Australasian College
for Emergency Medicine

Emergency department disaster preparedness and response

Policy P33

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Document Review

Timeframe for review:	Every three years, or earlier if required
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Revision History

Version	Date	Pages revised / Brief Explanation of Revision
V2	Oct-20	Substantial review and merging of content from pre-existing ACEM Standards: • P49 Policy on the Disposition of Patients in the ED on Notification of a Mass Casualty Incident • P33 Policy on Disaster Health Services • P66 Policy on ED Management of Medical & Nursing Volunteers During Disasters • ST309 Standard for Medical Practitioners Responding to Sudden Onset Disasters – Qualifications 'Related Documents' updated with recent publications

Related documents

This Policy should be read in conjunction with the following ACEM documents:

- P30 Policy on Emergency Department Hazardous Material Response Plan
- P59 Policy on Heatwave and Heat Health
- G26 Reducing the Spread of Communicable Infectious Disease in the Emergency Department Guidelines
- G764 Clinical Guidelines for the Management of COVID-19 in Australasian Emergency Departments
- *Management of Respiratory Disease Outbreaks Guidelines*

1. Purpose and scope

This policy relates to the preparedness and response of Emergency Departments (EDs) to disasters of all types, including mass casualty incidents, natural disasters and public health emergencies.

This policy is applicable to all EDs in Australia and New Zealand. It provides general principles and adopts an all-hazards approach that is applicable to sudden onset events with health impacts that may overwhelm the innate capacity and resources of the ED to cope. This may range from multiple casualty incidents to natural disasters to public health emergencies.

This policy recognises that ED settings vary across Australia and Aotearoa New Zealand. As such, the scale of appropriate responses to similar events may necessarily differ between EDs. This may range from departmental surge to hospital wide response to whole-of-system mobilisation. This policy should be applied within the context of local ED, hospital and state health emergency and disaster plans.

2. Definitions

Sudden Onset Disaster

A disaster is a serious disruption to community life that overwhelms the innate immediate capacity and resources to cope. It usually requires special mobilisation and organisation of resources other than those normally available to local authorities. A disaster can be further characterised as a sudden onset disaster, defined as occurring with little or no warning, meaning there is insufficient time for the complete evacuation of the at-risk population[1]. Examples of these include floods, cyclones, earthquake.

Mass Casualty Incident

An event, typically occurring with little or no warning, that generates a demand for medical care that exceeds the capacity of the receiving health service or system to provide conventional standards of care to the affected population[2]. Examples include plane crash or bus crash.

Disaster Health

Disaster health is the collaborative application of various health disciplines to the prevention, preparedness, response and recovery from the health problems arising from disasters.

Disaster Health Services

Disaster health services are health care systems designed to attempt to meet the health care needs of disaster victims, casualties and responders.

Surge capacity

The measurable ability of a health system to manage a sudden influx in the number of patients[3]. There are four main components: space, supplies, staff and systems. Surge capacity includes both the adaptive use or augmentation of existing resources and the creation of additional capacity[4].

Casualty

A casualty refers to a person involved in a mass casualty incident who requires medical assistance.

Patient

A patient refers to all persons seeking treatment.

3. Background

Australia and Aotearoa New Zealand are prone to and experience a range of natural and man-made disasters as well as public health emergencies. Such events impact on the health system through direct effects, which increase illness and/or injuries and exacerbate existing medical conditions, and indirectly through disruption of community access to health services[5].

A comprehensive approach to disaster health management requires coordinated and collaborative actions across all government levels, sectors, agencies and disciplines for the prevention, preparedness, response and recovery from the health impacts of a disaster.

Planning is integral to effective response and recovery. An all-hazards approach is advocated to provide a foundation for managing any disaster, even those unforeseen or unimagined[5]. It is also recognised that the planning and response to any sudden onset disaster must be flexible and scalable, involving all areas of the hospital system.

While the focus of this document is on disaster preparedness and response, ACEM also recognises that these activities form only part of the broader disaster management cycle. Applying lessons learnt and investing in disaster prevention and mitigation, i.e. activities that reduce the likelihood and impacts of future disasters, are also essential and valuable. Prevention is invariably less costly in human and economic terms than after-the-fact response. ACEM believes that EDs and emergency physicians, as a frontline component of the health system, have a central and critical role in all aspects of disaster health management from prevention to recovery.

4. Policy

EDs represent the first stage (or frontline) of the hospital system's response to disasters of all types and scales, including multiple casualty incidents, natural and man-made disasters and public health emergencies. EDs (and their associated hospital system) should have policies and procedures in place to ensure established disaster systems, appropriately trained staff, adequate supplies and safe spaces for responding to disasters.

The planning and design of disaster health services at any level must be based upon the best available evidence and experience from past major incidents and disasters. This should involve and draw upon the expertise of emergency physicians.

5. Procedures and actions

5.1 Systems

- Emergency physicians should be involved in all aspects of disaster planning, management, and patient care.
- Emergency physician input into disaster planning is important to ensure that the planning process captures issues that may impact on clinical outcomes.
- The emergency physician is in an ideal position to facilitate disaster health responses and the smooth transition from the acute disaster health responses to the public health issues of disaster recovery operations.
- Emergency physicians should ensure that the ability of the ED to manage mass casualty incidents and other disaster situations are considered in any proposed changes to ED operating procedures or design.

- EDs must have disaster plans, both with an all hazards approach and for setting-specific hazards, which includes (but may not be limited to):
    - Activation thresholds and escalation processes
    - Functional roles and responsibilities within the ED, including incident command structure
    - Communication pathways within the ED, with other hospital functions and departments, and with external agencies, as required
    - Procedures for surging capacity, including expanding treatment space, managing surge staff and accessing disaster supplies
    - Procedures for de-escalation or transition to routine service delivery during recovery or maintenance phases of the disaster
- ED disaster plans should align with relevant hospital, state and national plans.
- ED disaster plans should be inclusive and reflect the diversity of Australian and New Zealand communities. Needs of higher risk populations, such as children, women, older persons, people with disabilities, Aboriginal and Torres Strait Islander people, Māori and Pacific Islanders, culturally and linguistically diverse groups, and socially disadvantaged groups must be considered and addressed. These groups are more vulnerable and disproportionately affected in a disaster[5].
- ED disaster plans should be regularly tested, at least every 1-2 years[5]. Where possible, consideration should be given for multi-disciplinary and/or multi-agency exercises.
- Systems for reviewing disaster plans on a regular basis should be established, triggered by major changes in risk profile, and following any activations as part of an after-action review process.
- Systems for evaluating and reviewing the ED's disaster preparedness should be established. This should include mechanisms for ensuring currency of staff training and credentialed staff databases and checking quality and sufficiency of disaster supplies.

5.2 Staff

- The response to any sudden onset disaster in the field or in the ED must ensure the safety of medical practitioners, patients and other responders. This is achieved by ensuring medical staff are appropriately trained, prepared and equipped. This applies to ED staff as well as potential surge staff including non-ED healthcare workers or volunteers. EDs must have policies and procedures to prepare and manage these different types of potential response staff to ensure their appropriateness and safety.
- ACEM believes medical practitioners responding to a sudden onset disaster in the pre-hospital setting and the ED should have the required skills to provide safe and appropriate assistance in these situations. Currency of relevant training and skills, and possession of relevant qualifications is required. The recommended standards are provided in Appendix 1.
- Medical practitioners familiar with disaster planning and response across a range of settings are best placed to effectively contribute in disaster situations. This is essential in situations where physicians and their patients are at their most stressed and vulnerable, ensuring the provision of a rapid response and effective treatment for disaster-affected communities.
- All ED staff and medical practitioners who may be required to respond to a sudden onset disaster should be familiar with:
    - respective state, territory or jurisdiction's disaster and emergency management arrangements and procedures;
    - local hospital and ambulance services disaster plans and arrangements; and
    - national arrangements for disaster response.

- All ED staff should have the opportunity to undertake education and training in disaster response[5]. This includes Major Incident Medical Management System (MIMMS) courses, drills, simulations and exercises, ranging in fidelity and scale from departmental table-top to multi-agency field exercises.
- If there are sufficient numbers of appropriately trained and experienced personnel available to deploy to the pre-hospital environment, these should always be used in preference to practitioners who may not meet the essential or highly desirable criteria.
- In some instances, the recommended staff types and skillsets described in this document will not be immediately available to meet the pre-hospital and emergency department demand for medical care. This is more likely to occur in catastrophic disasters, particularly in rural and regional environments. In these scenarios a decision may be made to use other, ideally local, healthcare professionals or volunteers in the ED and/or pre-hospital setting. EDs should have pre-established procedures to activate, utilise and stand down such surge staff. Ideally, such medical responders should:
    - Fulfil roles and duties that most closely approximate their usual role and skill set
    - Stand down and return to their usual work environment as soon as it is safe and appropriate to do so.
- ACEM recognises EDs may receive unsolicited offers of assistance during a disaster. It is recognised that all health workers have a role to play in the response to disasters[6]. However, volunteers need to work as part of a system which uses their skill-mix in the most appropriate way, and ensures they are credentialed, indemnified and insured for the protection and welfare of patients, the organisation and themselves. ACEM also recognises that medical students are a special group of potential volunteers that can be used to augment emergency department operations in a disaster. It is important that all ED disaster plans have systems to handle these offers for assistance. Specifically, they should include provisions for:
    - Pre-establishing role descriptions, allocations and credentialing with local groups likely to be called upon, such as local GPs[7], community service organisations and medical or nursing students
    - Providing clear linkages with health facility and jurisdiction disaster plans so that credentialing processes for volunteers are established in advance and that clear credentialing and indemnity arrangements are in place[5]
    - Managing hospital medical, nursing and allied health staff who self-present to the ED in the immediate aftermath of a disaster to volunteer assistance
    - Pre-designating a single point to which all volunteers report, and a single person for allocation of roles and duties[8]. If large numbers of volunteers present due to an area of high population and/or significance of the disaster then a single person for nursing, medical, and allied health should take this role, to facilitate rapid distribution of appropriate staff to areas of need. Security mechanisms should be in place to verify the credentials of volunteers, and to maintain a log of volunteer movements for the security of the individual and the organisation
    - Ensuring that any non-hospital medical and nursing volunteers are appropriately briefed on relevant ED operational procedures
    - Ensuring all medical and nursing volunteers in the ED understand and operate within emergency department communications and command structures
    - Ensuring where possible that volunteer medical and nursing staff presenting to the ED work in association with an ED staff member[8]
    - Ensuring that ED staff are distinctly and easily identifiable and that volunteers are separately identifiable

- Re-assigning any volunteer presenting to the ED who is unable to perform the role allocated to them, or if that is not possible then they should be re-deployed elsewhere or asked to leave
- Removing by hospital security any volunteer or surge staff who disrupt safe departmental function and refuse to leave on request

- EDs must ensure that there are relief and fatigue management systems to protect the welfare of all disaster response staff under their purview, including non-ED surge staff and volunteers.
- EDs must ensure all medical or nursing disaster response staff, including non-ED surge staff and volunteers, have access to post-incident debriefing and counselling as required.
- ED disaster plans must ensure staff are used appropriately both in terms of their skills and the ED's ability to continue providing a service to the community once the initial impact of the disaster is over.

5.3 Supplies

- EDs should have a dedicated disaster store for specific equipment and supplies, including surge stock, required to respond to a disaster. This storage must be easily and rapidly accessible to ED staff when required, secure, and protected against environmental damage[9]. A stock rotation process must be included to ensure this store is kept up to date with minimal wastage.
- Procedures for ensuring adequate and appropriate disaster supplies are required. This includes:
  - Identifying and procuring required disaster supplies/equipment and amounts appropriate to the ED's setting and hazard profile
  - Ensuring appropriate storage, organisation and maintenance
  - Conducting regular checks for integrity and performance
  - Establishing arrangements for sourcing items stocked elsewhere or if additional supplies are required.
- Disaster supplies should not only account for clinical needs (e.g. trauma care or specific therapeutics/antidotes) but also administrative/clerical and communication needs (e.g. mass casualty patient IDs and physical copies of critical documents, two-way radios etc.)[8], plus hydration and nutrition needs if there is a significant possibility of disruption of normal chains of supply such as from a large scale natural disaster.
- Appropriate and sufficient levels of Personal Protective Equipment (PPE) must be available and provided to all ED staff responding to a disaster. Provision must be made for PPE needs for all types of disasters, including requirements specific to hazardous material/Chemical, Biological, Radiological and Nuclear (CBRN) response and for pandemic and high-risk communicable disease outbreak response[10,11].

5.4 Spaces

- EDs, hospitals and healthcare systems should make plans to provide care for all people seeking care during a mass casualty incident or sudden onset disaster. All patients and casualties should be given care according to need in line with resources available.
- ACEM believes that all hospitals and EDs should have plans that allow the reception and treatment of casualties in the event of a mass casualty incident or sudden onset disaster, and measures to rapidly increase ED and hospital treatment capacity of patients.
- ED design and any proposed changes to design should consider capacity to manage mass casualty incidents and disaster situations[9]. Consideration should also be given to the ability to implement necessary layout, flow and/or process modifications to mitigate specific event risks, such as infectious disease transmission during a pandemic or contamination during a hazardous material incident with mass casualties[12,10,13].
- ED disaster plans should pre-emptively identify and articulate procedures for:

- Expansible treatment areas within the ED[8]
- Treatment space external to the ED[8]. This may include adjacent clinical areas (or less ideally, temporary structures such as tents or marquees) that are utilised to temporarily enlarge ED capacity, and/or separately established clinical services and spaces, such as surge/flu clinics[11], for diversion of appropriate patients from the ED.

- Entry and exit points to the ED space should be identified, and procedures established for placement of security to control access
- Appropriate strategies for rapidly increasing treatment capacity at onset of a mass casualty incident or disaster situation include[8]:
  - Discharging clinically well patients from the ED and inpatient units to promptly create treatment capacity within the hospital and health system
  - Transferring patients from the ED once initial assessment has been completed and resuscitation commenced, to create treatment capacity within the ED.
  - Diverting incoming stable patients to other health care facilities.

6. References

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11 Australasian College for Emergency Medicine (ACEM). Management of respiratory disease outbreaks. Melbourne: ACEM; 2020. Available: https://acem.org.au/getmedia/a5d70088-7ed8-4a23-aa0c-a06f1082be5c/Management-of-Respiratory-Disease-Outbreaks

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Appendix 1: Recommended minimum standards for medical practitioners responding to sudden onset disasters

Qualifications for Emergency Department Settings

Essential (one of the following):

- An emergency physician qualified as a medical practitioner in the speciality of Emergency Medicine, holding the recognised qualification of Fellowship of ACEM, currently credentialed to work in an Australasian Emergency Department; or
- ACEM Trainees with at least 6 months experience in an Emergency Department, within the last 2 years
- Other registered medical practitioners who have completed either the ACEM Emergency Medicine Diploma or ACEM Emergency Medicine Advanced Diploma; or
- Other registered medical practitioner with currency (at least 6 months in the last two years) of practice within an Emergency Department, and appropriate continuing professional development in the field of Emergency Medicine practice;
- Other registered medical practitioners who are credentialed to and who regularly provide acute clinical services in an ED such as: intensivists, anaesthetists, surgeons, currently employed junior medical staff and some general practitioners, working within their usual scope of practice.

Desirable

- Participation in disaster response training in the local hospital and district
- Familiarity with disaster plans for the ED and hospital in question

Qualifications for Pre-Hospital Settings

The primary and most appropriate workforce for deployment to the pre-hospital setting is drawn from appropriately qualified and credentialed practitioners in the scope of practice of Pre-hospital and Retrieval Medicine (PHaRM). It is recognised that such resources will be limited and will concurrently also have responsibility for coordination and performance of routine pre-hospital and retrieval medicine.

Relevantly qualified and experienced ADF medical practitioners are also considered appropriate for deployment in such circumstances.

Essential

- Registration as a medical practitioner with the relevant national body. (AHPRA/NZMC)
- Emergency medicine and disaster planning experience as detailed in Section 6.2, ACEM Policy on Emergency Department Disaster Preparedness and Response
- Ability to meet the physical, cognitive, and psychological challenges unique to the practise of pre-hospital medicine.
- Knowledge of scene safety and personal protective equipment requirements of pre-hospital medicine

Highly Desirable

- Successful current completion of Major Incident Medical Management and Support (MIMMS) or equivalent course.

Desirable

- Postgraduate qualifications in pre-hospital and retrieval or disaster medicine
- Relevant courses and qualifications
- Clinical experience (at least six months) in PHRM and/or disaster response/medicine

Limitations and Exceptional Circumstances

These recommendations apply to Australian and New Zealand medical practitioners responding to a sudden onset disaster in a pre-hospital setting or ED setting in Australia or New Zealand. Recommendations for medical practitioners responding in a military or Australian or New Zealand Medical Assistance Team (AUSMAT or NZMAT) capacity are outside the scope of this policy.

In some instances, the recommended staff types and skillsets described in this document will not be immediately available to meet the pre-hospital and emergency department demand for medical care. This is more likely to occur in catastrophic disasters, particularly in rural and regional environments. In these scenarios a decision may be made to use other, ideally local, health care professionals or volunteers in the ED and/or pre-hospital setting. These health care professionals should stand down and return to their usual work environment as soon as it is safe and appropriate to do so.

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