nurses.¹

The decisions of Triage Nurses should, as far as possible, be evidence-based and demonstrate best-practice standards. All triage decisions are to be based on clinical urgency of the patients' presenting problems, and not determined by factors such as departmental workload and funding.

CENA endorses a set of minimum standards for the Triage Nurse and triage practice:

Standard 1: Education, Training and Professional Development

CENA endorses the Emergency Triage Education Kit as the minimum standard for all Triage Nurses and nurses required to undertake triage roles within the Emergency Department. The following theoretical and practice elements are core components of Triage Nurse training:

- a. history, science and practice of triage
- b. the Australian health care system
- c. the role of the Triage Nurse
- d. the Australasian Triage Scale (ATS)
- e. effective communication skills
- f. legislative requirements and considerations
- g. epidemiology and population health
- h. assessment and triage decision-making by presentation type
 - i. primary and secondary surveys
 - ii. trauma
 - iii. medical and surgical emergencies
 - iv. paediatric emergencies
 - v. obstetric and gynaecological emergencies
 - vi. mental health emergencies
 - vii. rural and isolated triage practice
 - viii. environmental emergencies
- i. quality and safety in health care



Standard 2: Clinical Practice

The Triage Nurse:

- a. is a qualified and experienced Registered Nurse* who demonstrates and maintains clinical expertise in emergency nursing prior to undertaking the role of Triage Nurse
- b. completes triage education based on the Emergency Triage Education Kit prior to commencing the triage role
- c. participates in research processes of audit and evaluation of triage practice
- d. participates in annual education, training and professional development in triage and related emergency nursing and emergency care activities

Standard 3: Equipment and Environment

The triage environment must provide safety for the public, the Triage Nurse, staff and patients of the Emergency Department and the hospital. The environment must:

- a. be immediately accessible and well sign posted
- b. have access to an area for patient examination and primary treatment
- c. be designed to maximise the safety of the Triage Nurse, staff and patients (e.g. duress alarms, access to security personnel)
- d. be equipped with emergency equipment and the Triage Nurse deemed competent in its use
- e. enable care to be provided with due regard to standard and additional precautions for infection control and prevention
- f. enable and facilitate patient privacy

Rationale

The role of the Triage Nurse is central to the effective and efficient operation of the Emergency Department. Emergency Departments are routinely unpredictable settings. The finite resources of the Emergency Department emphasise the need for timely and accurate triage decisions that ultimately underpin optimal health service delivery.

References

Australasian College for Emergency Medicine (ACEM). (2006). P06 – Policy on the Australasian Triage Scale. Melbourne: Australasian College for Emergency Medicine.

Date developed: January 2007

Endorsed: March 2007

Review: March 2009

* Division 1 in Victoria



APPENDIX D: METHODOLOGY

Aims

The ETEK aims to provide a nationally consistent approach to the educational preparation of emergency nurses for the triage role, and promote the consistent application of the Australasian Triage Scale (ATS). This project involves the validation of the educational tools provided in the ETEK and was conducted to achieve the following aims:

1. To develop a large set of paper-based triage scenarios for inclusion in the ETEK
2. To assess the above scenarios for content validity and determine inter-rater reliability
3. To achieve a weighted kappa of at least 0.6 for the scenarios set using an expert panel of emergency nurse raters

Method

The method used for this study was a postal survey comprising a demographic questionnaire and a series of paper-based triage scenarios. An expert panel of Triage Nurses rated each of the scenarios into one of five ATS categories. This process was undertaken to identify a scenario set suitable for teaching consistent application of the ATS using established guidelines.²

Design

A descriptive correlational design was used to measure inter-rater reliability for 237 triage scenarios among multiple expert raters.

Setting

Participants worked in publicly funded Emergency Departments located in each of five Australian states and two Australian territories. Data was collected for this study from 2 April to 14 May 2007.

Participants

Participants in this study comprised a convenience sample of 50 experienced Triage Nurses working in public Emergency Departments. Inclusion and exclusion criteria for participants are shown in Table A1. In order to obtain a sample with representation from each state a stratified approach was used to select participants. Table A2 shows the sampling frame used for this study.



Instrument

The consultant developed a questionnaire containing a total of 237 triage scenarios that related to the content covered in the following chapters of the ETEK:

- Chapter 4: Triage Basics
- Chapter 5: Mental Health
- Chapter 7: Pain
- Chapter 8: Paediatrics
- Chapter 9: Pregnancy

The fictitious scenarios were constructed in consultation with a group of specialist Triage Nurses (paediatric, mental health, obstetric). The types of scenarios included in the questionnaire took into account common chief complaints to Australian EDs with some additional scenarios to cover presentations more likely to occur in regional and rural areas (e.g. snake, spider and marine envenomation). Each of the 237 triage scenarios was written in a narrative form, to resemble a triage note. The scenarios were one paragraph long and provided a basic description of the patient including; age gender, general appearance and observations. The information provided in the scenarios was based on the original work of Whitby et al¹³¹, who developed it from 11,169 actual episodes of triage, a description of the features of emergency presentations used by nurses when allocating a triage code. The narrative approach to the scenario presentation was adopted to take into account the primary purpose of the ETEK as a teaching resource. Using this format, participants are required to identify from a scenario, which is presented as text, the clinically important components of the presentation and allocate a triage code.

Procedure

Members of the National Education Framework for Emergency Triage Working Party located individuals from their own professional networks who met the section criteria according to the sampling frame. Working Party members contacted these potential participants by telephone to explain the study. This was done using the Plain Language Statement (PLS).

Those participants who agreed to take part were sent the PLS, a consent form, the questionnaire, ATS Guidelines^{1,50} and a reply paid envelope. These were provided to those performing the recruitment as a kit. Working Party members addressed the envelopes containing the consent form, the questionnaire, the ATS Guidelines and the PLS. They recorded the questionnaire number against the participant name and informed Marie Gerdtz of the codes used.

Participants returned completed questionnaires directly to Marie Gerdtz via the reply paid envelope.



Ethical approval

Ethical approval to conduct this low risk project was sought via expedited review. Ethical and technical review of the research protocol was undertaken via the School of Nursing Human Research Ethics Advisory Group and approved by the University of Melbourne Human Research and Ethics Committee.

Approval granted on 27 March 2007.

The research was performed in accordance with NHMRC Guidelines.¹⁴⁴

Participants were given a Plain Language Statement (PLS) and provided written consent.

Analysis

Raw data was entered into SPSS (version 10.0). Descriptive analysis was performed including calculation of frequencies, mean and standard deviation for demographic variables. The data was also explored descriptively by determining concurrence; that is, the percentage of responses for each case scenario in the modal category and spread. Raw percentage agreement was calculated for the 237 scenarios for the modal response category.

Scenarios were analysed as an entire set and were also categorised according to the chapters contained in the ETEK (Chapters 4, 5, 7, 8 and 9).

To explore the data, all scenarios in which the modal response category was greater than 60 and 70 per cent respectively were included in a model to calculate chance-corrected agreement (unweighted kappa). This approach was taken to identify the maximum number of scenarios appropriate for testing according to the predetermined criteria (kappa >0.6).

The formula for calculating kappa is by Fleiss et al.¹⁴⁵:

$$K_j = \frac{P_j - p_j}{1 - p_j}$$

$$= \frac{\sum_{i=1}^N n_{ij}^2 - Nn_{pj}[1 + (n-1)p_j]}{Nn(n-1)p_j q_j}$$



Notation: N represents the total number of subjects, n is the number of ratings per subject and k is the number of categories into which assignments are made. Let the subscript i where $i=1, \dots, N$, represent the subjects and the subscript j , where $j=1, \dots, k$, represent the categories of the scale. Define n_{ij} the number of raters who assigned the i th subject to the j th category. The quantity p_j is the proportion of all assignments that were to the j th category.⁸

The formula for calculating kappa variance was also from Fleiss et al.¹⁴⁵:

$$\text{Var}(k) = \frac{2}{Nn(n-1)(\sum p_j q_j)^2} \times \left[(\sum p_j q_j)^2 - \sum p_j q_j (q_j - p_j) \right]$$

Analysis of kappa statistics was done by programming the above formula into a Microsoft Office Excel (2003). Frequencies were entered by scenario and triage code.

Statistical advice and checking of analysis was provided by Marnie Collins (Statistical Consulting Centre Department of Mathematics and Statistics, The University of Melbourne).

Results

A total of 42 (84%) of questionnaires were returned, of which eight individual items on the questionnaire were incomplete. A total of 9946 occasions of triage were available for the analysis. In Table A3 the demographic characteristics of the participants who completed the questionnaire are provided. All participants were experienced in emergency nursing and in performing the triage role, more than half ($n=27$; 64.3%) held specific qualification in emergency nursing at a Graduate Certificate or Diploma level. The majority designated appointment level as Registered Nurse/Clinical Nurse Specialist ($n=27$; 64.2%). The remainder reported working in combined management, teaching and clinical roles.

Good distribution of participants was achieved nationwide with the exception of South Australia. Recruitment of suitable participants in South Australia was adversely influenced because the person who was responsible became unwell during the project and was not able to distribute the questionnaires as, originally planned. Raw percentage agreement for each of the 237 scenarios was found to vary widely with 92 (38%) showing raw percentage agreement at 70 per cent or more, and 152 (64%) showing raw percentage agreement of 60 per cent or more. Certain types of scenarios were noted to have poorer levels of agreement. In particular scenarios classified as 'mental health' and 'pregnancy' show lower levels of agreement than other scenario types.



Excellent rates of interobserver agreement were achieved using unweighted kappa in the scenario set that included all scenarios with raw percentage agreement >70 per cent. For this scenario set an overall unweighted kappa of 0.63 was achieved, with higher levels of agreement noted in ATS categories 1 and 5. 95 per cent confidence intervals for this scenario set indicate reasonable precision (0.629–0.636). Table A3 shows the distribution of responses for each of the scenarios with a modal response of >70 per cent. Good rates of interobserver agreement for all five ATS categories were also achieved with raw percentage agreement >60 per cent. For this scenario set an overall unweighted overall kappa was 0.5. Table A6 shows the distribution of responses for each of the scenarios with a modal response of >60 per cent. Ninety Five per cent confidence intervals for this scenario set also indicate reasonable precision (0.508, 0.514).

Recommendations

The scenarios that were tested in this project fell naturally into three groups. The first set of scenarios show excellent level of agreement and can be used for testing purposes if required ($n=92$). Evidence of agreement was determined by raw percentage agreement >70 per cent and chance corrected agreement of >kappa 0.6. For this scenario set an overall unweighted kappa of 0.63 was achieved, with higher levels of agreement noted in categories 1 and 5. These 92 scenarios are suitable for the purpose of testing the application of the ATS guidelines.

The second set of scenarios show moderate levels of agreement and could be used for teaching, but not testing, purposes within the ETEK ($n=61$). For this scenario set an overall unweighted overall kappa was 0.5.

The third group of scenarios shows lower levels of agreement ($n=84$). It is not recommended that these scenarios be used for testing or teaching in the context of the ETEK. However, future work could be performed to assist in identifying aspects of the scenarios that influence agreement levels.

We have identified from this work that, despite being provided with guidelines, interobserver agreement among expert Triage Nurses for scenario sets involving mental health, pregnancy and paediatrics remain relatively poor when compared to those involving other types of general ED presentations. Future work may be required to refine current ATS guidelines to these specific patient presentations.



Table A1: Inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
Registered Nurse NBV Division 1 (or equivalent) currently practicing	People with whom working party members you may have a dependent relationship (i.e. junior staff member with line management responsibility).
Five years of experience as an emergency nurse	
Practicing triage at least once per week in an A1, B1 or B2 hospital.	

Table A2: Sampling frame

State/Territory	<i>n</i>	Hospital classification (<i>n</i>)
ACT	1	A1 (1)
New South Wales	15	A1(5), B1(5), B2(5)
Northern Territory	2	A1 (2)
Queensland	10	A1 (5), B1(3), B2 (2)
South Australia	5	A1 (3), B1 (2)
Tasmania	2	A1 (2)
Victoria	10	A1 (5), B1(2), B3 (3)
Western Australia	5	A1 (3), B2 (2)

Key: A1 Principle referral hospital, B1 Large major city hospital, B2 large regional hospital



Table A3: Demographic description of participants

Variable	Frequency	Per cent	Mean SD	SD
Gender				
Male	4	9.5		
Female	38	90.5		
Age			38.7	7.9
Education				
Certificate of Nursing	3	7.1		
Bachelor of Nursing	7	16.7		
Graduate Diploma	27	64.3		
Masters	5	11.9		
Experience				
Years as a registered nurse			15.9	8.4
Years as an emergency nurse			11.5	6.1
Years as a Triage Nurse			9.9	5.7
Appointment level				
Registered Nurse	13	31.0		
Clinical Nurse Specialist	14	33.3		
Associate Charge Nurse	2	4.8		
Nurse Unit Manager	5	11.9		
Nurse Educator	42	14.3		
Other	1	4.8		
Shifts worked at triage			1.95	1.0
Location				
New South Wales	14	33.0		
Victoria	8	19.0		
Australian Capital Territory	1	2.4		
Queensland	9	21.4		
Northern Territory	2	4.8		
Tasmania	2	4.8		
Western Australia	5	11.9		
South Australia	1	2.4		



APPENDIX E: ANSWERS TO CONSOLIDATION/SELF-TEST CHAPTERS

Answers to Chapter 11 triage scenarios

1. Ebony is a four-month-old girl who is brought to the ED by her mother at 4.00 pm. Her mother states that the child has had difficulty breathing for two days and has been worse overnight. The child has been coughing and feeding poorly. Her fluid intake has been approximately half that of a normal day and she has had a decrease in the number of wet nappies. She has a moist-sounding cough and no audible wheeze. She is tachypneic with a respiratory rate of 60 breaths per minute. Examination of her chest shows mild use of accessory muscles. On auscultation she has an expiratory wheeze. Her skin is pink and she has moist mucous membranes.

1	2	3	4	5
Airway is patent. This child has mild respiratory distress as evidenced by mild use of accessory muscles. Poor feeding and reduced wet nappies indicate that this child may become dehydrated if not treated early.				

2. Laura is a 10-year-old girl who presents to the ED at 11.00 pm with her older sibling saying that she has had abdominal pain for the past few hours. She indicates that the pain is across the centre of her stomach and paracetamol has not helped. She complains of nausea and says that she has vomited once since the onset of pain. When asked, she states that she has had normal bowel motions. She is able to give her own history while leaning over onto the desk, holding her stomach. Her skin is pink and she is not short of breath.

1	2	3	4	5
There is no compromise to the primary survey. Pain has not been relieved by oral analgesia and there is a moderate level of distress associated with the pain.				

3. Graham is a 55-year-old male who presents to the ED accompanied by his partner. He states that he has been 'bleeding from the back passage' since the previous night. He is very anxious about the bleeding and reports that it was 'bright red' in colour and 'filled the toilet bowl' on two occasions. His blood pressure is 155/100; his heart rate is 102 beats per minute; his respiratory rate is 20 breaths per minute.

1	2	3	4	5
There is no compromise to airway or breathing. From the history it appears that the blood loss is moderate and that the HR is mildly elevated but there is no haemodynamic instability.				



4. Louisa is a 24-year-old female who presents to the ED with her friend after ‘fainting’ in the toilet at home. She is complaining of left-sided abdominal pains, which she has had ‘on and off’ for several months. She previously attended the ED two weeks ago for the same problem. An abdominal ultrasound was performed at that time but identified no abnormalities. She rates her pain as ‘six out of ten’. Her heart rate is 82 beats per minute and her respiratory rate is 18 breaths per minute. Her skin is cool and dry. She looks pale and uncomfortable.

1	2	3	4	5
There is no compromise to airway, breathing or circulation. Pain is moderate to severe and is causing distress.				

5. A mother presents to the ED at 9.20 pm with her nine-week-old son, Christopher, stating that he has had a fever since 4.00 pm that afternoon. She gave him paracetamol at 5.00 pm. She says that he normally vomits after feeds but has vomited once this evening between feeds. Christopher is breast-fed; he has fed less frequently this evening. Christopher’s mother also informs you that he had his first immunisation two days ago. He is in his mother’s arms and is crying. He appears slightly pale. His hands are warm but his feet are cold. Capillary refill is about two seconds and he has moist mucous membranes and normal skin turgor. His anterior fontanelle is not bulging.

1	2	3	4	5
Airway and breathing are not compromised. Skin is pale and capillary refill indicates adequate peripheral perfusion. Dehydration is not evident. The child is distressed despite being with his mother and having been given analgesia.				

6. Kimberley is 32 years of age. She was sent to the ED following an accident at work. She was carrying a pot of hot oil and slipped, spilling it on her upper legs. She immediately removed her clothing and stood under a cool shower for 15 minutes. On arrival in the ED she is in considerable pain (‘nine out of ten’). You estimate that she has approximately eight per cent burns to her anterior thighs. Her heart rate is 110 beats per minute and her respiratory rate is 24 breaths per minute.

1	2	3	4	5
Burns of this nature cause severe pain. Analgesia should be given, and patient should commence treatment within 10 minutes of arrival.				



7. Michaela is a three-week-old infant who is brought to the ED at 9.30 pm by her parents. She has been referred by her local doctor. Her parents state that Michaela has been feeding poorly for several days and that her weight gain has been poor. The infant seems lethargic. The parents have not noticed a fever. The infant is sleeping in her mother’s arms and her skin is pale. Her peripheries are cool and her eyes slightly sunken. Painful stimulus is required to wake the child, who then wriggles and cries vigorously.

1	2	3	4	5
The airway is clear and there is no compromise to breathing. The child shows signs of dehydration including lethargy and drowsiness, and should therefore commence treatment within 10 minutes of arrival.				

8. Toby is an 18-month-old boy who presents to triage at 6.00 pm with his parents. They state that he has been ‘unwell’ for two days; he started vomiting 48 hours ago, developed diarrhoea yesterday and has had seven loose stools today. He has had episodes of ‘crying and drawing up his legs’. He is drinking small amounts. He appears lethargic and uninterested in his surroundings. He is pale and his capillary refill is approximately three to four seconds.

1	2	3	4	5
Airway and breathing are not compromised. Multiple signs and symptoms of dehydration are evident including lethargy and poor capillary refill. The child also appears to be in pain and very distressed with his illness. He needs to commence treatment within 10 minutes of arrival.				

9. Edward is a 36-year-old male with a past history of alcoholism. He presents to triage at 5.30 pm. He has a referral letter from the nearby drug and alcohol service and an escort. The referral letter states that the patient has ‘suicidal ideation and homicidal thoughts’. The letter requests a psychiatric assessment and states that the patient is ‘possibly experiencing alcohol withdrawal’. He states that his last drink was at 9.00 am.

1	2	3	4	5
<p>This patient has no compromise to this airway, breathing or circulation. There is no report of acute behavioural disturbance or agitation at this stage. You will need to determine whether it was 9.00 am today or the day before that the drink was consumed (possible alcohol withdrawal state).</p> <p>This patient has an escort and will be under direct surveillance from that person. He should not leave the waiting room without this support person. He must also be under close observation of the Triage Nurse. Security should be informed that this person is in the ED.</p> <p>The patient has suicidal ideations and is at risk of self-harm. He should wait no longer than 30 minutes to commence treatment. Re-triage may need to be performed if the patient shows signs of behavioural disturbance.</p>				



10. Rae, a 24-year-old university student, comes to the ED with a friend. She has a four-hour history of generalised abdominal pain now localised to the right iliac fossa. She has vomited twice and had one episode of diarrhoea about two hours ago. Her heart rate is 92 beats per minute and her temperature is 38.2°C.

1	2	3	4	5
The airway, breathing and circulation are not compromised. She has pain and likely intra-abdominal pathology as evident by localising pain, fever and vomiting. She should wait no more than 30 minutes to commence treatment.				

11. A father presents to the ED at 8.00 pm with his three-and-a-half-year-old daughter, Savannah, stating that she has had a sore throat for 'a day or two'. It started with a runny nose and a fever, and then yesterday she began complaining of a sore throat. She has no cough or stridor, she demonstrates no shortness of breath and her skin is pink and warm

1	2	3	4	5
Airway, breathing and circulation are intact. She is experiencing some discomfort from her condition and should therefore commence treatment within an hour.				

12. Baz, 34 years old, was installing a ceiling fan with the assistance of a friend in his own home. He received a 240 volt charge to his right hand, and was thrown back against the roof. His friend immediately switched the power off and called an ambulance. Baz had a brief period of loss of consciousness, but was alert when the ambulance crew arrived. His heart rate is 80 beats per minute and irregular; his respirations are 20 breaths per minute. He has a five centimetre blackened area to his right hand. No exit wound is seen.

1	2	3	4	5
Airway, breathing and circulation are intact. Likely full-thickness burn from electrocution indicates severe localised trauma, with possible systemic involvement. This patient should wait no more than 10 minutes to commence treatment.				



13. Hannah is a 41-year-old woman who presents via ambulance with an altered conscious state following collapse. She is 30 weeks pregnant (G₃P₁) and is normally well. She was out shopping with a friend when she suddenly collapsed. Ambulance officers report a fluctuating conscious state. At the scene she tolerated an oropharyngeal airway but spat it out en route. She is in a lateral position on the ambulance trolley with supplemental oxygen via a mask. Her respiratory rate is 10 breaths per minute. Her SpO₂ is 93 per cent; her heart rate is 130 beats per minute. Her skin is pale, cool and moist. Her blood pressure is 190/110. Her Glasgow Coma Score is 10 out of 15. Her temperature is 36.3°C.

1	2	3	4	5
Airway may be compromised due to fluctuating level of consciousness. There is additional risk to her airway and breathing due to the pregnancy. There is hypoventilation and severe hypertension. There is an imminent risk of deterioration. Simultaneous assessment and treatment must commence immediately.				

14. Mr J is a 74-year-old man who is brought to the ED by ambulance at 5.10 am. He has acute shortness of breath and a history of left ventricular failure. His heart rate is 112 beats per minute and irregular, his blood pressure is 180/100 and his respiratory rate is 30 breaths per minute, with accessory muscle use. His SpO₂ is 89 per cent, but the pulse oximetry display is giving a poor trace. Oxygen is being administered at 100 per cent via bag-valve-mask. Mr J is trying to remove the mask and is very agitated.

1	2	3	4	5
Airway is currently clear, however, there is severe respiratory distress. There is acute shortness of breath and a mild tachycardia. These signs and symptoms are possibly due to acute left ventricular failure.				

15. Bo is a 16-month-old boy who presents to triage at 11.00 am with his mother. She states that he has had 'a cold for over a week' which 'has not improved'. Since last night he has had a fever and a cough and has seemed 'more congested'. He was restless over night, is tired today and is drinking less than usual. He is resting against his mother and doesn't protest when examined. No cough, stridor or grunting is heard. He is tachypneic and demonstrates mildly increased work of breathing. His skin is flushed and warm. His capillary refill is less than two seconds and his mucous membranes are moist.

1	2	3	4	5
Airway is patent. The child is tachypnoeic with mildly increased work of breathing. Perfusion is not compromised. The child should wait no longer than 30 minutes to commence treatment.				



16. Luka is a nine-year-old boy who presents to triage with his father at 3.00 pm. He has an injured elbow as a result of a fall playing football. He is distressed and is clutching his arm, which is in a sling. He tells you that his pain is ‘ten out of ten’. His left elbow is markedly swollen and deformed. He has a strong radial pulse, and sensation distal to the injury is intact. He is pale, slightly diaphoretic and tachycardic.

1	2	3	4	5
Airway, breathing and circulation are intact. There is severe pain and the child should wait no more than 10 minutes to commence treatment.				

17. Albert, 62 years old, often attends your ED. Today he says he is constipated. His bowels have not opened for ‘at least two weeks’. He says he has pain and feels bloated. When you ask him to score his pain he is not sure what to say and just answers ‘it’s really bad’. His vital signs are within normal limits and his skin is warm and dry.

1	2	3	4	5
There is no compromise to airway, breathing or circulation. The pain and discomfort have been present for more than two weeks. The patient should wait no more than one hour before treatment is commenced.				

18. Sebastian is a 16-year-old boy who is brought to the ED by a passer-by, who found him crying and banging his head against the footpath in a small laneway. After bringing Sebastian to the triage the accompanying adult leaves the ED. Sebastian has superficial lacerations to both wrists, and is dishevelled and unkempt. He is upset about having being brought to the ED, and is saying, ‘just leave me alone – why don’t you just piss off’. He admits trying to hurt himself, and says that he will do so again as soon as he can.

1	2	3	4	5
Airway, breathing and circulation are intact. The patient has attempted self-harm. His comments indicate that he may be at high risk of absconding. He should commence treatment within 10 minutes of arrival in the ED.				

19. Anne-Marie is a 22-year-old female who is brought to the ED by her flatmates, who are concerned about her bizarre behaviour. She had been talking to herself for several days, turning the television off and on because it is sending her messages, yelling out at night and not sleeping. Her flat mates are concerned that she will come to some harm without help.

1	2	3	4	5
Airway, breathing and circulation are intact. There are signs of thought disorder as well as bizarre and agitated behaviour.				



20. Mohammed is a 24-year-old Somali man who is brought to the ED by police. He is crying and lying on the floor, rocking. He smells of alcohol, and police say he is a refugee who has recently been released from a detention centre. He has committed no crime, but was apprehended 'directing traffic' in the middle of a busy city highway.

1	2	3	4	5
Airway, breathing and circulation are intact. A full medical assessment will be required to identify any physical causes for the behaviour. Psychotic symptoms are reported including delusions and bizarre behaviour. This patient should commence treatment within 30 minutes of arrival.				

21. Damien is a 36-year-old male who is brought to the ED by his friend. He has had a recent marriage break-up, which involved a lengthy custody and property court case. He has had symptoms of depression for several weeks, including low mood, ruminations, poor sleep and appetite, feelings of hopelessness and agitation. Since receiving the outcome of the Family Court hearing three days ago, Damien has been using the amphetamine 'ice', and is now 'obsessed with plotting revenge' on his former spouse. He has been awake for more than 48 hours, and presents as angry, rambling in speech, volatile and disordered in his thinking.

1	2	3	4	5
Airway, breathing and circulation are intact. There is extreme agitation and possible threats of harm to others. This patient should commence treatment within 10 minutes.				

22. Chloe is a 15-year-old girl who is brought to the ED from a friend's house after taking an overdose. The circumstances are unclear, however, she admits to having taken 12 paracetamol tablets and 'some other things', including alcohol. She is known to the ED, having presented 12 months ago following an episode of self-harm. She is cooperative, coherent and not drowsy. Her breath smells of alcohol.

1	2	3	4	5
Airway, breathing and circulation are intact. Actual self-harm has occurred and the patient is at risk of the toxic effects of the ingestion of paracetamol and other tablets which are as yet unknown, thus full physical assessment is required in the ED. This patient should commence treatment within 30 minutes of arrival.				



23. Leonie is a 29-year-old woman who presents to triage with her mother. She has had three days of abdominal pain and vomiting. She tells you she is 32 weeks pregnant (G₂P₁) and is an insulin-dependent diabetic. Her main reason for coming to the ED is that she couldn't get an appointment with her obstetrician and the pain is 'worrying' her. She appears a little short of breath and her respiratory rate is 28 breaths per minute. Her SpO₂ is 98 per cent. Her heart rate is 128 and her skin is pale, warm and dry. She is alert and oriented and her Glasgow Coma Score is 15 out of 15. Her temperature is 37.2°C (tympanic).

1	2	3	4	5
Airway is intact and there is slight shortness of breath and tachypnoea. The heart rate is elevated. The patient is experiencing abdominal pain. She also has a significant co-morbidity, being an insulin-dependent diabetic. Notwithstanding these factors, she is ventilating well and is alert and orientated. She should wait no more than 30 minutes to commence treatment.				

24. Paul is a 47-year-old male. He has a painful left shoulder, and received treatment in the ED for the same problem two days ago. There is no history of injury, but Paul tells you that his shoulder is stiff and keeps 'seizing up'. He tells you that he was prescribed some pain killers that worked initially, but that the pain is back and is 'much worse now'. He is crying in pain. His left hand is pale and cool; a weak radial pulse is noted. His right hand is pink and warm.

1	2	3	4	5
Airway, breathing and circulation are intact. Neurovascular assessment indicates a limb-threatening condition. The patient is experiencing severe pain and so should wait no longer than 30 minutes to commence treatment.				

25. Gillian is a 26-year-old woman who presents via ambulance with palpitations. She is 34 weeks pregnant (G₁P₀) and is normally well. She tells you that she was out shopping when her palpitations started. She does not have any associated chest pain or shortness of breath. Her respiratory rate is 20 breaths per minute. Her SpO₂ is 98 per cent. Her heart rate is 108 beats per minute and her blood pressure is 120/80. Her skin is pale, warm and dry. Her Glasgow Coma Score is 15 out of 15.

1	2	3	4	5
Airway, breathing and circulation are intact. The heart rate is mildly elevated and the patient is experiencing palpitations. She should wait no longer than 30 minutes to commence treatment.				



26. Mal is a 28-year-old male who presents to triage saying that he has been bitten by 'some sort of insect'. He was clearing rubble from a building site about two hours ago when he felt a sudden burning sensation in his right hand. He said 'I flicked something off but I didn't see what it was'. Over a period of two hours his right arm has become increasingly painful and he is sweating. He is complaining of a frontal headache. He is alert and oriented to time, place and person. His heart rate is 98 beats per minute and his respiratory rate is 22 breaths per minute.

1	2	3	4	5
Airway, breathing and circulation are intact. Envenomation is likely from the history, and the increasing pain warrants treatment within 30 minutes.				

27. Thuy, a 44-year-old woman, presents to the ED with back pain. She has had the problem on and off for many years. This current episode was brought on after lifting a light shopping bag from her car four hours ago. She has taken Nurofen with little improvement. Currently she has no general practitioner so she 'didn't know where else to go when the pain happened'. Her vital signs are within normal limits and she is not sure how to rate her pain but says it is 'very bad'.

1	2	3	4	5
Airway, breathing and circulation are intact. The pain is due to an acute back injury and the patient should wait no longer than one hour to commence treatment.				

28. Patty is a 53-year-old female who presents to triage complaining of right-sided abdominal pain. She states that the pain has been constant for two days now. She has not had any nausea or vomiting. She tells you that the pain is worse when she is sitting still. She states that she has had this pain before and that her doctor thought it might be gall stones. Prior to coming to the ED she took two paracetamol with minimal effect. She rates the pain as 'five out of ten'. Her blood pressure is 145/84, her heart rate is 96 beats per minute and her respiratory rate is 18 breaths per minute. Her temperature is 36.4°C.

1	2	3	4	5
Airway, breathing and circulation are intact. The patient has abdominal pain with no associated nausea or vomiting. Symptoms are moderate, and treatment should commence within one hour.				

29. Emil is a five-year-old boy with a seven-day history of diarrhoea and vomiting. He presents to the ED with his mother at 9.30 pm. He has been unable to keep food or fluids down today. He is pale, lethargic and drowsy. His heart rate is 124 beats per minute and his respiratory rate is 20 breaths per minute.

1	2	3	4	5
Airway is intact and there is no respiratory distress. The patient is mildly tachycardic. He should wait no longer than 30 minutes for treatment.				

30. Catherine is a four-year-old girl who is brought to the ED at 4.30 pm with a 12- hour onset of being unwell. In the past four hours she has developed a petechial rash on her abdomen. She also has a runny nose and a fever (her temperature is 37.8°C per axilla). She has been tolerating sips of oral fluid but now seems drowsy.

1	2	3	4	5
Airway, breathing and circulation are intact. History suggests suspected meningococcaemia. Treatment should commence within 10 minutes.				

31. Lee is a 20-year-old female who presents to the ED with her mother. Her mother reports that she has had paranoid hallucinations and that since yesterday she has not taken any fluids. She states that her reason for not drinking is that she believes that there are 'spiders and poison around'.

1	2	3	4	5
Airway, breathing and circulation are intact. The presence of psychotic symptoms (paranoid ideas) indicates that treatment should commence within 30 minutes.				

32. Candy, a three-month-old female, presents to the ED with her mother. She has been referred by the maternal child and health nurse. According to her mother, the infant has been 'crying a lot' and has 'bad colic'. The baby was born prematurely at 36 weeks, and was delivered by emergency caesarean section due to preeclampsia. Since birth, the baby has gained weight and her mother says that apart from the colic she 'is doing OK'. When you examine the baby you note green/yellow bruising and red welts on her upper arms.

1	2	3	4	5
Airway, breathing and circulation are intact. A number of risk factors suggest this child is at risk of abuse; accordingly the child should wait no longer than 30 minutes for assessment.				

33. Nathan is a 45-year-old man who presents to the ED with his wife and child. He asks to see a psychiatrist because he has been having problems managing his anxiety about his work situation, and he doesn't know how to get a referral. He reports that he once saw a psychiatrist, four years ago, and that it helped him sort out his troubles, but that he can not remember the doctor's name. He is on no medication and has no active thoughts of harming himself; he says that he 'just needs to sort out his anxiety'.

1	2	3	4	5
Airway, breathing and circulation are intact. The patient has brought himself in to the ED to access help. He reports a pre-existing mental health disorder (depression) and demonstrates that he is cooperative and able to engage in developing his own management plan. He should wait no longer than two hours before treatment is commenced.				



34. Brian is a 39-year-old male who walks to the triage desk. He says he fell in his driveway and now has left shoulder pain. On examination his shoulder is very swollen and painful on movement. His arm is already in a sling. His left hand is warm and a radial pulse is present.

1	2	3	4	5
Airway, breathing and circulation are intact. There is an acute injury causing pain, but there is no circulatory compromise to the effected limb. The patient should wait no longer than one hour before commencing treatment.				

35. Bianca is 24 years old. She has a history of a perianal abscess, which underwent drainage two days ago. She continues to have pain ('six out of ten') and was seen by her local doctor today. She has taken Panadeine Forte with no relief and is also on oral antibiotics.

1	2	3	4	5
Airway, breathing and circulation are intact. Pain is due to acute infection which is being treated. The patient has taken analgesia but continues to experience a moderate level of pain. The patient needs to undergo a review of her condition by a medical officer within one hour of arrival.				

36. Craig is an 18-year-old male patient who presents saying he feels 'suicidal' and requesting admission. He makes a verbal threat to 'cut up' if he is not admitted.

1	2	3	4	5
Airway, breathing and circulation are intact. The patient reports suicidal ideation and wants to be admitted. He is seeking help for his condition so there is no risk of absconding, from the information available. He should receive treatment within 30 minutes.				

37. Karen, a 36-year-old female, presents to triage accompanied by a social worker. She has come from the plaster clinic. She has increasing pain in her left foot from a fractured right fibula which she sustained yesterday morning. A lower-leg plaster was applied in the ED last evening. The social worker tells you that the patient has a history of depression and has said that she wants to 'end it all'.

1	2	3	4	5
Airway, breathing and circulation are intact. A pain assessment is required at triage. The patient reports having suicidal ideation. She is accompanied by a social worker in whom she has confided. She should be under close observation in the ED waiting room and it is desirable that the social worker wait with her in the waiting room until she is assessed by a medical officer. She should receive treatment within 30 minutes.				

38. Ida is a 66-year-old female who presents to the ED alone. She states that she is on Aropax and is having 'suicidal' ideation. She tells you that she has two possible plans to harm herself. She says she is having an anxiety attack and reports poor sleeping and eating patterns for the past two weeks.

1	2	3	4	5
Airway breathing and circulation are intact. The patient reports having suicidal ideation, and is independently seeking help. She should be under close observation in the ED waiting room, and should receive treatment within 30 minutes.				

39. A 52-year-old male presents to triage. He has a history of schizophrenia. He is currently on medication for his condition but can not recall the name of the medication, or the name of his case manager. He says that he has been having suicidal thoughts and that 'there are voices' urging him to 'step in front of a train'.

1	2	3	4	5
Airway, breathing and circulation are intact. There is evidence of psychotic symptoms (command hallucinations) and suicidal ideation. The patient should be under close observation in the ED waiting room, and should receive treatment within 30 minutes.				

40. Rohan, a 50-year-old male, has been brought to the ED by the district nurse. The nurse states that he has a history of alcohol abuse and that he is feeling 'suicidal'. She notes also that over the past week he has been neglecting his general care. The patient has a history of an intracerebral bleed (two years ago) and he is deaf.

1	2	3	4	5
Airway, breathing and circulation are intact. Extra help is required for communication and thus an interpreter should be involved for signing. The main risk is suicidal ideation. The patient should be under close observation in the ED waiting room; ideally the nurse should wait with him until he is seen by a medical officer, because of his communication needs and cognitive impairment. He will need to be re-triaged if he develops signs of agitation. He should receive treatment within 30 minutes.				

41. While playing volley ball, Gary, 47, hurt his left wrist. He has a good range of movement but reports pain when asked to rotate his left hand.

1	2	3	4	5
Airway, breathing and circulation are intact. The main problem is pain. The patient should receive treatment within one hour.				



42. Janine is a 56-year-old woman who presents to the ED with her partner at 2.30 am. She has pain in the epigastric region which has been increasing since yesterday. The pain radiates to her lower abdomen and she says that she has been vomiting clear fluid tonight. Her bowels last opened two days ago. She is on Oridus and has a history of hypertension.

1	2	3	4	5
Airway, breathing and circulation are intact. There is localised abdominal pain and a risk of intra-abdominal bleeding due to medication. Persistent vomiting will add to the patient's discomfort. She should be treated within 30 minutes.				

43. Mr D, 84, has a chronic leg ulcer. The district nurse has sent him to the ED because she believes the wound is infected. Mr D has a history of hypertension and ischemic heart disease. He lives with his daughter, who normally helps him out with his daily living, but she has gone to Queensland for a holiday. The wound is covered when you see him, but the bandage is soiled with what appears to be haemo-serous ooze. His temperature is 35.9°C and his vital signs are within normal limits.

1	2	3	4	5
Airway, breathing and circulation are intact. The main problem is suspected infection. The patient has co-morbid factors (hypertension and ischemic heart disease). He should commence treatment within one hour.				

44. Nic, a 38-year-old aborist, has cut his left arm with a chain saw. He was brought to the ED by a workmate. He has a deep laceration of about ten centimetres to the inner aspect of his arm. The wound was bleeding 'quite a bit', but the blood loss has been controlled with a firm bandage. He tells you that the wound is 'not that painful', but he looks pale and is sweating. His heart rate is 84 beats per minute and his respiratory rate is 20 breaths per minute. His workmate reports that the dressing was changed once, half an hour ago, because it was soaked with blood.

1	2	3	4	5
Airway and breathing are intact and there is no haemodynamic compromise despite moderate blood loss. This patient should wait no longer than 30 minutes before treatment is commenced. A clean dressing and firm bandage should be applied to the wound. A sling should be applied and elevation of the wound should also occur. Observation of ongoing blood loss needs to occur. Re-triage will be required if the patient develops signs of haemodynamic compromise or if the blood loss is not stemmed with basic pressure immobilisation.				



45. Liam is a 23-year-old male who presents to triage after being seen by a locum doctor. He is backpacking around Australia and has been staying in a boarding house near the hospital. His partner has brought him to the ED. He has a six-hour history of fever and lethargy. He has been vomiting, and complains of a headache. The doctor gave him intramuscular Maxalon, with some effect. His temperature is 38.4°C, and his partner points out a fine petechial looking rash on his torso. He is drowsy but oriented to time, place and person

1	2	3	4	5
Airway, breathing and circulation are intact. The patient has signs of meningococcaemia and needs to commence treatment within 10 minutes.				

46. Ashley, a 23-year-old university student, fell off her bicycle two days ago and was seen in another ED. She is complaining of stiffness and pain to her left wrist. Her left hand is swollen but she has full range of movement; her left hand is pink and warm.

1	2	3	4	5
Airway, breathing and circulation are intact. This injury occurred 48 hours ago and was treated at that time. Function of the limb is not impaired and there are no high risk features to this presentation. This patient should receive treatment within two hours.				

47. Remo is a 43-year-old male who presents with a two-week history of right renal stones. He now has pain, which he describes as 'colicky' in nature. He rates the pain as 'four out of ten'. He has had no pain relief today.

1	2	3	4	5
Airway, breathing and circulation are intact. The pain is likely to be due to renal calculi. Pain is mild to moderate and there are no high-risk factors. This patient should be seen within one hour.				



48. Angie is a 27-year-old woman who presents via ambulance following a high-impact motor vehicle accident. She is 38 weeks pregnant (G₂P₁) and is normally well. She was a passenger in a car that collided head-on with another vehicle in an 80 kph zone. The ambulance officers report significant damage to both vehicles. Angie was wearing a seatbelt and the passenger airbag was deployed. She has good recall of events but complains of a painful chest and abdomen and has visible seatbelt marks. She also has a facial abrasion and lacerations to both her knees. She has a cervical collar on; oxygen is at 10 litres per minute via mask and 500mls crystalloid fluid in progress intravenously. Her respiratory rate is 28 breaths per minute, her SpO₂ is 93 per cent and her heart rate is 134 beats per minute. Her skin is pale, cool and dry. Her Glasgow Coma Score is 15 out of 15. Her blood pressure is 100/R. Her pain is 'six out of ten'. She has no PV loss.

1	2	3	4	5
Airway is intact, the patient has mild tachypnoea and a lower than expected SpO ₂ and is tachycardic. She is also relatively hypotensive despite volume replacement. The mechanism of injury indicates a significant force and she has moderate pain. Due to these factors she should receive treatment within 10 minutes.				

49. Norm is a 60-year-old man who arrives at triage at 9.20 am. He is ambulating using a walking stick. When asked what is wrong he points to his abdomen and chest and says, 'This is as tight as billy-o. I got stirred up yesterday – I had a barney with a bloke up home, and then the tightness got worse, like a vice'. On examination you find that his heart rate is within normal limits and is regular. His skin is warm and dry. He is not short of breath. His SpO₂ is 95 per cent on room air.

1	2	3	4	5
Airway, breathing and circulation are intact. The patient has chest pain which is likely to be cardiac in origin. Accordingly, he should wait no longer than 10 minutes for treatment.				

50. Ann is a 16-year-old female who walks to triage with her mother. She reports that she injured her left wrist while playing volley ball. On examination you note good range of movement but she still has some pain. She says the pain is 'three out of ten'.

1	2	3	4	5
Airway, breathing and circulation are intact. The pain is mild but exists in the context of an acute injury. The patient should wait no longer than one hour for treatment.				



51. Mr A is a 54-year-old man who has been sent to the ED by his local doctor. He is unsteady on his feet and requires the assistance of his son to walk. His referral letter reads:

Dear Doctor,
Please assess this man who was recently admitted to your hospital with left renal calculi. He has been complaining of dizziness and headache for several days. No focal weakness, visual disturbance or confusion. Seen for same 2/7 ago no improvement with Stemitil. PMx, IHD, NIDDM, renal calculi, hypertension. Blood pressure: 215/130. Please assess.

Via translation through his son, Mr A tells you that he is 'very dizzy', feels 'weak all over', has pain in his back and his abdomen and has vomited twice today.

1	2	3	4	5
Airway and breathing are intact. The patient has severe hypertension and has a number of co-morbid conditions. He is also experiencing pain in the abdomen and discomfort from vomiting. He should wait no longer than 30 minutes for treatment.				

52. Jake, 46 years of age, presents to triage with his carer. He is crying because he has abdominal pain and has a recent history of a small bowel obstruction (six months ago). Jake has an intellectual disability, and lives in a community residential unit with three other adults and supervisory staff. His carer says that he is 'normally able to attend to his activities of daily living under supervision', and that he 'usually tolerates a lot of pain before he will let staff know he is unwell'. In fact, his carer says that 'last time he was hospitalised he had been ill for quite a while before staff actually realised that there was a problem with his health'. His heart rate is 120 beats per minute and his respirations are 26 breaths per minute. His skin is pale, cool and moist.

1	2	3	4	5
Airway is intact. The patient is mildly tachypnoeic and tachycardic. He reports pain and although the severity is unclear his behaviour indicates at least a moderate level of distress. He should wait no longer than 30 minutes for treatment.				

53. Jane is a 17-year-old girl who was sent to the ED by her local doctor. On her way home from school her boyfriend noticed that she had become drowsy, 'she kept asking where she was, and appeared disoriented'. She was seen by her local doctor who told her to 'go straight to the ED'. He did not provide her with a letter of referral. Her Glasgow Coma Score is 14 out of 15.

1	2	3	4	5
Airway, breathing and circulation are intact. The history is unclear and there is an altered conscious state. The patient should wait no longer than 30 minutes for treatment.				



54. Jonny, 34 years of age, has an abscess under his tooth. He presents to the ED at 1.30 am. He is in pain ('six out of ten') despite having taken Panadeine and Nurofen regularly. He has an appointment with his dentist tomorrow, but has not been able to sleep because of the pain. He is afebrile.

1	2	3	4	5
Airway, breathing and circulation are intact. The main problem is pain, possibly due to infection. Pain is at a moderate level and treatment should commence within one hour.				

55. Rose is a 47-year-old female who presents to triage with a letter from her local doctor. She makes no eye contact when you speak to her. The letter reads:

Dear Doctor,
Please assess Rose, a 47-year-old woman who lives alone. She has a history of cholelithiasis and schizophrenia. She has some burns on her inner thigh which require your attention.

On questioning, Rose tells you that her burns occurred two days ago, and that they are red and itchy. When you ask her how she sustained the burns she says she isn't sure.

1	2	3	4	5
Airway, breathing and circulation are intact. The patient has a pre-existing mental health disorder. No agitation is noted in the scenario, and the patient has independently sought help. The mechanism of her injuries requires investigation – they may be the result of abuse or self-harm. Treatment should commence within 30 minutes.				

56. Adrian is a 13-year-old boy who presents to the ED via ambulance at 10.00 am. The ambulance officer states that he was hit by a car with a bull bar, and was thrown several metres. He is complaining of pain in his neck and legs. He has a cervical collar in place. He looks pale. He is tachycardic and tachypneic. He answers questions appropriately and is able to move all limbs on request.

1	2	3	4	5
Airway is clear. There is possible cervical spine injury, tachypnoeic and tachycardic. The mechanism of injury indicates significant force. The patient should wait no more than 10 minutes.				



57. Edna is 93 years old. She has been transferred to the ED via ambulance from a nearby aged care facility. For the past two weeks she has not been eating much, and yesterday was only taking small amounts of oral fluids. Today she was found to be semi conscious and with a fever (39.8°C). She has a history of ischemic heart disease, heart block and hypertension. She has a dual-chamber pace maker. She also has a three-year history of dementia. On arrival her respiratory rate is 28 breaths per minute; her heart rate is 68 beats per minute. Her skin is hot and moist, and her Glasgow Coma Scale is 9 out of 15.

1	2	3	4	5
Airway is intact. The patient is tachypnoeic, tachycardic and has an altered level of consciousness. She is possibly septic and treatment should commence within 10 minutes.				

58. Rodney is 43 years old. He was escorted to the ED by police, having been apprehended climbing out of a window of an abandoned warehouse. While trying to escape he cut his right hand on some broken glass. He has a deep, six centimetre laceration to the palm of his right hand. There has been minimal blood loss, but he says he can not feel his right index or second finger at all.

1	2	3	4	5
Airway, breathing and circulation are intact. The injury has caused neurovascular impairment. Treatment should begin within 30 minutes.				

59. Mr G is a 53-year-old male who walks to the triage desk unassisted. He is short of breath. He states that he was recently a patient of this hospital. He has cancer of the liver and had a peritoneal tap 10 days ago for acities. He also tells you that he 'needs draining again'. His respiratory rate is 24 breaths per minute and his heart rate is 92 beats per minute.

1	2	3	4	5
Airway, breathing and circulation are intact. The patient is experiencing discomfort due to his acities.				

60. Heidi, a 17-year-old female, presents to the ED complaining of a sore throat. She has a hoarse voice and her friend states that she also has muscular pain to her neck, shoulders and back. She has been unwell for a few days, but has come to the ED today because she is having trouble swallowing. You ask her to open her mouth and note that her breath is foul-smelling. Her tonsils appear to be covered in pus. Her temperature is 39.4°C.

1	2	3	4	5
Airway, breathing and circulation are intact. The patient is septic and treatment should commence within 30 minutes.				



61. Over the past four weeks Gregory, 56, has attended your ED 14 times. Today he says he has a problem with a tattoo that was applied 'by a mate' two weeks ago. The wound looks red and is oozing pus. Gregory has a history of alcohol and intravenous drug use, hepatitis C and type 2 diabetes. His vital signs are within normal limits.

1	2	3	4	5
Airway, breathing and circulation are intact. The patient has an infection to the skin and has a number of co-morbid conditions. He should commence treatment within one hour.				

62. Larry, 62, stubbed his right big toe on the corner of a fireplace. The nail has lifted right off and the toe is now covered with a blood-soaked tea-towel. Larry walks into the ED assisted by his son. He tells you that he takes Warfarin, so 'thought it best to come to hospital rather than see the local doc'. His son tells you that the tea-towel has not been changed since the injury, but that there was 'blood all over the floor'.

1	2	3	4	5
Airway breathing and circulation are intact. There is moderate blood loss and a clean, firm dressing needs to be applied to the wound. The patient should wait no longer than one hour for treatment, however, close observation of the dressing needs to occur and re-triage should be performed if bleeding can not be adequately controlled				

63. Carole, 48 years, is brought to the ED by her husband. She is vomiting and has severe epigastric pain. She ate at a local restaurant and tells you she thinks that she has 'food poisoning'. Her heart rate is 98 beats per minute; her respiratory rate is 26 breaths per minute. Her skin is pale and moist to touch. She says that the pain comes and goes: she rates it as 'eight out of ten' at the worst point and 'two out of ten' at the lowest point'. She has vomited semi-digested food more than six times in the past hour. Now the vomit is clear fluid.

1	2	3	4	5
Airway, breathing and circulation are intact. Pain is the problem, and it is reported to be severe. Accordingly, the patient should wait no longer than 10 minutes for treatment.				

Answers to Chapter 12 triage scenarios

1. Albert, 44 years, was mowing the lawn on Sunday morning when a foreign body flicked up out of the mower and into his eye. His wife drove him to the hospital. On presentation at triage, his eye is tearing quite a bit, and he still has the sensation that 'something is there'. He says he has 'no pain' but the eye is 'uncomfortable'. A quick check of vision reveals that he has no problems with visual acuity.

1	2	3	4	5
Airway breathing and circulation intact. Foreign body in eye with no change to visual acuity. He should wait no longer than 60 minutes.				

2. Shane is a 30-year-old male who presents to the ED complaining of having a frontal headache. The patient states he has been thinking of harming himself and wants to 'get help'. If he can not sort out his problems, he says he will 'go and jump off a bridge'.

1	2	3	4	5
Airway breathing and circulation are intact. The main problem is the pain and this must be investigated thoroughly before assuming the problem is psychiatric. Suicidal ideation but is seeking help. This patient should be under close observation in the waiting room. If he develops signs of agitation, he should be re-triaged. He should wait no longer than 30 minutes.				

3. Violet is a 91-year-old female of non-English speaking background. She is brought to the ED in her son's car after seeing her local doctor. You are called to assist her to get out of the car. Her son tells you she is 'very sick'. You note that she is able to transfer to a wheelchair with minimal assistance. According to her son, Violet fell three days earlier and has bruised her right hip. She is able to walk, though the hip is very painful. She is not distressed when seated. Her blood pressure is 150/90, her heart rate is 88 beats per minute, and her respiratory rate is 20 breaths per minute. You are unable to ascertain her exact level of pain, though she tells you she is 'alright'.

1	2	3	4	5
Airway breathing and circulation intact. Her hip is causing pain on movement but the patient is able to weight-bear. She should wait no longer than 60 minutes.				

4. Glen, 52 years, presents to the ED with 'bleeding haemorrhoids'. He has had this problem 'on and off for the past few months', but now it is 'getting worse'. He says he has considerable pain when he opens his bowels and bleeds 'quite a bit' (about half a cup at a time for the last two days). He states that he needs to be seen by a doctor 'as soon as possible' as he considers his problem is 'an emergency'.

1	2	3	4	5
Airway breathing and circulation intact. Mild haemorrhage. Pain only occurs when bowels are opened. He should wait for no more than 60 minutes.				



5. Rebecca is a 17-year-old female who is brought to the ED by her friends following an all-night party, where she took two tablets of ecstasy. She can not stop crying, and says she wants to die. She has had two previous minor overdoses in the past year.

1	2	3	4	5
Airway breathing and circulation intact. Severe symptoms of depression. The patient's friend should stay with her in the waiting room. She should also be under close observation from the Triage Nurse. She should wait no more that 30 minutes.				

6. Charlie is a 15-month-old boy who presents to the ED via ambulance at 2 am following an episode of 'shaking and jerking' with a loss of consciousness. The episode lasted approximately four minutes. The ambulance officers state that he stopped fitting when they arrived but he had been 'very drowsy' during transport. His mother states that Charlie has never had an episode like this before. During the night, he had a fever and a runny nose. He has been sleeping poorly and is a little irritable. The child is flushed and his skin is very warm. He is tachypneic, but has no use of accessory muscles or retraction. He is crying and clinging to his mother.

1	2	3	4	5
Airway breathing and circulation intact. There is no increase work of breathing. History of fever and possible febrile convulsion. This child should wait no longer than 30 minutes				

7. Dianne is a 67-year-old lady who was out shopping with her daughter when she slipped and fell on her outstretched hand injuring the left wrist. She is not distressed by the pain and rates it as 'three out of ten'. Her wrist is tender, but not deformed. Radial pulse is present at 72 beats per minute.

1	2	3	4	5
Airway breathing and circulation intact. Mild pain with no circulatory compromise. This patient should wait no longer than 60 minutes.				

8. Kate is 18 years old. She attends triage at 12.30 pm with a work colleague. Her hand is wrapped in a tea towel and she appears pale and anxious. She tells you she has cut her hand with a carving knife. On examination you see a four centimetre laceration across her left palm. Tendons are on view and the wound is bleeding slowly. Kate tells you she is feeling quite nauseous and her pain is 'seven out of ten'. Movement and sensation to her fingers are intact.

1	2	3	4	5
Airway breathing and circulation intact. Blood loss is mild but pain is severe. This patient should wait no longer than 30 minutes.				

9. Denise is a 34-year-old female who is transferred to the ED on a 40°C day via ambulance. According to bystanders, she was attending an outdoor barbeque and 'collapsed in the heat'. Witnesses helped her to an upright position, and she was then observed having a 'fit' that lasted approximately two minutes. She was not incontinent and regained consciousness when she was placed in the supine position. Paramedics attended and inserted an intravenous cannula. Her Glasgow Coma Score is 15 out of 15; heart rate 112 beats per minute and respiratory rate 22 breaths per minute. Her skin is hot and moist.

1	2	3	4	5
Airway breathing and circulation intact. History suggests heat stroke and seizure. Patient has normal neurological functioning now. The patient should wait no longer than 30 minutes.				

10. Justin is a 22-year-old male who comes to the ED concerned about a mole on his back. He says that his girlfriend advised him to see a doctor and he is 'worried that it might be a melanoma'. The mole is large and irregular in shape; he says it is sometimes itchy.

1	2	3	4	5
Airway breathing and circulation intact. This is not an urgent problem, however the lesion needs to be checked for melanoma and this should occur within two hours.				

11. A young man is brought in to the ED by ambulance after having been dragged unconscious and not breathing from the sea in Far North Australia. He arrives with full CPR in progress and you note that he has red welts across his chest.

1	2	3	4	5
Cardiopulmonary arrest. Possible jelly fish envenomation. The patient should commence treatment immediately.				

12. Fred, an 84-year-old man, presents to triage complaining of palpitations and central chest pains. He has a history of ischemic heart disease, coronary artery by-pass grafts and atrial fibrillation. He takes his anti-arrhythmic medications regularly and normally manages well at home. Today his skin is pale, cool and moist, and his heart rate is 142 beats per minute and irregular.

1	2	3	4	5
Airway intact. Chest pain is likely to be cardiac in origin. This patient should be treated within 10 minutes.				



13. A man states that his three-week-old baby grandson, Kyle, is ‘not breathing properly’. The baby is wrapped in a bunny rug held by his grandfather. On closer examination, you note the baby’s eyes are open and his face is white/grey. Respiratory effort is poor.

1	2	3	4	5
Cardiopulmonary arrest is imminent. The child should be treated immediately.				

14. Robyn is a 38-year-old woman with a history of asthma. She has required two admissions to the intensive care unit for her asthma in the past 18 months. She presents to triage at 8.30 pm following a 22-hour history of wheeze and shortness of breath. She has been self-administering Ventolin at home but has had a minimal response despite the use of three nebulisers in the past hour. On arrival to triage, her respiratory rate is 26 breaths per minute; she is speaking three-word sentences and has an audible wheeze.

1	2	3	4	5
Airway is intact. Significant level of respiratory distress in the context of history of previous severe asthma requiring ICU admissions. This patient should be treated within 10 minutes.				

15. Caroline is a 45-year-old female who presents to triage complaining of a ‘cold’ for the past four days. In the past two days, she has pain in her right upper quadrant. The pain is now increasing and she describes right thoracic ‘back pain’. Caroline states that she has no diarrhoea, vomiting or urinary symptoms but has had ‘difficulty breathing since yesterday’. Her skin is pale, hot and moist, and she has normal respiratory effort. Caroline says she has a fever and her heart rate is 112 beats per minute. Her respiratory rate is 26 breaths per minute and she says that her pain is currently ‘seven out of ten’. The pain is worse on deep inspiration and movement.

1	2	3	4	5
Airway is intact. Patient is mildly tachypnoeic febrile and is experiencing pleuritic and upper abdominal pain. She should receive treatment within 30 minutes.				

16. Neil is a 74-year-old male who presents to triage following trauma to his left arm after slipping on a wet floor. He describes tenderness at his wrist, elbow and shoulder. He rates his pain as ‘three out of ten’. No obvious deformity of the wrist is noted, but he has a decreased range of movement. His heart rate is 92 beats per minute.

1	2	3	4	5
Airway breathing and circulation intact. No circulatory compromise to injured limb. Pain is reported to be mild.				



17. Harry is a 48-year-old man who regularly attends your ED for various complications associated with his poorly controlled type 2 diabetes. He has no GP, lives in a special accommodation house but frequently sleeps out in a local park. Today he presents to triage complaining of a two-hour history of intermittent left-sided chest pain that is 'heavy' in nature. On further questioning you establish that his pain came on at rest and radiates down both arms. His heart rate is 66 beats per minute, respirations are 20 breaths per minute, and skin is cool and dry.

1	2	3	4	5
Airway breathing and circulation intact. Chest pain is likely to be cardiac in nature. Diabetes is a co-morbid factor. The patient should receive treatment within 10 minutes.				

18. Mr Wallace, 57 years, works for an energy company reading gas meters. On his rounds today he was attacked by a dog and bitten on the upper left leg. On inspection you note six to seven square centimetres of skin loss. The wound is irregular, fat tissue is exposed and it looks dirty. There is a small amount of blood loss. Mr Wallace says the injury is 'a bit painful' but he is not overtly distressed.

1	2	3	4	5
Airway breathing and circulation intact. Blood loss is mild. Pain is reported as mild. This patient needs to receive treatment for his injury within 60 minutes.				

19. Kira is a seven-year-old girl who presents with a school teacher having fallen from play equipment. Her mother is on her way to the ED. She fell onto her right arm and has been complaining of pain around her wrist. She 'did not hit her head' and does not complain of pain anywhere else. Her arm has been placed in a sling but she has not received any analgesia. Kira is tearful but states that her arm is only 'a little bit sore'. There is a small amount of swelling around her distal forearm; there is no deformity and no neurovascular impairment. She demonstrates tenderness over her distal radius and has a limited range of movement of her wrist. She has no other signs of injury.

1	2	3	4	5
Airway breathing and circulation intact. Injured wrist/forearm with no circulatory impairment. Pain is mild. This child should commence treatment within 60 minutes.				



20. A mother presents at midday with her nine-month-old son, Connor. She describes three days of fever, poor oral intake and a 'runny nose'. On the first evening of the episode he vomited once and had two loose stools overnight, but this has not reoccurred. Connor had 180 ml of fluid this morning (his usual intake is about 320 ml) and he had a normal number of wet nappies. He was previously well and he is fully immunised. He has signs of a runny nose, no cough is heard and he has no signs of increased work of breathing. His skin is slightly pale but warm and his mucus membranes are not dry. He is quiet but looking around at his surroundings.

1	2	3	4	5
Airway breathing and circulation intact. Child is alert with mildly decreased oral intake. This child should receive treatment within 60 minutes.				

21. Alanna is a ten-week-old infant who presents with her parents. She has a two-day history of increasing lethargy and poor feeding. Her mother indicates that she has become unsettled and less keen to feed over the past two days. She developed a fever yesterday and had to be woken for feeds overnight, which is unusual. She was born at term, has had her first immunisation and has no other health problems. She does not demonstrate increased work of breathing but is slightly tachypneic. Her skin is pale and her legs are mottled, a little cool and demonstrate a capillary refill of three to four seconds. She is lethargic but responds to painful stimuli.

1	2	3	4	5
Airway is intact. Respiratory rate is mildly elevated and there is poor peripheral perfusion. This child should wait no longer than 10 minutes to commence treatment.				

22. A 76-year-old woman, Rita, is brought to the ED by her daughter who found her wandering in a 'dazed state' outside her house. The patient presents as agitated and confused, is picking at imaginary things on her cardigan and is unable to give an account of herself.

1	2	3	4	5
Airway breathing and circulation are intact. The patient is acutely confused and agitated. She will need to be under close observation and should wait no longer than 30 minutes to commence treatment. Her daughter should wait with her.				

23. Liz is a 40-year-old woman who presents to triage with fever and productive cough. She says she is not short of breath and does not complain of any pain. She is 18 weeks pregnant (G₄P₃) and is normally well. Her respiratory rate is 24 breaths per minute, SpO₂ is 96 per cent, and heart rate is 98 beats per minute. Her skin is noted to be pale, warm and dry, Glasgow Coma Score is 15 out of 15, and her temperature is 38.2°C.

1	2	3	4	5
Airway breathing and circulation are intact. The patient is febrile and is likely to have an infection. She should wait no longer than 60 minutes.				



24. David is a 40-year-old male who presents to triage complaining of severe chest pain, saying he is having a 'heart attack'. He says he has no history of cardiac problems and his observations are within normal range. He appears highly anxious and is hyperventilating. Currently he says his pain is 'ten out of ten'. His skin is warm and moist.

1	2	3	4	5
Airway is intact. This patient reports severe pain and has some risk factors for heart disease. Investigations must be conducted to rule out cardiac causes for his pain and he should wait no longer than 10 minutes before treatment is commenced.				

25. Lionel, 68 years, is transferred to your ED from a nursing home. He has Alzheimer's disease and for the past two days has refused fluids. This morning his carer found him lying on the floor next to his bed yet the cot-sides were up. She thought that he had probably fallen because the blankets were also on the floor and he had been incontinent of urine. Last week he was able to mobilise with a frame and take himself to the toilet, but for the past two days he has not had the energy to move at all and has needed assistance going to the toilet. Since the fall he can not stand up and he seems to be guarding his right hip. On arrival, he is lying on the trolley groaning. His heart rate is 122 beats per minute, respiratory rate 24 breaths per minute and blood pressure is 110/70.

1	2	3	4	5
Airway is intact heart rate is elevated as is respiratory rate. There is a possibility of a fractured hip and given cognitive impairment pain difficult to assess. This patient is likely to be in pain and discomfort from the injury. He should wait no longer than 30 minutes for treatment.				

26. Nicholas is a three-year-old boy who presents with increasing wheeze and shortness of breath. His mother indicates that he has a history of asthma and has been in hospital before. He developed a cold two days ago and he became increasingly wheezy yesterday. His mother gave him Prednisolone this morning and he has had hourly Ventolin at home. In the past two hours he has had three doses of Ventolin; the last dose was 15 minutes ago. He has a tight cough and a marked increase in work of breathing. Nicholas's skin is pale but warm; and he is distressed and restless.

1	2	3	4	5
Airway is clear, though there is marked increased work of breathing. The child is distressed and restless. He should wait no longer than 10 minutes.				



27. Frankie is an 18-month-old boy who presents to the ED with his mother by ambulance. He has a barking cough and is having difficulty breathing. His mother describes a recent cold. He woke this morning with the cough and seemed distressed. His breathing is fast and noisy. He does not have a stridor but does have a barking (croup-like) cough and mild increase in work of breathing. His skin is pink and warm and he remains settled while with his mother.

1	2	3	4	5
Airway is clear though there is increased work of breathing. This child should wait no longer than 10 minutes for treatment.				

28. Parents present with their 13-month-old child, Oliver, who has a history of diarrhoea and vomiting. They state that he has been unwell for 'about six days'. It started with vomiting, which persisted for two to three days, but this has since stopped. Oliver developed diarrhoea on the second day, which has continued. He is willing to drink and has passed two loose stools today. He shows no shortness of breath, his skin is pink and warm and his mucus membranes are not dry. He is grabbing at your ID badge.

1	2	3	4	5
Airway breathing and circulation are intact. The child is alert and active. He should wait no more than 60 minutes.				

29. Mr Carver, an 87-year-old man, is brought to your ED in the early hours of the morning with acute shortness of breath. He is sitting upright on the ambulance trolley with a simple face mask in situ. He is receiving eight litres of oxygen per minute. His heart rate is 116 beats per minute and irregular; blood pressure is 170/90; jugular veins are visible and elevated. His skin is moist and pale. He is unable to talk but he does nod when asked if he has chest pain.

1	2	3	4	5
Airway is clear. The patient has marked increased work of breathing and shows signs of acute left ventricular failure. He also has pain in the chest. He should wait no more than 10 minutes for treatment.				

30. A father presents at 6.30 pm with his 22-month-old son, Jackson, who has cut his forehead after tripping and falling against the coffee table when he was playing at home. He cried after the event and received a large cut to his forehead. When you view Jackson he is not distressed but he does squirm away when attempts are made to examine his wound. He has a haematoma on the left side of his forehead and a full thickness laceration of one to two centimetres over his eye on the same side.

1	2	3	4	5
Airway breathing and circulation are intact. The child is not distressed and he did not lose consciousness. He should wait no longer than 60 minutes for treatment.				

31. Adit is a 15-month-old boy with a two-hour onset of fever and breathing difficulty. He presents via ambulance with an audible stridor at rest.

1	2	3	4	5
Partially obstructed airway. This child should wait no longer than 10 minutes for treatment.				

32. Tahlia is an 18-month-old girl who arrives at the ED with her mother at midnight. About 24 hours prior she developed a 'barking cough' that became 'much worse at night'. She is also febrile (temperature is 38.4°C). Since becoming unwell, Tahlia has had two bottles of water but refuses food and milk. Both mother and child appear very anxious.

1	2	3	4	5
Airway is clear and the child is ventilating adequately. The child is anxious but is still able to take oral fluids. She should wait no longer than 30 minutes for treatment.				

33. Kerri, a 31-year-old female, presents to triage with her boyfriend. She is complaining of a severe headache and has a history of migraine. She said she saw her GP two days ago for 'a sore throat' and was prescribed penicillin, which she is currently taking. Today she woke up with a headache and started to vomit. She is pale with a washed-out appearance; her skin is cool and moist. Kerri's heart rate is 98 beats per minute, respiratory rate 18 breaths per minute and her Glasgow coma score is 15 out of 15. She rates her pain as 'nine out of 10'.

1	2	3	4	5
Airway and breathing are intact. Periphery is pale and cool, indicating poor perfusion. This patient has severe pain and should wait no longer than 30 minutes for treatment.				

34. Antony, 56 years, was opening a tin of paint stripper with a knife and some of the chemical splashed up into his right eye. He ran water from the tap over his eye for fifteen minutes, before his partner drove him to the ED. At triage he appears very uncomfortable; the eye is closed and there is blistering to the skin surrounding the right orbit.

1	2	3	4	5
Airway breathing and circulation are clear. The chemical burn to the eye with changed visual acuity. This patient should receive treatment within 10 minutes.				



35. Rosemary is a 40-year-old woman who presents to triage complaining of abdominal pain. She is 36 weeks pregnant (G₅P₃) and is normally well. She tells you she has had pain 'on and off' for one week but it has become more severe in the last day. It is difficult for the patient to be precise about the location, but the pain seems to be in the right upper quadrant. She says the pain is 'worse after eating' and today she has vomited twice. She says this pain 'does not feel like labour pains'. Her respiratory rate is 22 breaths per minute, SpO₂ is 98 per cent and heart rate is 106 beats per minute. Her skin is pale, warm and dry, and her Glasgow Coma Score is 15 out of 15. Temperature is measured at 37.8°C. Rosemary rates her pain as 'seven out of ten'. She tells you that she has had no PV loss.

1	2	3	4	5
Airway, breathing and circulation are intact. The patient has severe pain and should wait no longer than 30 minutes for treatment.				

36. Mary-Jane is a 36-year-old woman who presents to triage via ambulance following a fall from a ladder. She is 37 weeks pregnant (G₂P₁) and is normally well. She was hanging curtains in the nursery and standing the step second from the top when she overbalanced. She complains of a painful right wrist and pain in her right hip. Her respiratory rate is 20 breaths per minute, SpO₂ is 99 per cent, and her heart rate is 110 beats per minute. Her skin is pale, warm and dry. Her Glasgow Coma Score is 15 out of 15 and her blood pressure is 120/70. She rates her pain as 'six out of ten' and she reports no PV loss.

1	2	3	4	5
Airway and breathing are intact. There is a slight tachycardia and the patient has moderate pain. The patient should wait no longer than 30 minutes.				

37. Connie is a 74-year-old female who presents to the ED via ambulance. Apparently she was an in-patient at your hospital five days ago. At that time she was managed for an acute bowel obstruction. Today the hospital-in-the-home nurse visited her and then called an ambulance. According to the ambulance officers, she has had increasing abdominal pain and vomiting during the night. Her bowels have not been opened for three days. You note her to be pale and distressed on the ambulance trolley. She complains that her abdomen is 'bloated'. Her blood pressure is 110/75, heart rate is 112 beats per minute, respiratory rate is 26 breaths per minute, and temperature is 37.2°C.

1	2	3	4	5
Airway breathing and circulation are intact. There is mild tachypnoea and tachycardia. Significant pain is experienced due to a possible recurrence of bowel obstruction. This patient should wait no longer than 30 minutes.				

38. Ted, a 78-year-old male, is brought to the ED via ambulance. The patient attended the ED last night with a vague story of feeling dizzy and unwell. He was diagnosed with a viral illness and sent home. Throughout the night he was woken by heavy chest pains that 'came and went'. He took three of his Anginine, which did not relieve the pain. He is now short of breath and his lips have a frosted appearance. His heart rate is 92 beats per minute, respiratory rate 24 breaths per minute and blood pressure 160/90.

1	2	3	4	5
Airway is intact. The patient may be hypoxic as evidenced by 'frosted lips'. Haemodynamics are stable. There is also chest pain which may be cardiac in nature. This patient should wait no longer than 10 minutes.				

39. Macey is a 38-year-old female who presents to the ED with an injured right leg. She is brought to the triage desk in a wheelchair by her father who tells you she has multiple sclerosis. Today she was found by her father after falling down four steps at the front of her home. Normally she is able to walk using a walking stick, but since the fall she has not been able to walk at all. On examination you note that her right ankle is swollen and a right pedal pulse is palpable. She tells you that she has 'no pain' at the moment and is happy to wait to see a doctor.

1	2	3	4	5
Airway breathing and circulation are intact. There is an injury to the ankle and possible fracture. The patient should wait no longer than 60 minutes.				

40. A solidly built male of about 40 years of age and smelling strongly of alcohol starts shouting at another patient in the waiting room. He says he wants to see a doctor, but before you can establish what is wrong, he stands up and begins to threaten with a knife the other patients who are waiting.

1	2	3	4	5
Immediate threat of physical violence using a weapon. Simultaneous security and clinical response to aggression is required immediately.				

41. Tomas is an eight-year-old boy presents to the ED with his mother, who had been called to the school to pick him up today. While playing at recess Tomas was involved in a fight, which resulted in him being hit in the face with a cricket bat. His mother says the school called her because the child was inconsolable after the event and he didn't want to go back to the classroom. There was no loss of consciousness reported, but the child has a three centimetre laceration to his left cheek.

1	2	3	4	5
Airway breathing and circulation are intact. There has been no loss of consciousness, nonetheless the child is distressed and should receive treatment within 60 minutes.				



42. Harley is an 18-month-old boy who was brought to the ED via ambulance. He was found face down in a swimming pool. His parents administered cardiopulmonary resuscitation at the scene and called the ambulance. On arrival the child is breathing spontaneously and receiving 100 per cent oxygen via a bag-valve mask. His heart rate is 140 beats per minute and his respiratory rate is 14 breaths per minute. The child's eyes are closed and he is lying still on the trolley. He is responding to painful stimuli.

1	2	3	4	5
Near drowning with respiratory arrest. Respiration and circulation now re-established. The child should commence treatment immediately.				

43. Phillip, 44 years, was bitten by an ant two days ago. The bite site, which is located on his inner thigh, is red and itchy. There is a 15-centimetre area of cellulitis surrounding the bite. He has a temperature of 38.2°C.

1	2	3	4	5
Airway breathing circulation is intact but there is cellulitis with fever. This patient should commence treatment within 60 minutes.				

44. Laurie has been referred to the ED from his local doctor on a Monday morning. He complains of increasing upper abdominal pains, associated nausea and constipation over weekend. He had a loose bowel action this morning. His appetite is normal, but his pain is sharp in nature and he rates it as 'eight out of ten'.

1	2	3	4	5
Airway breathing circulation is intact. The patient has severe pain and abdominal symptoms. He should commence treatment within 30 minutes.				

45. Mr Smyth, 77 years of age, is brought to the ED by his daughter. He is having difficulty passing urine and feels like his bladder 'is about to burst'. He tells you that he has had problems with 'the prostate' before. When asked about his pain he says it is 'about five out of ten'. You notice that he is unable to sit still because of the pain and he is sweating quite a bit.

1	2	3	4	5
Airway breathing circulation is intact. Moderate pain due to acute urinary retention. This patient should wait no longer than 30 minutes to commence treatment.				



46. Ned, a 28-year-old jockey, attends the ED after being kicked in the abdomen by a horse. He was assisting a colleague to guide the animal into a float when it reared up and kicked him. Ned was thrown some two metres and fell on the ground. He did not lose consciousness, but was 'winded from the kick'. At triage Ned appears pale and distressed. He tells you that he has pain and points to his left upper quadrant. His heart rate is 128 beats per minute, his respiratory rate is 26 breaths per minute and his skin is cool and moist.

1	2	3	4	5
Airway clear, tachypnoeic and tachycardic. Significant blunt trauma to the abdomen (possible liver injury) and the patient is showing signs of shock. This patient should commence treatment within 10 minutes.				

47. Homer, 28 years, twisted his right knee playing basketball. The knee is very swollen and he is unable to weight-bear on it. The injury occurred about two hours prior to his arrival in the ED and an ice pack has been applied.

1	2	3	4	5
Airway breathing and circulation are intact. The patient has pain due to an acute limb injury. He should wait no more than 60 minutes for treatment.				

48. Carmel, 59 years, woke this morning with pain in her left eye. She then noticed a rash appearing above her brow and has developed severe pain in the left side of her face and eye. She says there is 'a lump' behind her ear. She has no past medical history but she did have an episode of flu-like symptoms two days ago. She describes the pain as 'hot and sharp'. She rates it 'eight out of ten'.

1	2	3	4	5
Airway breathing and circulation are intact. Severe pain due to infection with possible trigeminal nerve distribution. This patient should wait no longer than 30 minutes.				

49. Gillian presents to the ED with generalised abdominal pain. She has been brought in by a work colleague. When questioned, she complains of six days of constipation. She is booked in for a colonoscopy at a private clinic tomorrow. She isn't on medication but she is bent over and crying in pain.

1	2	3	4	5
Airway breathing and circulation are intact. Abdominal pain is causing significant discomfort. This patient should wait no longer than 30 minutes to commence treatment.				



50. Martin presents to the triage desk on his own. He tells you he has pain in his left shoulder after he fell in a driveway. On examination you note that his left shoulder is very swollen. He has very limited range of movement, in fact he can not move the shoulder joint itself, and he rates his pain as 'seven out of ten'. His left radial pulse is present, but he has some 'numbness' around the shoulder area. His arm is in a sling and he smells of alcohol. He says the accident occurred 'a couple of hours ago'.

Airway breathing and circulation are intact. The patient is in severe pain and the neurological involvement suggests dislocation + fracture. The patient should wait no longer than 30 minutes.				

51. Beverly is a 57-year-old female who was originally sent from her local doctor to the outpatients department to make an appointment to see an orthopaedic surgeon. She was referred for an investigation of osteoarthritis in her right knee via an arthroscope. Today, when she presents at the ED, she is in severe pain and has difficulty weight-bearing on her right leg. She says that the pain does settle somewhat at rest. The clerk at outpatients said she needed to be seen in the ED today because of her pain. An orderly escorts her from outpatients to triage in a wheelchair.

1	2	3	4	5
Airway breathing and circulation are intact. Her pain requires attention, though it does settle at rest. This patient should commence treatment within 60 minutes.				

52. Zane, 26 years of age, presents with an infected left arm. He has a recent history of intravenous drug misuse. He tells you that he has been re-using and sharing needles. His cubical fossa is red and cellulitic and there are several pus-filled sores on the arm. He is afebrile. He looks around the waiting room nervously and asks you how long it will be before he can get to see the doctor, as he 'has to be somewhere else in an hour'.

1	2	3	4	5
Airway breathing and circulation are intact. Infection requires treatment and this should commence within 60 minutes. Re-assess if there are increasing signs of agitation while waiting as this may indicate drug withdrawal and re-triage may be required.				

53. Hamish is an 18-year-old male who is sent to the ED from his local doctor with a sudden onset of right testicular pain. He has a history of partial testicular torsion two weeks ago and states that pain is the same as it was then. He is doubled over in pain at the triage desk.

1	2	3	4	5
Airway breathing and circulation are intact. Severe pain with possible torsion of testes. The patient should receive treatment within 10 minutes.				

54. Linda is a 35-year-old female with a past history of hepatitis B. Today she presents with right side abdominal pain. The pain has been getting worse over the past week and is currently 'four out of ten'. She has no vomiting; her skin is pink and warm.

1	2	3	4	5
Airway breathing and circulation are intact. Moderate pain is the main problem for this patient and she should commence treatment within 60 minutes.				

55. Marion, 76 years, presents to the ED from a nursing home. She collapsed suddenly just before breakfast that morning. Ambulance officers attended and found her semi-conscious. Her blood glucose level was measured at 2.1 mmol and she was given intravenous dextrose (50 mls of 50 per cent dextrose). She is now sitting up on the ambulance trolley talking to staff.

1	2	3	4	5
Airway breathing and circulation are now intact. Hypoglycaemia has been treated. Though, given loss of consciousness this patient should wait no longer than 30 minutes to commence treatment.				

56. Cassandra, 15 years, was riding her horse in the bush some 60 km away from town when the animal was startled and threw her about three metres. She was wearing a helmet but it broke in half when her head struck a tree. Her companions noted an initial loss of consciousness, after which she was drowsy and vomiting, but she did not appear to have any injuries elsewhere and she said she had no neck pain when asked. Cassandra was transferred to your ED in the back of a utility. On arrival she has a Glasgow Coma Score of 8 out of 15. Her respiratory rate is 24 breaths per minute and her heart rate is 62 beats per minute.

1	2	3	4	5
Airway management and cervical spine precautions are required as the patient is unconscious and is likely to have a significant head injury \pm c-spine injury. With a Glasgow Coma Scale of 8/15, treatment should commence immediately.				

57. Lisa is an 18-year-old female who presents to the ED with her friends who state that she ingested an unknown quantity of tablets and drank a bottle of white wine about 40 minutes ago following a fight with her boyfriend. On further questioning you establish that the medication she took included 24 paracetamol tablets. Lisa appears drowsy at triage, is disorientated to place and time, and she smells strongly of alcohol. Her friends report that in the past 10 minutes she has been 'twitchy'.

1	2	3	4	5
Airway breathing and circulation are currently intact, although 'twitching' suggests significant toxic ingestion of unknown substances. This patient should commence treatment within 10 minutes.				



58. Iris is a 64-year-old woman who is brought to the ED by her husband in a private car. She states that she caught her leg on a garden seat while carrying the washing in from the clothes line. She was concerned that there was a fair amount of bleeding occurring and she described the gash as three centimetres long. She is not distressed.

1	2	3	4	5
Airway breathing and circulation are intact. The laceration needs to be dressed and observed for further bleeding. This patient should wait no longer than 60 minutes.				

59. Silvia, 66 years, is brought to the ED by her husband. She is complaining of a sudden onset of nausea and dizziness. She is normally fit and well and has no relevant history. She has not vomited and has no headache. Her blood pressure is 130/60, heart rate 64 beats per minute and her respiratory rate is 22 breaths per minute. She is afebrile. Her Glasgow Coma Score is 15 out of 15.

1	2	3	4	5
Airway breathing and circulation are intact. Collapse of unknown now alert and orientated. This woman should wait no longer than 60 minutes.				

60. Luke, a 27-year-old wants to travel to India next week. He attends the ED for advice about the sorts of vaccinations he might need.

1	2	3	4	5
This is a non-urgent problem; however the patient still requires advice about vaccinations given he is travelling overseas in the next week. He should wait no longer than two hours.				

61. Pete, aged 28 years, presents to the ED at 9 pm on a Sunday night requesting a workers compensation certificate for a day he had off work in the previous week. He was seen at the hospital five days ago with a sprained wrist and had been given the certificate for one day off work at that time. However, he states that he has lost that certificate. He tells you that he is 'prepared to wait' as his boss has told him to get a new certificate by Monday morning or he would be 'in big trouble'. His wrist is no longer painful and he says he 'feels fine'.

1	2	3	4	5
This is a non-urgent problem and the patient can wait no longer than two hours.				

62. Larry, 26 years, was in a fight last night. He attends the ED this morning at 6.30 am with a five centimetre deep laceration to his left ear. He says the injury was the result of a human bite which occurred at about 3 am. He smells of alcohol. When asked if he was knocked out he replies 'no'. He has no pain elsewhere. His vital signs are within normal limits and he is orientated to time, place and person.

1	2	3	4	5
Airway breathing and circulation are intact. There is a risk of infection and the laceration needs to be closed. The patient should wait no longer than 60 minutes.				

63. Rudolf, 78 years, presents to triage via ambulance. He was at church, and when he went to stand up during the service, collapsed to the ground. He did not lose consciousness but did become very pale and sweaty. Paramedics attended and noted he was in heart block with a heart rate of 42 beats per minute and blood pressure of 80/60. They inserted an intravenous cannula and administered atropine (600 mcg) with no effect. On arrival to the ED he is conscious and states that he has no chest pain.

1	2	3	4	5
Airway and breathing intact. Haemodynamic compromise in the setting of heart block. This patient should wait no longer than 10 minutes.				

64. Betty is a woman in her 20s. She presents to the triage desk with her friend, who states that Betty has taken 25 Endep tablets. As you begin talking to her friend, Betty collapses to the floor and commences fitting. You summon help and staff arrive to lift her onto a trolley and take her into the ED.

1	2	3	4	5
Collapse with seizure due to toxic effects of drugs. This patient should receive simultaneous assessment and treatment.				

65. Barry, a 43-year-old man, was using an angle-grinder today and now has a foreign body in his left eye. The eye is red and painful. He states that the pain is 'seven out of ten'.

1	2	3	4	5
Airway breathing circulation intact. Foreign body in eye with severe pain. This patient should receive treatment within 30 minutes.				



66. Mario, a 67-year-old man, was putting some pesticide on his vegetable patch and he accidentally spilt it on his clothing. He had a shower at home immediately after the accident but has come to the ED some two hours later because he is nauseous, vomiting and has developed excessive sweating. His heart rate is 122 beats per minute and his respiratory rate 28 breaths per minute. He says he is not sure of the name of the chemical he was exposed to as he has had it in his shed for 'many years'.

1	2	3	4	5
Airway intact, tachypnoeic with tachycardia and excessive sweating, nausea and vomiting, possibly due to toxic exposure to organophosphate. This patient should wait no more than 10 minutes.				

67. Mr F is a 66-year-old man who was brought to the triage desk by his daughter. He states that he is confused and thinks that people are talking about him. He tells you that he has a history of 'heart failure, high blood pressure, renal failure, urinary tract infection and depression'. His skin is warm and moist, his respiratory rate is 20 breaths per minute, and his Glasgow Coma Score is 15 out of 15.

1	2	3	4	5
Airway breathing and circulation intact. Normal level of consciousness. Paranoid thoughts with no immediate risk of harm to self or to others. This patient should wait no longer than 60 minutes. His daughter should wait with him in the waiting room.				

68. Hugh is a 54-year-old male who was seen in the ED with a fractured right radius and ulna four days prior. He presents again because he says the cast is too loose and needs to be replaced. He has no pain.

1	2	3	4	5
This is a non-urgent problem. However, the plaster needs to be assessed as it was applied in the ED and if it is loose will not effectively immobilise the fracture.				

69. Sue, a 36-year-old female, presents with a two-day history of feeling generally unwell. She has an ache in her lower abdomen and describes having to go to the toilet more frequently than normal. On further questioning she states that she has had urinary frequency for 12 hours, and rates her pain as 'four out of ten'. She has a heart rate of 98 beats per minute and a temperature of 37.8°C. She appears to be quite pale.

1	2	3	4	5
Airway breathing and circulation intact. Acute urinary symptoms and discomfort with mild-moderate pain. This patient should wait no longer than 60 minutes.				



70. Joanne is a 34-year-old female who walks to the triage desk at 10.50 am. When you ask her what is wrong she says 'I can't go to the toilet and my backside is painful'. When questioned further she says that she has not passed urine today but 'did last night and it was not painful'. She rates her current pain as 'four out of 10'.

1	2	3	4	5
<p style="color: red;">Airway breathing and circulation intact. Acute urinary symptoms and discomfort with mild-moderate pain. The history is a little unclear, however this patient should wait no longer than 60 minutes.</p>				

71. Mrs W is assisted to the triage desk by her daughter around midday. Mrs W doesn't speak very good English so her daughter tells you her history. Last night Mrs W had an episode of palpitations and complained of nausea and feeling lethargic. Today 'the palpitations are back'. She has a history of coronary artery bypass grafts. When asked if she has chest pain, Mrs W says she is 'very sick'. Her heart rate is 108 beats per minute and her skin is cool and moist to touch.

1	2	3	4	5
<p style="color: red;">Airway intact but has palpitations/tachycardia with possible chest pains. History suggestive of cardiac event with some signs of increase sympathetic activity (pallor and diaphoresis). This patient should wait no longer than 10 minutes.</p>				

72. Maree is a 32-year-old woman who presents via ambulance complaining of 'palpitations'. She is 30 weeks pregnant (G₃P₁) and is normally well. She was doing the vacuuming when her palpitations started. She complains of mild chest pain that is dull in nature and a mild shortness of breath. Her respiratory rate is 24 breaths per minute; SpO₂ is 98 per cent; and heart rate is 162 beats per minute. Her skin is pale, cool and dry; blood pressure is 90/R; and Glasgow Coma Score is 15 out of 15. Her temperature is 36.3°C.

1	2	3	4	5
<p style="color: red;">Airway intact, mild tachypnoea and haemodynamic compromise. This patient should wait no longer than 10 minutes.</p>				



73. Kerry is a 36-year-old woman who presents to the ED with her husband via ambulance with a sudden onset of a headache. She tells you that she is 31 weeks pregnant (G₃P₁) and has been 'keeping well'. Her husband tells you that Kerry was making lunch when she suddenly complained of a severe occipital headache. Her respiratory rate is 20 breaths per minute, SpO₂ is 98 per cent, and heart rate is 124 beats per minute. Her skin is pale, cool and dry. The ambulance officers report that Kerry's blood pressure is 160/100 and she has a Glasgow Coma Score of 14 out of 15 (eyes open to voice). Her temperature is 36.3°C. When asked to score her level of pain, she tells you it is 'nine out of 10'.

1	2	3	4	5
Airway and breathing intact; hypertensive in the context of pregnancy with sudden severe onset of headache and altered conscious state. This patient should wait no longer than 10 minutes.				

74. Tricia, an 18-year-old female, is brought into the ED by a friend. Her friend states that she has had vaginal bleeding since her 'Depo injection 15 days ago'. Her friend states that Tricia is suicidal and wants to find 'peace'. Her friend also tells you that Tricia took a large quantity of herbal sedative last night and now feels 'weak and tired'.

1	2	3	4	5
Airway breathing and circulation intact. Suicidal ideation. This patient should be under close observation and be treated within 30 minutes. Her friend should be encouraged to sit with her for support. The patient may need to be re-triaged if she attempts to leave without being seen. The priority is the physical assessment in respect to drug toxicity, as there is the additional risk of absconding which requires close monitoring.				

75. Josie, 39, walks to the triage desk and complains of pain in her legs, stating; 'My feet and legs are swollen and sore' She has a history of intravenous drug use and heavy alcohol intake and she has hepatitis C. Currently Josie is not on any medication and is alert and orientated.

1	2	3	4	5
Airway breathing and circulation are intact. The patient has pain and no history of injury. She has significant co-morbid factors and should be seen within 60 minutes.				

76. Jake is 28 years old. He attends the ED with his partner at 5.30 pm. He has abdominal pain radiating to his right loin, urinary frequency and dysuria. He saw his GP yesterday for the pain and was told he 'might have kidney stones'. The pain is worse now than yesterday ('seven out of 10') and he has noticed some blood in his urine the last time he voided.

1	2	3	4	5
Airway breathing and circulation are intact. Pain is severe and the patient should receive treatment within 30 minutes.				

77. Isaac is an 85-year-old male who presents to triage with his son. He has left loin pain and has recently undergone a lithotripsy for renal calculi. Today he has had pain for one-and-a-half hours which 'comes and goes'; the pain is now 'eight out of ten'.

1	2	3	4	5
Airway breathing and circulation are intact. Pain is severe. The patient should receive treatment within 30 minutes.				

78. Jess, 14 years, is brought to the ED by her mother. She is complaining of severe period pains and is doubled over in a wheelchair crying. Her mother tells you that Jess has not been able to go to school for the past week because of her menstrual problems and wants a referral to a specialist to 'sort out the problem'. When you talk to Jess you establish that the blood loss is moderate and the pain is in her abdomen thighs and back. She seems to calm down after you speak to her and appears more comfortable when you wrap a blanket around her.

1	2	3	4	5
Airway and breathing are intact. Blood loss is within normal limits. Discomfort alleviated by local measures. This patient should wait no longer than 60 minutes.				

79. A 5-year-old boy is rushed into your ED by his parents on a hot summer day. He has been holidaying with his family in Far North Queensland and was wading in the sea. He has a raised red welt on his right leg and is crying in severe pain, He has a heart rate of 128 beats per minute and a blood pressure of 130/70.

1	2	3	4	5
Possible marine envenomation. Rapid heart rate and elevated blood pressure associated with pain indicate that treatment should commence within 10 minutes.				

80. Reese, 31 years, suffers from migranes. Today she came to the ED with her sister. She has had an eight-hour history of global headache, vomiting and visual disturbance. She has taken her usual medication (Imigran), but says it is 'not working'. Her heart rate is 96 beats per minute, respiratory rate 28 breaths per minute. She is afebrile and rates her pain seven out of ten..

1	2	3	4	5
Airway, breathing, and circulation are intact. The patient is experiencing severe pain and should wait no longer than 30 minutes for treatment.				



81. India is a nine-year-old girl who arrives to the ED via a taxi accompanied by her mother. She fell while playing netball, injuring her right foot. She is transferred to the triage desk in a wheelchair as it is painful for her to weight bear.

1	2	3	4	5
Airway, breathing and circulation are intact. Moderate pain will require investigation and treatment should commence within 60 minutes.				

82. Terry is a 53-year-old male who presents to the ED asking for a review of his blood pressure medication. He describes having had a 'headache' during the past week. It is two years since he saw a doctor about his medication. His Glasgow Coma Score is 15 out of 15 and his heart rate is 70 beats per minute; he has no nausea or vomiting and is currently pain free.

1	2	3	4	5
Airway, breathing, and circulation are intact. This condition does not currently warrant urgent treatment. The patient is able to wait two hours to see a doctor, but vital signs and pain level should definitely be re-assessed if he is not seen within this time.				

83. A mother presents with her six-month-old baby who she says won't wake up. The child is breathing, but is floppy, can not be roused and has pin-point pupils.

1	2	3	4	5
Airway is unstable and cardiopulmonary arrest imminent. The child requires immediate simultaneous assessment treatment.				

84. Paddy is a 32-year-old male who presents to triage stating that he has vomited blood twice in the last six hours. He states that he has had dark bowel motions for the last three days and he normally drinks '12 stubbies of beer per day'. Paddy's skin is pale, warm and dry. His heart rate is 108 and his respiratory rate is 20 breaths per minute. He doesn't have any pain but does complain of nausea.

1	2	3	4	5
While airway, breathing and circulation are currently within normal parameters, this patient is at significant risk of a sudden and large gastrointestinal blood loss. He should not wait longer than 10 minutes to commence treatment.				

85. Amber is a 22-year-old woman who presents to the ED at 11 pm complaining of a 24-hour history of a sore throat and is feeling generally unwell. She had been attending a party nearby and decided to call into the hospital to get some antibiotics. She has no other symptoms, looks well and is afebrile.

1	2	3	4	5
This is a non-urgent problem and the patient can wait two hours to see a doctor.				



86. You are called to assist a young woman getting her boyfriend out of the car that is pulled up in the ambulance bay. She tells you that Matt 'shot up' 30 minutes ago. On examination Matt appears to have vomited and is centrally cyanosed. He has irregular grunting respirations of 6 breaths per minute and his heart rate is 42 beats per minute.

1	2	3	4	5
Grunting respirations and central cyanosis indicate that this patient has an airway obstruction and requires immediate treatment.				

87. Elliot is 27 years old. He injured his back yesterday lifting a heavy box at work. He had been managing the pain at home, however today it is 'much worse'. He was unable to get an appointment with his local doctor so he has come to the ED. He rates his pain 'five out of ten', and has taken two Panadeine Forte and two Nurofen tablets in the past hour.

1	2	3	4	5
Airway, breathing and circulation are intact. Adequate analgesia has been administered prior to arrival. This patient should wait no longer than 60 minutes to see a doctor.				

88. Ambulance officers arrive without prior notice with a female aged 26. She was a front-seat passenger in a single motor vehicle crash that involved multiple rollovers. The ambulance officers state that the patient was walking around intoxicated at the scene and was abusive, complaining of abdominal pain and reluctant to come to hospital. On examination the patient is centrally cyanosed and not breathing.

1	2	3	4	5
Respiratory arrest immediate simultaneous assessment and treatment is required.				

89. Ron, the 50-year-old coach of a visiting interstate football team, presents to triage at 7 pm on Saturday night. His anti-hypertensive medications have run out and his GP had warned him that it would be dangerous for him to stop his medications. The man says that he realises that it is 'not completely appropriate' for him to attend the ED for a prescription, but says he doesn't know any GPs in the city and is quite prepared to wait for a prescription. His Glasgow Coma Score is 15 out of 15 and his skin is pink, warm and dry. He has no headache or pain elsewhere.

1	2	3	4	5
This is a non-urgent presentation and this patient can wait up to two hours to see a doctor.				



90. Noel, 29 years, is driven to the ED by friends following a fight at his cousin's party. You are called to retrieve Noel from the ambulance bay. While getting Noel out of the car, you learn that he was stabbed in the left side of his chest with a carving knife and see a two centimetre laceration below his left nipple. His skin is cool, pale and moist. He has a weak carotid pulse and a Glasgow Coma Score of 9 out of 15.

1	2	3	4	5
Cardiopulmonary arrest is imminent. Immediate assessment and resuscitation is required.				

91. Brett is 27. He presents to triage via a private car following a fall from scaffolding at a construction site approximately 20 minutes prior to presentation. Brett fell more than 10 feet onto a concrete slab. He was observed by his work mates to be unresponsive for 'about five minutes' and then he regained consciousness, but he has been drowsy. He has vomited four times and has a large boggy haematoma on his occiput. Brett is complaining of a generalised headache. His Glasgow Coma Score is 13 out of 15, heart rate is 74 beats per minute, and respiratory rate is 14 breaths per minute.

1	2	3	4	5
Airway, breathing and circulation are intact. The mechanism of injury and history of loss of consciousness for several minutes indicate that this patient should be seen within 10 minutes.				

92. An obviously pregnant woman presents to triage stating that she is in labour and that she thinks there is something hanging down between her legs. On cursory examination you see under her dress what appears to be an umbilical cord.

1	2	3	4	5
Birth is imminent. The patient should receive immediate simultaneous assessment and treatment.				



APPENDIX F: ABBREVIATIONS

AAA	Abdominal aortic aneurysm
AAEN	Australian Association of Emergency Nurses
ACEM	Australasian College of Emergency Medicine
ATS	Australasian Triage Scale
BP	Blood pressure
BSL	Blood sugar level
CTAS	The Canadian Triage and Acuity Scale
DRGs	Diagnosis related groups
ED	Emergency Department
ENA	Emergency Nurses' Association
ESI	Emergency Severity Index
GCS	Glasgow Coma Scale
HR	Heart rate
ICD-10	International Classification of Diseases – version 10
ICU	Intensive Care Unit
ITS	Ipswich Triage Scale
K	Kappa
LOC	Loss of consciousness
O/A	On arrival
MTS	Manchester Triage System
NTS	National Triage Scale
SAO₂	Oxygen saturation
SOB	Shortness of Breath
PE	Pulmonary embolism
RR	Respiratory rate



APPENDIX G: GLOSSARY

access block

The situation where patients in the ED requiring inpatient care are unable to gain access to appropriate hospital beds within a reasonable timeframe.

admission delay time

The difference between the ready-for-departure time and the actual departure time for patients who are admitted to hospital, die in the ED, or are transferred to another hospital for admission.

arrival time

The first recorded time of contact between the patient and the ED staff.

assessment and treatment time

The difference between the time of initial medical assessment and treatment and the ready-for-departure time.

departure time

The time the patient physically leaves the ED.

emergency department (ED)

The dedicated area in a hospital that is organised and administered to provide a high standard of emergency care to those in the community who are in need of acute or urgent care.

ED overcrowding

The situation where ED function is impeded because the number of patients waiting to be seen, undergoing assessment and treatment, or waiting for departure exceeds either the physical or staffing capacity of the ED.

emergency medicine

A field of practice based on the knowledge and skills required for the prevention, diagnosis and management of acute and urgent aspects of illness and injury affecting patients of all age groups.

emergency physician

A registered medical practitioner who is trained and qualified in the specialty of emergency medicine and certified by the Australasian College of Emergency Medicine with the qualification of Fellow of the Australasian College of Emergency Medicine (FACEM).

re-triage

Clinical status is a dynamic state for all patients. If clinical status changes in a way that will impact upon the triage category, or if additional information becomes available that will influence urgency, then re-triage must occur. When a patient is re-triaged, the initial triage code and any subsequent triage code must be documented. The reason for re-triaging must also be documented.

time of medical assessment & treatment

The time at which the patient is initially reviewed and assessed by the medical officer; represents the start of the care for which the patient presented.

total ED time

The difference between the arrival time and the departure time.

triage

The basic process whereby all incoming patients are categorised into numerical groups dependant upon their urgency rating scale.

Triage Nurse

A qualified and experienced registered nurse who demonstrates and maintains clinical expertise in emergency nursing prior to commencing the triage role. A Triage Nurse undertakes patient assessment and allocates the ATS category in an ED.

triage system

The process by which a clinician applies a patient's clinical urgency.

urgency

Determined according to the patient's clinical condition and is used to 'determine the speed of intervention that is necessary to achieve an optimal outcome'. Urgency is independent of the severity or complexity of an illness or injury. Patients may be triaged to a lower urgency rating because it is safe for them to wait for an emergency assessment.

waiting time

The difference between arrival time and time of initial medical assessment and treatment. A recording accuracy to within the nearest minute is appropriate.

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