

CHAPTER 9

Triage

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LEARNING OBJECTIVES

- Discuss the history and background of emergency triage nursing.
- Describe the development of the Australasian Triage Scale (ATS).
- Discuss the clinical application of the ATS.
- Describe the level of evidence supporting the validity and reliability of the ATS.
- Discuss the role and responsibilities of a triage nurse.
- Describe the medicolegal implications of being the triage nurse.
- Describe how the triage role may vary across metropolitan, regional, rural, and remote and very remote centres.
- Outline an educational framework for triage nursing.
- Outline the important relevant features of triage documentation.
- Discuss telephone triage research findings.

INTRODUCTION

This chapter provides an understanding of the background and development of triage nursing practice. With emergency department (ED) patient presentations increasing, formalised triage systems have been developed to identify and prioritise those patients presenting with actual or potentially life-threatening conditions. Australasian triage guidelines were developed to assist the nurse to discriminate between life-threatening, urgent and non-urgent conditions. However, triage involves more than the application of triage guidelines. Triage nurses determine the need for a bed, allocate ED resources, fast track patient care, deliver first aid and provide a safety net for waiting patients. Today, to undertake triage and meet additional role demands nurses require extensive emergency experience and advanced practice and decision making skills.

ORIGIN OF TRIAGE NURSING

The origin of the word 'triage' is from the French verb 'trier', a word used in the 18th century to sort farming and agricultural products.¹ The application of this word to the sorting of medical casualties dates back to the Franco-Prussian military campaigns.² Prior to this, soldiers were generally cared for according to their rank and often by their families or retainers. It was the surgeon Baron Dominique Jean Larrey, who first prioritised the need for medical intervention and hospital transportation for wounded soldiers.³ The role of military triage at this time was to identify soldiers with non-fatal wounds.⁴ This meant that soldiers with minor injuries were medically treated while those mortally wounded were left to die. The main benefit of implementing a triage system was to accelerate the return of soldiers to the battlefield.^{5,6}

While triage remained a process confined to military campaigns it underwent extensive refinement during subsequent wars (World Wars I and II, Korean, Vietnam, Falkland and Gulf wars). Evidence was building of mortality rate reduction by the early assessment, prompt resuscitation and fast patient

transfer in military hospital settings and battlefields. Soldier mortality rate reduced from 5% during World War II to 1% by the end of the Vietnam War.³ By the 1970s the patient outcome benefits evident in military triage had captured the interest of governments and hospital service providers with the result that formal triage systems were implemented in some civilian emergency departments.⁷

In Australia, before the introduction of triage into civilian EDs, medical and non-medical personnel such as clerks and ambulance officers performed the initial patient assessment. The need to obtain patient and financial details saw the role commonly performed by clerical staff.⁸ Generally, patients were processed on a first-come first-served basis. While this was an efficient system when patient presentation numbers were low, it proved unsafe when large numbers of patients arrived at the same time.⁹

The nurse triage role was introduced to improve the timely recognition of patients with life-threatening conditions, and to ensure the safety of waiting patients, the appropriate allocation of resources and overall efficiency of ED services. By the late 1980s people presenting to an Australasian ED for care were

for the first time met by the triage nurse who assessed their clinical urgency. Since this time, decision making and activity by triage nurses has been shown to significantly influence the patient's experience of emergency care, mortality, morbidity and satisfaction rates.^{10,11}

THE AUSTRALASIAN TRIAGE SCALE

During the period 1985 to 1990, there was a significant increase reported in the number of patient presentations to ED.⁸ With the increase in the number of patient presentations there was growing concern that the identification of patients with urgent conditions was haphazard. The increase in patient presentations was attributed to an ageing population, improved life expectancy for chronic conditions and increased patient acuity and complexity. In addition, there was a decrease in the number of privately insured patients and increased hospital bed closures.^{9,12} Consequently, the first purpose of introducing Australian national triage guidelines was to assist the nurse in the recognition of patient urgency and enable greater consistency within practice.

With the increase in ED patient presentations, governments were seeking ways to regulate, compare and predict the cost of emergency services. To gain some control over the escalating cost of healthcare, financial models made use of ED triage code data.^{13,14} Given that triage codes were being examined to predict costs and that many EDs had developed their own guidelines, clinicians were motivated to establish national triage guidelines to secure greater equity within funding models.¹⁵ While concerns about linking triage codes with ED funding were raised, triage code incentive funding was introduced in 1996.¹⁶

To aid the application, veracity and standardisation of ED costing models, governments implemented ED computer information systems. One Australian system is known as EDIS™ (Emergency Department Information System). The purpose of ED information systems, introduced into many Australian EDs in the 1990s, was to standardise the collection of data.¹⁷ Standardised data collection enabled greater surveillance, regulation and prediction of costs for the specialty area of emergency.¹⁸ With the implementation of computerised information systems, data collection could be standardised, enabling governments to apply formulae to calculate, regulate and predict current and future ED funding needs.¹³

Therefore, national triage guidelines needed to be developed to assist triage nurse recognition of patient urgency; achieve greater consistency and uniformity within practice; and to create equity within ED funding models. In 1994 the National Triage Scale (NTS), that in 2002 became known as the Australasian Triage Scale (ATS), was introduced.^{19,20} The ATS consists of five scales which link patient history, signs and symptoms, and diagnosis to clinical urgency. Each triage scale incorporates a hierarchy of medical and nursing response times for patients (Table 9.1).

By the early 1990s, Australia, New Zealand and Canada had adopted national triage guidelines.^{21–23} The ATS provides

nurses with a uniform method to allocate a triage urgency code for a range of patient conditions thereby authorising them to regulate the distribution of emergency care.

Throughout Australasia, triage code waiting times are used to measure and compare ED performance. Waiting times provide an indication of the efficiency and timeliness of ED services. Hence, with the implementation of the Australasian Triage Scale there was increasing expectation that EDs would demonstrate timely service by meeting the triage code benchmarks agreed upon. Triage code benchmarks are determined by the percentage of patients seen by a medical officer within the specified triage code timeframe (Table 9.2).

Reliability and validity of the Australasian Triage Scale

With the introduction of the Australasian Triage Scale researchers began focusing on establishing the reliability and validity of the tool. The majority of research studies used hypothetical patient scenarios as their basis for validation. Jelinek and Little¹⁶ assessed the inter-rater reliability of the ATS by having 115 nurses allocate a triage code to 100 hypothetical patient scenarios. The findings from this study demonstrated that between nurses there was high concordance (95% within one category of the modal response) of triage code allocation. The study provided evidence that despite triage experience and hospital type, the ATS appropriately and consistently measured clinical urgency. The results are supported by other researchers who found inter-rater reliability

TABLE 9.1 Australasian Triage Scale

ATS response times	
Code 1 (resuscitation)	Requires immediate intervention
Code 2 (emergency)	Requires intervention within 10 minutes
Code 3 (urgent)	Should be seen within 30 minutes
Code 4 (semi-urgent)	Should be seen within 1 hour
Code 5 (non-urgent)	Should be seen within 2 hours
The Australasian triage scale. Emerg Med Australas 2002; 14(3):335–336.	

TABLE 9.2 Triage benchmarks

	ACEM*	AHS†	NZ‡
	%	%	%
Triage code 1	100	100	100
Triage code 2	80	76	80
Triage code 3	75	50	75
Triage code 4	70	56	
Triage code 5	70	86	

*Australasian College of Emergency Medicine

†Australian HealthCare Standards

‡New Zealand emergency departments (n = 42) benchmark against only the first three triage codes.

at between 80% and 95%.^{24–26} While these studies confirmed that the ATS was a reliable measure of patient urgency, they identified that some patients continued to be over- or under-triaged—accounting for inter-rater disagreement rates of between 5% and 20%.²⁴

Researchers were also interested in identifying the reliability of the ATS when measuring a range of patient outcomes such as admission rates. Hollis and Sprivulus²⁷ identified that, despite ED activity, admission rates for codes 1, 2 and 3 were consistent with ATS guidelines. Other researchers examined and demonstrated a strong association between triage codes and patient diagnoses, morbidity and mortality rate.^{25,28,29} Australian studies convincingly established the inter-rater reliability of the ATS and identified that greater consistency and recognition of clinical urgency were present when triage nurses used the guidelines.

However, the NTS was not sensitive in identifying the urgency of acutely ill children.^{30,31} Browne et al provided evidence that the National Triage Scale did not consistently identify children with urgent conditions. Similarly, Durojaiye and O'Meara's³⁰ study confirmed inconsistent application of ATS for seriously ill children. This indicated that additional guidelines needed to be developed for this population group and perhaps other guidelines might be needed for other vulnerable populations such as people with mental health problems. Consequently, the ATS was revised in 2002, and vulnerable populations such as children and people with mental health conditions were included in the revised guidelines. There is Level II^{21,25}, Level III^{16,26} and Level IV^{24,27} evidence to support the continued use and national acceptance of the five-level ATS guidelines. Refer to Chapter 7 for a more detailed understanding of research evidence levels.

RURAL TRIAGE

Across Australasia, healthcare infrastructure is composed of hospitals that provide different levels of emergency care (see Ch 1). Designated emergency departments are located largely in urban settings while rural, remote and very remote health centres have designated treatment rooms which provide limited resuscitation practices.

Across Australia, there are 217 very remote communities and a total of 271 health services, sites or facilities which provide emergency services with limited resuscitation capabilities.³² Compared with remote, rural or regional communities Indigenous Australians largely compose the populations which live in very remote communities (18% of the total population). Many of the very remote services (n = 133) are staffed by, and for, Indigenous communities. By contrast, Māori health providers are under-represented in New Zealand rural and semi-rural healthcare communities. In New Zealand, a Māori health provider is an organisation that delivers health services largely for Māori and is managed by Māori.³³

Rural, remote and very remote nurses often undertake triage but then go on to provide first line emergency care and definitive patient care and/or referral.³⁴ For emergency

services, where medical review is limited, the ATS waiting time benchmark is examined in respect to the 'nurse seen time'.

Many rural, remote and very remote communities experience significant healthcare isolation. To reduce isolation and improve healthcare access throughout Australasia, initiatives such as 'Telehealth', the 'Bush Crisis Line' and 'Healthline' are being examined.^{2,34,35}

In rural, remote and very remote areas, nurses have extended their scope of practice through successful completion of educational courses. For example, rural New Zealand nurses are able to expand their scope of practice through the 'PRIME' (primary response in medical emergencies) course. To improve New Zealand rural health, the 'PRIME' course is being implemented nationally.³⁶ An equivalent Australian course is 'FLEC' (First Line Emergency Care Course).³⁷ These educational initiatives aim to meet the needs of nurses working in rural, remote and very remote emergency settings where, as first responder, they must triage, resuscitate and manage the patient.

TRIAGE DECISION MAKING

Triage decision making involves advanced cognitive processes which are used to determine a patient's medical urgency, the allocation of departmental resources (allocation of beds and clinical areas), initiation of interventions and management of incidents and service flow. To this end the role of triage requires the nurse to undertake primary and secondary triage.

Primary triage decisions

Primary triage decisions are focused on identifying life-threatening conditions then delivering appropriate interventions and first aid. The initial assessment evaluates the patient's airway, breathing and circulation and, only if the patient is determined stable, should the triage nurse then focus on the patient's primary complaint. Using this primary decision, triage nurses determine the appropriate urgency code. In this way triage code allocation regulates the timing of medical and nursing care.

The determination of a patient's clinical urgency must be independent of ED activity, benchmarking practices and incentive funding. Selection of the correct triage code will avoid incidences of over- or under-triaging and provide for safer patient outcomes.³⁸ The most urgent clinical patient feature should determine triage code selection.³⁹

Central to achieving this primary outcome is the triage nurse's ability to trawl for information, recognise and discriminate between patterns of clinical urgency, develop a working diagnosis, predict patient care needs, and evaluate collected information.⁴⁰ In trawling for information triage nurses collect objective and subjective data, which enable clinical urgency to be determined.

Disaster and trauma triage concepts and guidelines are presented in Chapters 18 and 40 respectively.

OBJECTIVE DATA

Triage nurses should begin each patient assessment with a primary survey. This information process begins with inspection (visual observation of the patient). It is important 'just to look at the patient'. Initial observations of a patient should include: general appearance, the degree of distress and emotional responses. This information provides opportunity for working diagnoses or suppositions to be formed. Triage nurses should also utilise all available information sources. For example, a patient may present with pathology, radiological and or interventional results. These information sources can help to solidify triage decision making.

A triage working diagnosis frames impressions of a patient's urgency and the need to allocate a bed. A working diagnosis can be (dis)confirmed during the triage interview and on the collection of physiological data.

Physiological data

Triage nurses should regularly choose to collect haemodynamic observations. Such observations provide a useful reference point for triage decision making when further information is necessary to discriminate between more or less urgent cases. The allocation of a triage code and clinical area are more confidently and accurately determined when a triage nurse has access to haemodynamic information.^{41,42} However, vital signs should be obtained only when time permits, which may exclude triage code 1 and 2 patients.³⁹

SUBJECTIVE DATA

The triage nurse concurrently collects and collates subjective data. This involves collecting information that provides an understanding of 'why' the patient is presenting (primary complaint). Additional patient information to be elicited and collated includes: the precipitating event, onset of symptoms, medical history and medications. This information enables more confident triage decision making to take place.

Information gathering techniques

Triage nurses typically gather information using focused questioning. Triage nurse questioning should target the main reason for a patient presenting to an ED (chief complaint). By using open-ended questioning techniques, triage nurses should be able to gather information that 'funnels down' from the broad complaint to specific signs and symptoms. This funnelling process enables triage nurses to quickly gain insight into the patient's chief complaint. While in the process of collecting patient information, the triage nurse will be actively ruling in, or out, life-threatening diagnoses such as myocardial infarction.

When triage nurses gather patient information, they measure this against clinical templates stored from practical experience and theoretical knowledge. By taking a patient's history, vital signs and symptoms and comparing with medical templates, triage nurses are able to discriminate between the different levels of urgency. Triage nurses rely on pattern recognition when gathering information to refine decision making processes, direct choice and accelerate decision making.

While pattern recognition enables triage nurses to discriminate between more or less urgent, the prioritisation of a patient's need for care is accelerated through the development of a working diagnosis. A working diagnosis is used by triage nurses as a strategy to confirm patient urgency, determine an appropriate clinical area, and predict care interventions. A triage working diagnosis helps to make sense of the act of triage, assists decision making processes, reduces patient anxiety, expands professional confidence and adds an element of personal satisfaction to the role.⁴⁰

Secondary triage decisions

Secondary triage decisions involve the appropriate allocation of ED resources and the initiation of triage extended practices (timekeeping practices). Secondary decisions are based on suppositions or a working diagnosis confirmed during the primary assessment, which frame the need for investigational or nurse-initiated activities. Evidence suggests that triage nurses are undertaking a range of investigational activities to assist in decision making.^{43,44}

TRIAGE TIMEKEEPING PROCESSES

Triage nurses initiate extended practices, which modulate a timing of ED care that create a process of 'timekeeping'. Triage nurses use timekeeping practices to maintain, regulate or restore a normal rhythm of emergency care. Triage timekeeping processes sustain and maintain appropriate patient flow and resource utilisation, while supporting patient assessment and urgency recognition decision making. The decision to undertake investigational and or extended activities occurs simultaneously with triage code and clinical area allocation. Evidence suggests that triage nurse pain management⁴⁵⁻⁴⁷ and radiological investigations^{48,49} contribute to improved patient outcomes and more timely, efficient and equitable healthcare services.

TRIAGE GATEKEEPING PROCESSES

Primary and secondary triage decision making is sustained through a process of gatekeeping. Gatekeeping regulates patient flow and through this process, a patient's clinical need is appropriately matched with a geographical ED workspace 'inside'. For example, a patient requiring urgent medical intervention would be allocated to an appropriate resuscitation workspace where care is optimised and delivered by appropriately qualified nursing and medical staff. Triage nurses know that clinical areas provide different levels of care appropriate for a patient's condition or injury and that this determines a normal pattern of patient movement.

The fragmentation of workspaces into 'places' enables a process of gatekeeping to occur and triage decision making to be ordered. Different meanings of time punctuate clinical areas that hierarchically order practice and staff activities. Consequently, each ED clinical area reflects varying levels of urgency, timeliness, efficiency and control, characterising workspaces into 'places'. Once nurses have learnt the meanings applied to work 'places' and the different patient groups, they

are able to make effective triage choices and predict care needs. Triage nurses use gatekeeping processes to accomplish the appropriate allocation of service resources to a patient's medical need thereby securing flow, order, consistency and patient safety.⁴⁰

COMMUNICATION

Triage nurses act as a cultural broker for staff and patients. Triage nurses convert patient language into an urgency code, a useable currency which provides an understanding for emergency nurses and doctors to orientate their practice.

Triage nurses are also in a position to introduce patients to the context of emergency care. Nurses should take this opportunity to explain to patients about activities taking place in the triage area. Triage nurses need to be aware that patients presenting to the ED are often experiencing anxiety and fear. To de-escalate negative emotions triage nurses should inform patients of the waiting times and comfort relatives and patients by explaining the triage process, the technology that is being used and the potential procedures and care interventions that may take place at the bedside. To achieve the 'cultural broking' triage outcome nurses require advanced communication and interpersonal skills.

TRiage NURSE EDUCATION

The triage role requires the nurse to have advanced cognitive, communication and decision making skills and to be able to collate knowledge systems, patterns of knowing and ways of doing with a patient's physiological, interpersonal and communicative signs. Consequently, triage education programs need to develop strategies that foster these advanced clinical skills and provide practical opportunities to develop patterns of 'knowing'. To this end emergency educators can support triage decision making by designing educational initiatives that target high levels of problem solving and questioning in order to achieve more thoughtful triage practice responses.

Emergency educators need to develop programs that are based on gatekeeping processes, which assist nurses to allocate beds and manage incidents, such as patient overcrowding. Educational strategies that provide for novice triage nurses to work beside an experienced clinician assist the development of the practical aspects of gatekeeping resources and flow.

Timekeeping processes are often constrained during incidents such as patient overcrowding. These incidents often induce negative experience patterns. By making this dimension of triage practice transparent, conflicting interests and knowledge systems that compete to build 'threatening' or 'blame' environments can be avoided. In addition, novice triage nurses may benefit from an introductory period free of nurse-initiated activities. Once adjustment to the role is complete, extended practices can be introduced into the nurse's craft repertoire. This may result in greater consistency in triage practice.

Triage nurses need to be provided with opportunities to reflect on belief systems, biases, assumptions, expectations and ways of thinking, which are embedded within emergency care. Through reflective practices nursing independence within the context of triage practice can be secured, and more responsible decision making and disciplined and tolerant work practices achieved. This educational process should give triage nurses the wherewithal to extract complex meanings from experiences and analyse practice patterns (see Ch 8).

Educational forums need to be structured whereby experienced and novice triage nurses are brought together as a group. These focus groups provide opportunity for triage nurses to share their experiences and practices for information gathering, managing difficult triage situations and resource allocation, thus improving gatekeeping, timekeeping and decision making skills. This process would assist nurses to understand what makes practice reasonable and would promote ethical patterns of knowing and acting.

To reduce the potential influence of an emotionally charged triage response to a particular situation or event, triage nurses must learn how emotions can hold sway over gatekeeping, timekeeping and decision making processes. The convergence of different expectations (patient and/or nurse) often precipitates emotionally labile situations that escalate troubling or aggressive behaviour. Triage nurses must be prepared to confront and mediate ethical issues, contradictions, conflict, and practical dilemmas in order to foster more tolerant and caring triage practices.

TRiage DOCUMENTATION

The documented triage assessment should constitute the first part of the patient's medical notes. The triage nurse should document every episode of triage undertaken within their institution. The triage nurse should also enter treatment contemporaneously as this avoids reliance on personal memory. Triage documentation should include the nurse's name, date and time of assessment, presenting complaint, a focused patient assessment, triage code, treatment area and interventions implemented.³⁹ The documented patient assessment should be sufficient to explain the allocated triage code, clinical area and interventions instigated by the nurse. The triage nurse should not make an entry on behalf of someone else. The legal implications of documentation are discussed in Chapter 3.

LEGAL ASPECTS OF TRIAGE

The triage document has the potential to be admitted as legal evidence if it is relevant to a matter being dealt with in a court of law. Quality nursing documentation remains part of a nurse's accountability. Good documentation can assist a nurse if called upon to account for their professional actions. The triage nurse should only document the facts, relevant patient assessment and interventions. Triage assessments must be contemporaneous notes and information should never be obliterated (see Ch 3).

If triage nurses take a medical order via the telephone, it is important to try to get another person to listen to and countersign the order on the phone. If this is not possible, make sure the medical officer repeats the order and then for confirmation repeat the order back to them. Write the order immediately in the triage record and note the date, time, amount, etc. and sign the entry.

SPECIAL CONDITIONS

Patient overcrowding

Patient overcrowding is a pandemic problem in ED. Incidents of overcrowding can jeopardise care practices, patient and staff safety and the overall functioning of the ED. Within Australasia overcrowding is commonly blamed on the increase in non-urgent cases. This is in fact not the case. Instead incidents of ED overcrowding are largely the result of declining hospital bed numbers. This has meant that admitted patients are waiting longer in the ED for a ward bed to become available.^{50,51}

During periods of overcrowding, aggression and troubling behaviour are a common experience for the triage nurse. In this situation, the triage nurse needs to undertake a risk assessment to maintain and retain a safe triage environment for staff and patients. Maintaining or restoring a safe environment can often be achieved by the triage nurse's ability to implement aggression minimisation strategies.

For ED staff and patient safety the following hospital resources and equipment should be viewed as standard. This includes locating security personnel within the ED to ensure a more timely and active security presence and the resolution of troubling behaviour. The triage and clerical area should have access to direct telephone lines to police and security. Other security features to be considered include personal staff mobile duress alarms, metal detectors, and camera surveillance equipment. All ED staff should be required to undertake educational courses in aggression minimisation.

Telephone triage

Telephone triage has evolved alongside emergency triage to better manage ED workload. During the late 1990s, the strategy was widely implemented to reduce ED patient overcrowding.^{52–57} The purpose of telephone triage is to reduce the burden on general practitioners and EDs by screening and referring patients to appropriate services.^{54,58,59} However, the UK began implementing telephone triage centres independent of EDs, a model that was increasingly adopted throughout Australasia.^{54,60}

Telephone triage has its own unique difficulties when compared with ED triage. These difficulties include the lack of visual cues for assessment and patient compliance.^{56,61} Given legal and patient safety concerns, many Australian EDs have stopped providing telephone triage.^{53,62} As a result, governments have developed independent telephone triage centres with specific telephone triage guidelines.^{63–66} Throughout Australasia, telephone triage systems are able to refer patients

to local practitioners, EDs or community services. To date, Australia and New Zealand have limited adult and paediatric telephone triage systems. In Australia 'Kidsnet' is a paediatric telephone advice service—established in 1977.⁶⁷ Kidsnet provides information on child and acute paediatric health issues and paediatric services available within the area. An average of 1669 enquires per month are made to Kidsnet.⁶⁷ New Zealand's equivalent is the 'PlunketLine', which also provides expert advice to health workers, parents and caregivers.⁶⁸ The PlunketLine is now incorporated into a free 24-hour national 'HealthLine'. Evaluation of Healthline has reported high consumer satisfaction, a good safety record and reduced demand on health services.² Despite legal and safety concerns, the implementation of telephone triage systems provide evidence of significant positive outcomes for EDs, GPs and consumers.^{2,69–71}

SUMMARY

Triage nurses must decide within a few minutes the patient's medical urgency, allocate appropriate resources and initiate interventions according to patient need. The development of triage nursing has led to improved patient outcomes and the delivery of safer emergency care. Standardised triage guidelines have assisted the triage nurse to discriminate between more and less urgent conditions. In this way, the ATS have contributed towards safer, consistent and more equitable triage practices. The increasing complexity and acuity of patient presentations and extended scope of triage practice requires the emergency nurse to be highly experienced and have advanced knowledge, communication, and problem solving skills. The nurse also requires prior understanding of the gatekeeping and timekeeping processes embedded within the triage role. There is overwhelming evidence that triage nurses bring about a quality difference in ED services and patient outcomes.

REVIEW QUESTIONS

- 1 What is the purpose of triage?
- 2 What factors drove the need to establish national triage guidelines for Australasia?
- 3 Describe the levels of evidence that demonstrate the reliability and validity of the ATS.
- 4 How do the triage roles in rural, remote and very remote centres differ from each other and metropolitan centres?
- 5 What is the purpose of the initial triage patient assessment?
- 6 What are the different types of information the triage nurse collects to assist decision making?
- 7 Describe the focus of triage education programs.
- 8 What are the important features of triage documentation?
- 9 Describe the research benefits of telephone triage.

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USEFUL WEBSITES

ACEM

<http://www.acem.org.au/>

CENA

<http://www.cena.org.au/>

CRANA (including rural triage)

<http://www.crana.org.au/>

Bush Crisis Line

<http://www.bcl.org.au/>

PRIME website

<http://www.stjohn.org.nz/education/courses.aspx>

FLEC

<http://flec.crana.org.au/>

Commonwealth Department of Health and Ageing

<http://www.health.gov.au/internet/wcms/publishing.nsf/Content/health-publicat.htm>

Emergency Management Australia

<http://www.ema.gov.au/>

NZ Civil Defence Emergency Management Group

<http://www.auckland.cdemg.org.nz>