Victorian mass casualty burns plan

June 2006

Authorisation

The Victoria mass casualty burns plan (Burns Plan) has been developed as a specialist health sub plan of the State Health Emergency Response Plan (Short title: Health Displan Victoria).

The Minister for Health endorses this plan.

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Acronyms

ADF	Australian Defence Force
AHDMPC	Australian Health Disaster Management Policy Committee
ANZBA	Australian New Zealand Burns Association
BATT	Burns Assessment and Treatment Team
BLEVE	Boiling Liquid Expanding Vapour Explosion
DACC	Defence Aid to the Civilian Community
DHS	Department of Human Services
DoHA	Australian Government Department of Health and Ageing
DoI	Department of Infrastructure
DoJ	Department of Justice
ECC	Emergency Coordination Centre
EMA	Emergency Management Australia
EMMV	Emergency Management Manual Victoria
EMSB	Early Management of Severe Burns (training)
FEMC	Field Emergency Medical Coordinator
FEMO	Field Emergency Medical Officer
HSSC	Health Services Support Centre
IED	improvised explosive device
MAS	Metropolitan Ambulance Service
MeTS	Metropolitan Trauma Services
MTS	Major Trauma Services
MIMMS	Major Incident Medical Management and Support (training)
MPBV	Medical Practitioners Board of Victoria
NBV	Nurses Board of Victoria
PETS	Paediatric Emergency Transport Service
RAV	Rural Ambulance Victoria
RCH	Royal Children's Hospital
RIEMS	Request Incident Emergency Management System
SERC	State Emergency Response Coordinator
SHERP	State Health Emergency Response Plan
TBSA	Total Burn Surface Area
TTG	Trauma Triage Guidelines
VAERCS	Victorian Adult Emergency Retrieval Coordination Service
VicPol	Victoria Police
VMAT	Victorian Medical Assistance Team

Glossary

Term	Definition
Agency	An organisation or department contributing to the operation of the Burns Plan.
AUSBURNPLAN	National response plan for mass casualty burn incidents.
Burns Advisory & Treatment Team (BATT)	Visiting team of burns experienced staff who provide advice and necessary immediate treatment.
Burns Plan	Short title of the Victorian Mass Casualty Burns Plan.
Burn units	Specialist centres for the treatment of burns patients. In Victoria, these are located at The Alfred Hospital (adult) and The Royal Children's Hospital (paediatric).
Command	Directing an agency's human and material resources in the performance of its roles and tasks. *Command relates to agencies and operates vertically within an agency.*
Code Brown	Hospital recognised code for an external emergency.
Control	The overall direction of response activities in an emergency situation. Control acts horizontally across agencies, as it carries the responsibility for tasking other agencies.
Coordination	Bringing together agencies and elements to ensure effective response to the emergency. Systematic acquisition and application of resources (agencies, personnel and equipment).
Health Commander	The person responsible for directing the health emergency operations. In emergencies with an incident site, the Health Commander will be a senior ambulance manager. Otherwise, the appointment is made by the Department of Human Services.
Hospital Incident Controller	Person delegated by hospital executive to coordinate the hospital response to a burn (or other mass casualty) incident.
Major trauma	For the purposes of the Burns Plan, includes burns to greater than 20 per cent of total body surface area (TBSA) or suspected burns to the respiratory tract. (This is consistent with MAS and RAV Time Critical Guidelines).
Major Trauma Services (MTS)	Services providing the highest level of trauma care. In Victoria, these are located at The Royal Melbourne Hospital and The Alfred Hospital (adult) and The Royal Children's Hospital (paediatric).
Metropolitan Trauma Services (MeTS)	Second level of adult and paediatric major trauma services.
OSMASSCASPLAN	National response plan for mass casualty incidents involving Australians overseas.
Rural Trauma Services	These fit within a three-tiered structure: 1. Regional Trauma Services (RTS); 2. Urgent Care Services (UCS); 3. Primary Care Services (PCS).

Severe burn	For the purposes of the Burns Plan, this is a burn injury to more than 20 per cent of total body surface area (TBSA) in adults and children. Under AUSBURNPLAN, patients with burns to less than 20 per cent TBSA, who ordinarily would be managed in a tertiary burn centre, can also be considered for transfer to interstate specialist burn units. This will depend on the scale and scope of the disaster and the availability of resources. The Australian and New Zealand Burn Association (ANZBA) criteria for the referral of patients to specialised burn units are: • burns to greater than 10 per cent of TBSA • burns of special areas – face, hands, feet, genitalia, perineum, major joints • full-thickness burns to greater than 5 per cent of TBSA • electrical burns • chemical burns • burns with associated inhalational injury • circumferential burns of the limb or chest • burns in the very young or very old • burns in people with pre-existing medical disorders that could complicate management, prolong recovery or increase mortality • burns with associated trauma.
State Health Emergency Response Plan (Short title: Health Displan Victoria)	A sub plan of the Victorian State Emergency Response Plan. The Burns Plan is a specialist plan under Health Displan Victoria.
Triage	The process by which casualties are sorted, prioritised and distributed, according to their need for first aid, resuscitation, emergency transport and appropriate care.
Victorian Medical Assistance Team	A team of experienced doctors and nurses, usually sent from a hospital, who provide on-site assessment and emergency treatment of casualties prior to transfer. VMAT provides extended duration or advanced clinical care, for example, during emergencies where the number of casualties exceed the capacity of concurrent treatment and transport by ambulance services, or there are difficulties in accessing a casualty. High casualty numbers alone will not necessarily require a VMAT response. One member of each team is appointed medical team leader.

1. Introduction

Specific planning is required for some types of incident, including mass casualty burns. Such incidents offer particular challenges in providing optimal care to survivors.

Specialist burn units are a scarce resource. A statewide burns plan must therefore articulate how other local resources will be most effectively utilised, following a mass casualty incident. This will require hospitals without burn units managing, for a time, patients with severe burn injuries. Such a plan must also establish protocols for escalating the response, by harnessing appropriate assistance from interstate (specialist staff and transfer of patients to specialist units).

Pre-hospital care is also of vital importance. Mass casualty burns patients need to be resuscitated, triaged and transferred to the most appropriate hospital, according to the Trauma Triage Guidelines (TTG).[1] This requires effective communication and coordination between the Health Commander/Field Emergency Medical Officer (FEMO), the Field Emergency Medical Coordinator (FEMC), the Department of Human Services and all Hospital Incident Controllers (however titled).

1.2 Title

The plan shall be titled the *Victorian mass casualty burns plan* (short title: "Burns Plan").

1.3 Aims and objectives

The Burns Plan aims to provide a clear basis for the optimal care of burn survivors of a mass casualty incident, within existing Victorian state emergency management arrangements.

The main objective of the Burns Plan is to coordinate Victoria's response to a mass burn casualty incident. By coordinating the incident response and the distribution of burn casualties, both patients and health services will be appropriately supported.

1.4 Scope

The Burns Plan operates in support of Victorian, national or international mass casualty burns incidents.

The Burns Plan sets out the roles and responsibilities of the department, the Field Emergency Medical Coordinator and Hospital Incident Controller in responding to a mass casualty burns incident. All hospital emergency management plans should be consistent with the Burns Plan. The department is responsible for implementing, revising and updating this plan.

The Burns Plan also sets out the stages of a response and the activation triggers for each stage.

For roles and responsibilities at the incident site, refer to the State Health Emergency Response Plan ("Health Displan Victoria"). For roles and responsibilities during the recovery phase, refer to the State Emergency Recovery Arrangements.

1. Metropolitan and Regional Paediatric and Adult Major Trauma Triage Guidelines, Hospital Circular 29/2002.

1.5 Legislation and other key documents

The Burns Plan takes its authority from the *Emergency Management Act 1986*, and sits under the Minister for Health. Additional legislation and other key documents supporting the Burns Plan include:

- *Health Services Act 1988*
- Emergency Management Manual Victoria
- State Health Emergency Response Plan (Health Displan Victoria)[2]
- Metropolitan and Regional Paediatric and Adult Major Trauma Triage Guidelines
- MAS/RAV Time Critical Guidelines
- Individual hospital emergency plans (however titled)
- National Response Plan for Mass Burn Casualty Incidents (AUSBURNPLAN)
- Overseas Mass Casualty Plan (OSMASSCASPLAN)
- State Emergency Recovery Arrangements.

1.6 Plan testing and review

The Burns Plan will be tested and reviewed at least every other year. The governance of the Burns Plan is as for Health Displan Victoria (section 5).

2. Health Displan Victoria will be enacted on 1 December 2006, until this occurs Medical Displan Victorian (1997) remains operational.

2. Activation: underlying principles

Optimal care for severe burn injuries is delivered in specialist burn units. It is an underlying principle of the Burns Plan that severe burns patients will be stabilised and promptly transferred to specialist burn units for definitive care as soon as practicable.

The Burns Plan will be activated when an incident has occurred – or is imminent – and the number of burn casualties is (or is likely to be) beyond the normal capabilities of burn units to manage those patients.

Incidents potentially associated with mass casualty burn injuries include:

- improvised explosive devices (IED)
- boiling liquid expanding vapour explosion (BLEVE)
- fires - particularly involving mass gathering events.

The precise number of casualties that would activate the Burns Plan at any given time will vary. As a guide, an incident causing five or more severe burn casualties is likely to require activation of the Burns Plan.

The Burns Plan would also be activated when the department needs to coordinate assistance to other jurisdictions for a national burn response, under AUSBURNPLAN or OSMASSCASSPLAN.

Treatment capacity in burn units depends on current inpatient load, staffing levels and ventilator availability - circumstances that can only be known at the time of an incident.

3. Roles and responsibilities

3.1 Department of Human Services

The department will be responsible for:

- activating the Burns Plan
- coordinating all activities under the Burns Plan
- establishing an Emergency Coordination Centre (ECC). The ECC will be the central contact and coordination point in the department for information received from and proceeding to the incident site
- establishing a Health Services Support Centre (HSSC). The HSSC will monitor hospitals' capacity and manage requests for resources
- escalating the response
- facilitate recognition of clinicians credentials where interstate assistance has been formally sought
- providing advice to State government about engaging national resources. A request for interstate assistance is formally made through Victoria Police to Emergency Management Australia (EMA)
- coordinating assistance for a national or international mass casualty burns response (AUSBURNPLAN or OSMASSCASPLAN)
- reviewing and testing the Burns Plan
- coordinating interstate transfer of patients through the relevant referral services.

3.2 Field Emergency Medical Coordinator

The Field Emergency Medical Coordinator (FEMC) will be responsible for:

- receiving and accessing information provided by the Health Commander/Field Emergency Medical Officer (FEMO)
- liaising with the Major Trauma Services on-call Burns Consultant and Hospital Incident Controllers to determine appropriate hospital destinations for the injured
- activating Victorian Medical Assistance Team (VMAT)
- coordinating appropriate hospital destinations with the FEMO
- providing regular situation reports (SITREPS) to the department's Emergency Coordination Centre (ECC).

3.3 Hospital Incident Controller

The Hospital Incident Controller (however titled) will be responsible for:

- mobilising VMAT
- activating the hospital's emergency plan for receiving severe burn casualties
- liaising with the department's Health Services Support Centre (HSSC) and FEMO.

4. Response: stages of activation

The State Health Incident Commander will initially activate and manage the Burns Plan. Some stages may be activated concurrently, as the circumstances of the incident require.

The Burns Plan will be activated when an incident has occurred/is imminent and the number of burn casualties is (or is likely to be) beyond the normal capacity of the state burn units. Five or more severe burn casualties would probably require activation of the Burns Plan.

4.1 Alert

The alert stage will be activated when the department receives information about an incident, or impending incident, associated with mass casualty burn injuries.

The following actions will occur:

- liaison between the department and the FEMC.

4.2 Standby

The standby stage will be activated when the department receives information about an incident, or impending incident, which may require deployment of resources and personnel.

The following actions will occur as necessary:

- VMAT/s on standby
- FEMC to liaise with on-call Burns Consultant, The Alfred and/or RCH, regarding availability of experienced burns clinician/nurse to supplement VMAT
- FEMC to liaise with Hospital Incident Controllers of receiving hospitals regarding hospital bed availability/surge capacity (for escalation of response, see under 6. Hospital response, later in this document)
- Hospital Incident Controllers to consider activating Code Brown plans
- department to prepare for staffing of Emergency Coordination Centre (ECC) and Health Services Support Centre (HSSC)
- department to determine availability of beds in state burn units and/or resources that may be deployed for a national or international mass casualty burns response.

4.3 Initial response

The response stage will be activated when there is a need to deploy resources and personnel. The nature of the response will be determined by such factors as the magnitude and location of the incident.

The following actions will occur as necessary:

- deployment of VMAT team or teams as required, supplemented by burns-experienced clinician/s if desirable and practicable under the circumstances
- ECC activated
- HSSC activated. Additional supplies required for the management of burn casualties to be identified and obtained (information on RIEMS)
- creating surge capacity at receiving hospitals by:
  - discharging and/or transferring patients from receiving hospitals
  - cancelling elective surgery by receiving hospitals under hospital emergency plans, or as directed by the department
  - burn casualties from interstate or abroad (under AUSBURNPLAN and OSMASSCASPLAN, respectively) admitted to state burn units.

4.4 Ongoing management

The ongoing management stage will be activated when burn patients have been admitted to receiving hospitals for initial resuscitation and stabilisation. Redistribution of these patients within Victoria or interstate may then be required. As in the initial response stage, ongoing management will be determined by the magnitude and location of the incident.

The following actions will occur as necessary:

- patient redistribution between hospitals within Victoria, for definitive care
- burns specialist advice provided to hospitals without specialist burn units (using telephone, teleconferencing)
- locally-sourced visiting Burns Assessment & Treatment Team (BATT) to provide advice and immediately necessary treatment of burn patients admitted to hospitals without specialist burn units
- request for interstate assistance: burns staff for visiting BATT to provide advice and immediate necessary treatment of burn patients admitted to hospitals without specialist burn units, in accordance with Victoria's interstate transfer protocols
- interstate assistance sought: access to beds in interstate burn units
- transfer of patients to interstate burn units, using civilian air assets
- request for access to defence transport assets under civil response under Defence Aid to the Civilian Community (DACC) in accordance with relevant protocols.

4.5 Stand down

Stand down is activated when severe burn patients are being managed within the state burn units and the department is no longer required to coordinate resources across hospitals within Victoria. It will arrange a debriefing for all participating agencies within 48 hours.

5. Pre-hospital medical response

The State Health Emergency Response Plan (Health Displan Victoria) sets out the pre-hospital response to a mass casualty incident. The procedures, roles and responsibilities in Health Displan Victoria remain in place, and are supplemented where necessary in the Burns Plan.

Ambulance services are likely to require additional medical support in the field. One or more Victorian Medical Assistance Teams (VMAT) may be deployed. VMAT are activated under Health Displan Victoria.

At least one member of the VMAT deployed may be experienced in assessing and managing severe burn injuries. They may, for example, have completed Early Management of Severe Burns (EMSB) training. In the absence of a team member with such experience, the Field Emergency Medical Officer will liaise with the MTS on-call Burns Consultant. If practicable, the VMAT will be supplemented by an experienced burns clinician/nurse, with Major Incident Medical Management and Support (MIMMS) training, or equivalent.

Triage should follow standard major incident procedure, recognising that patients with severe burns may initially appear quite well. Care is required to ensure that such casualties are not triaged as 'walking wounded', leading to delayed treatment. In addition, there should be a raised awareness of delayed airway and breathing problems associated with inhalation injuries.

6. Hospital response

Hospital responses to a mass casualty burns incident will include, as appropriate:

- staffing of VMAT (if hospital so designated under Health Displan Victoria)
- supplementing VMAT with burns-experienced clinician/nurse when practicable (The Alfred and/or RCH)
- acting as a receiving hospital for severe burns patients. This may include any hospital designated to receive major trauma patients under the Metropolitan and Regional Paediatric and Adult Major Trauma Triage Guidelines
- secondary triage of burns patients
- managing patients with severe burns. Patients will be transferred to burn units in Victoria (and, when necessary, interstate) as soon as practicable.

Specific requirements for hospitals will depend on the magnitude and location of the incident. The escalation of response will be:

- admitting severe burn patients to state burn units and other MTS, creating surge capacity by activating hospital emergency management plans. Patient stabilisation may initially take place at another facility if the incident occurred in regional Victoria (in accordance with the Trauma Triage Guidelines), or interstate/abroad.
- admission of patients to Metropolitan Trauma Services (MeTS). Patient stabilisation may initially take place at another facility, if the incident occurred in regional Victoria (in accordance with the Trauma Triage Guidelines).

The following hospitals are designated MeTS **for both adult and paediatric patients:**

- Austin Health: Austin Hospital
- Eastern Health: Box Hill Hospital
- Southern Health: Monash Medical Centre, Clayton Campus; Dandenong Hospital
- Peninsula Health: Frankston Hospital
- Northern Health: The Northern Hospital.

The following hospitals are designated MeTS **for adult patients:**

- Eastern Health: Maroondah Hospital
- Sisters of Charity Health Service Melbourne: St. Vincent's Hospital
- Western Health, Western Hospital
- access to private hospital resources, as required.

Clinical management of severe burns patients should be according to Australian and New Zealand Burns Association (ANZBA) guidelines, in consultation with the on-call MTS Burns Consultant and/or the visiting Burns Advisory & Treatment Team (BATT).

6.1 Burns advisory and treatment team

It is an underlying principle of the Burns Plan that severe burns patients will be transferred for treatment in specialist burn units as soon as possible. When desirable and practicable, a visiting Burns Advisory and Treatment Team (BATT) will provide advice and immediately necessary treatment for patients. The BATT will consist of:

- a burns consultant
- a burns-experienced nurse.

BATT staff will be sourced locally or from interstate, as the circumstances allow. When a formal request has been made for interstate assistance, the department will facilitate mutual recognition of clinicians with the Medical Practitioners Board of Victoria (MPBV) and/or the Nurses Board of Victoria (NBV), as necessary.

7. Patient transport

7.1 Within Victoria

Primary emergency transport of burn patients will be organised according to the locality in which the incident takes place. Secondary transport within Victoria will be similarly organised, in consultation with the Victorian Adult Emergency Retrieval and Coordination Service (VAERCS) and the Paediatric Emergency Transport Service (PETS) as required.

7.2 Interstate

Secondary transport of patient's interstate will be coordinated by VAERCS and PETS, as required. Assistance from interstate aero-medical services may be sought.

Australian Defence Force (ADF) fixed wing and rotary wing assets may be utilised. The activation of a civil response under the Defence Aid to the Civilian Community (DACC) arrangement will be made by the State Emergency Response Coordinator (SERC), Victoria Police (VicPol), on behalf of the Chief Commissioner of Police.

8. Debrief and reporting

Individual agencies should conduct their own de-brief for the incident. The department will arrange a debrief for all participating agencies, as soon as possible after the incident.

The department is responsible for preparing a post incident medical report, to identify and resolve shortfalls in the State's response.