Australian Army

Land Warfare Doctrine

LWD 1-2

Health Support

2015

This publication supersedes Land Warfare Doctrine 1-2, Combat Health Support, 2009 and Land Warfare Procedures - General 1-2-1, Health Support, 2011.
Australian Army

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2015

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2 September 2015

Issued by command of the Chief of Army

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Colonel
Commandant
Army Logistic Training Centre
Contents

Preface

Aim

The aim of this publication is to provide the Australian Army with functional doctrine on health support to land operations.

Level

This publication aims to provide guidance to commanders and staff responsible for the planning and/or conduct of health support. It is a reference publication intended for use by the following:

• commanders and staff with health responsibilities,
• health elements,
• agencies involved in providing health support to land operations, and
• training institutions with a responsibility for teaching health support and operational planning.

Scope

This publication contains information concerning all aspects of the health support that is provided within the combat health operating system. It delivers integrated healthcare services to save lives, promote health and minimise the effects of wounds, injuries and disease on individuals, families and units.

The combat health operating system consists of the following five components:

• the land-based trauma system,
• the health training continuum,
• the force health protection system,
• the health knowledge system, and
• the health materiel system.

While this publication focuses primarily on land-based operations, it does so acknowledging that land operations will normally be part of a joint, coalition and/or interagency force. This publication describes the following:

• the nature of health support;
• health support organisation;
Contents

- health support effects;
- the roles of health support;
- health planning;
- health intelligence;
- employment on operations;
- reports, returns and documentation;
- health logistics;
- mental health support;
- veterinary support;
- interoperability; and
- the Geneva Conventions.
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Chapter 1

Health support

Introduction

_The soldiers' health must come before economy or any other consideration._

_Napoleon¹_

This publication provides application-level doctrine for the provision of health support (HS) to land operations. It describes the principles of HS and how its functions are managed and integrated to support operations.

Operational HS maintains combat power through minimising the effects of injury and disease.

HS is provided to combat forces, which include ADF military working dogs (MWD), within an area of operations (AO) as part of the wider continuum of HS provided within the ADF.

For HS to be effective, commanders must include health planners in operational planning and briefings at the earliest possible opportunity.

HS operates within the combat health operating system (CHOS). The CHOS is designed to deliver integrated healthcare services to save lives, promote health, and minimise the effects of wounds, injuries and disease on individuals, families and units. The CHOS (see Figure 1–1) consists of the following five components:

- the land-based trauma system;
- the health training continuum;
- the force health protection system;
- the health knowledge system; and
- the health materiel system.

---

HS contributes to combat power by ensuring that a land force is deployed at optimal fitness with adequate preventive health measures in place, and that appropriate treatment and evacuation capabilities exist to maximise the early return to duty (RTD) of casualties. High standards of deployed health care contribute to force morale and the willingness of individuals to perform.

Health elements (HE) are deployed as part of the personnel dimension of the CSS battlespace operating system. The HS capability is structured to support a range of operational activities, and wherever practicable is provided on a joint or combined basis to avoid the unnecessary duplication of capabilities.
Health threats

The deployed health capability is based on the health threat to the force, the line of effort being supported and the operating environment. Health threats can be categorised as follows:

- **Operational threats.** These are posed by warfare systems and conventional and non-conventional weapons. They arise from enemy action and are considered in the assessment of battle casualties (BC).

- **Environmental threats.** These are threats posed by the natural environment and include:
  - communicable, vector-borne and zoonotic diseases;
  - food- and water-borne diseases;
  - diseases, traumas or injuries caused by physical and mental unfitness; and
  - illnesses and injuries caused by extreme environmental conditions and industrial materials.

- **Occupational threats.** These are man-made threats posed by friendly warfare systems and equipment. They include accidental death or injury, radiation, heat, noise, excessive physical loads and effort, mental and physical exhaustion, disorientation, and isolation.

The HS capabilities available to commanders to reduce health threats include both prevention and treatment services. Preventive measures reduce operational, environmental and occupational health (EOH) threats.

Roles of health care

HS is organised into four roles. While these extend rearward throughout the AO to provide continuous care, casualties may be directly evacuated to the most appropriate health facility (HF).

The roles of health care (outlined in Chapter 4) are distributed on a progressive basis, from basic to specialist care. Each level, which is more sophisticated than the level below it, has prevention, treatment and evacuation components.

Health functions

HS comprises functional areas that prevent illness and injury, protect against health threats, and provide health care to deployed forces, including MWD.
Contents

Preventive health. Preventive health assists with the prevention of disease and non-battle injuries (DNBI), and mental health injuries. Preventive health sustains a force in all operational phases through a combination of occupational health, environmental health, public health, health promotion and fitness, and health information and surveillance.

Treatment. This encompasses first response, damage control resuscitation (DCR) and surgery, hospitalisation (including surgery) and specialist care.

Evacuation. This refers to the use of either surface or air assets to evacuate casualties from the point of injury (POI) to the most appropriate health care facility, as well as between HF.

Health logistics. Health logistics is the provision of medical supplies (such as dental and veterinary stores, pharmaceuticals; and blood and blood products), health materiel support; and support services. Mortuary affairs are not a health function.

Principles

Principles affect HS and are derived from operational experience, political and community expectations, and compliance with Australian and international laws and agreements.

Principles. The principles of HS, represented by the mnemonic CCCFMPP, are as follows:

- **Conformity.** Health plans must be integrated with the operational plan. They must also conform to the logistic plan and comply with the highest practical level of professional practice, standards and ethics, agreements, and relevant conventions of humanitarian law to which Australia is a signatory.
- **Continuity.** Triage, treatment and evacuation must be a continuous, integrated process until the casualty reaches a HF capable of providing definitive care. No casualty should be evacuated further than their condition requires or the operational situation warrants.
- **Control.** HS is a complex and highly specialised service. C2 of HS must be exercised at the highest level possible by experts versed in both medical care and the mental and physical aspects of operations.
- **Flexibility.** Health support plans (HSP) must enable an immediate response to changing tactical situations. HE must be capable of rapid regrouping or restructuring to meet specific operational requirements. HSP must consider redundancy where possible.
• Mobility and protection. HE require compatible mobility and protection, complemented by appropriate communications, in order to maintain contact with supported forces.

• Proximity. HS must be provided as soon as possible to reduce morbidity and mortality. HS resources must be located as close to the battlespace as the tactical situation allows, to enable the rapid clearance of casualties and the provision of resuscitative treatment as far forward as possible.

• Prevention. Measures designed to promote physical and mental resilience significantly conserve personnel strength. These include training, appropriate health protection measures, ongoing health care, health surveillance and health advice. The health plan is informed by HLTHINT (health intelligence) and reconnaissance.

Geneva Law and the law of armed conflict. Australian ratification of the Geneva conventions and protocols places obligations on the way the ADF provides HS. Geneva law is covered in the law of armed conflict (LOAC). All ADF members are responsible for ensuring that their conduct complies with the LOAC. This obligation is not conditional upon an enemy’s compliance, and unilateral compliance is required of ADF members (see Chapter 13).

Care expectations

When ADF personnel are injured or become ill, there is an expectation that they will receive prompt and effective health care. Deployable health care must meet contemporary professional Australian standards, other than when the exigencies of military operations dictate.

Providers. Civilian medical-legal requirements and clinical governance restrict who can provide definitive health care. They specify the minimum qualifications and experience health care providers must have.

Standards of care. High-quality health care is important for the morale and confidence of troops, as well as acting as a public statement of assurance to soldiers’ families, the general public and the international community.

Continuity of care. HS must be able to provide continuity of care in all operating environments. It should progress throughout the treatment process, supported by the provision of in-transit care during evacuation.

Balance. Commanders must balance the highest clinical standards possible against the constraints of the operational environment.

Health confidentiality. Health information must not be communicated to any individual or organisation that does not have a need to know. Health confidentiality is managed in accordance with the Privacy Act 1988 and Health Directive 610, Privacy of Health Information of Defence Members and Defence Candidates.
Time imperative (10-1-2 metric)
The primary determinant of all HS planning is time. The 10-1-2 time metric (see Table 1–1) is a planning guide only. It helps determine the structure of the joint trauma system on operations, including the location of HF and evacuation assets.

Table 1–1: 10-1-2 metric

<table>
<thead>
<tr>
<th>Time imperative</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 minutes from time of injury</td>
<td>Control major bleeding and airway within 10 minutes of injury.</td>
</tr>
<tr>
<td>1 hour from time of injury</td>
<td>Advanced resuscitative care within 1 hour of injury, provided en route or in a HF.</td>
</tr>
<tr>
<td>2 hours from time of injury</td>
<td>A minimum of DCS surgery is to be achieved within 2 hours of injury.</td>
</tr>
</tbody>
</table>

There are also psychological time imperatives dictated by policy (eg, suicide risk assessment within 24 hours; critical incident mental health support [CIMHS] response at or after 24 hours but no later than seven days post-incident).

Casualties
HE are deployed to support the population at risk as defined in the OPORD. They may also be tasked with providing health care to civilians or to military personnel from other nations. This may take the form of a primary task, a secondary task, or lifesaving care in emergency situations.

The medical rules of engagement (MEDROE) must clearly state the eligibility and standard of treatment for the following:

- Australian citizens in an AO, who are generally limited to treatment of a minor nature if there is no other option for that care;
- foreign military personnel, as authorised through allied or enemy agreements;
- third country nationals who may be supporting the operation, such as labourers, contractors, and private military and security company personnel who may be entitled to health care; and
- host nation (HN) citizens, with consideration given to HN treatment standards and the subsequent requirements for follow-up or longer term treatment.

Casualty definitions are provided in Annex A.
Triage

Triage is the process for sorting casualties based on their need for treatment. It is a clinical process, performed by health personnel to prioritise casualties for either treatment or evacuation based on the total casualty and patient load in a facility. The priority may vary throughout the evacuation process, and may change while the casualty is at a single point in the evacuation chain. Triage priorities are described in Annex B to Chapter 3.

Triage is usually performed in an open area where all casualties can be arranged for rapid review by the triage officer. The need to regularly review triage decisions, based on the progress of all patients waiting for care, dictates that this area should be sited near the resuscitation area.

Two triage situations can occur, as follows:

- Where the number of patients and the severity of their injuries do not exceed HS resources, those with life-threatening problems and those sustaining multiple-system injuries are treated first.
- Where the number of patients and the severity of their injuries exceed HS resources, such as during a mass casualty (MASCAS) event, patients with the greatest chance of survival with the least expenditure of time, equipment, supplies and personnel are managed first.

Mass casualty situations

In a MASCAS scenario the number of casualties waiting for treatment exceeds the capacity of the HE. This is similar to a defended position being overrun and requires action outside the direct control of the HE.

The promulgation of a MASCAS is a clinical decision that should be made by the senior medical officer (SMO) on notification from the HF operations cell.

The HF operations cell should initiate the unit MASCAS plan. This should be developed at all levels within an AO. Unit SOP will dictate the specific details for particular HS units.

There is no defined number of casualties that automatically leads to declaration of a MASCAS. The factors that contribute to a MASCAS situation at a specific time and place are as follows:

- the number and type of casualties;
- the skill and number of healthcare workers available;
- the number of inpatients in the facility;
- the capabilities of the HF/treatment assets; and
- the availability of evacuation platforms.
Key appointments
The key appointments within a MASCAS situation are as follows:
• the CO;
• the casualty regulator, who is the SMO; and
• the triage officer, who is the senior clinician within the HF.

Triage
This process is further discussed in Annex B to Chapter 3.

Annex:
A. Casuality definitions
Annex A to Chapter 1

Casualty definitions

All casualties have equal status and importance. At an individual level, priority is based on clinical need rather than operational importance. Commanders allocate priorities to elements of the force when health resources are limited.

Casualties. Casualties are treated in accordance with their clinical needs. They may include enemy forces and noncombatants. Operational, environmental or occupational threats can cause casualties, who can be categorised as follows:

- **Battle casualty.** BC are personnel who are killed, wounded, missing or captured as a direct result of action against the enemy. BC estimates are expressed as a daily percentage rate of the combat troops and are the result of a command-led, health-informed analysis. The operations staff is responsible for determining ADF BC rates. The intelligence staff is responsible for determining enemy BC rates.

- **Casualties with disease and non-battle injuries.** DNBI are personnel losses not directly attributable to being in action. DNBI include the sick or diseased, accidentally injured and non-battle missing, and mental health injuries. DNBI are influenced by the environment and epidemiology of the AO and the state of preparedness of forces. DNBI are expressed as a daily percentage rate and are an indicator of the daily workload for the deployed HE. The health staff is responsible for estimating DNBI based on historical evidence, environmental assessment and knowledge of the occupational risks. The distribution of wounded depends on the type of operation.

- **Mass casualties.** A MASCAS situation arises when the number of casualties requiring care is greater than the evacuation and/or treatment capability and/or capacity available.
Chapter 2

Organisation

Introduction

The medical service is neither autonomous nor independent – it exists to serve the rest of the Army and must conform with, and subordinate itself to, the general plans of the Army.1

This chapter describes the modular health capabilities, task groupings, generic organisational structures and C2 of deployable HE. The HSP and OPORD will specify the HS organisation for a particular operation. Figure 2–1 illustrates the general structure of the Army’s HS capability.

HE must be able to support many small teams in complex environments. They must be able to surge to meet tactical requirements while retaining the ability to concurrently support multiple lines of effort in an adaptive campaign. Casualty loads will be diverse and may be resource-intensive, including DNBI, BC, psychological casualties (PSYCAS), CBRN and humanitarian assistance (HA). HS must be protected, equipped and structured to carry out the following:

• support task-organised forces on varied lines of effort and tactical actions;
• provide HS and non-HS health capabilities such as obstetrics and paediatrics; and

Health teams

HS capability is based on commonly staffed and equipped health teams that can be task-organised to fulfil the requirements of specific operational probabilities. Health teams are described in Annex A.

Health structures

The deployed health capability can vary in size and composition. It is based on the size and nature of the force supported; the health threat; the environment; and the nature of the operation. There are four main HE within the Australian Army.

1st Close Health Battalion

1 CHB (see Figure 2–2) consists of integral and close health personnel centralised under close health companies (CHC). 1 CHB is under command of 17 CSS. Its roles are described in Chapter 4.

The key capabilities provided by 1 CHB are as follows:

- deployable close health platoons to provide integral HS for up to three battlegroups (BG), and augmented by other deployable health capabilities such as a surgical team, preventive medicine, mental health, diagnostics, aeromedical evacuation (AME) and rehabilitation;
- an AME capability comprising four AME teams;
- a deployable unit Role 2 Enhanced (R2E) HQ;
- a surface evacuation capability to allow Role 1 (R1) to Role 2 (R2) health unit patient transfer;
- CHC HQ capable of providing casualty clearance, tracking, health planning and augmentation of task force (TF) HQ;
- centralised management of HS within raise, train, sustain and augmentation functions of general HS;
- the provision of medical technicians (MED TECH) to platoon level for each RAINF line unit as well as additional MED TECH for other HS and HS support units within manoeuvre and non-manoeuvre units; and
- physical training instructors to support soldier rehabilitation units.
2nd General Health Battalion

2 GHB is a fully scalable and flexible capability that has the ability to design an R2E around the casualty estimate. An example of the sizes of Role 2 Light Manoeuvre (R2LM) and R2E are shown in Figure 2–3). Table 2–1 illustrates how this organisation can be scaled.

Figure 2–3: 2nd General Health Battalion structure

The key capabilities of 2 GHB are as follows:

- two surgical companies that provide the main deployable clinical capability, being independently deployable entities capable of forming a discrete small ‘hospital’ (see Table 2–1);
- a surgical company that mirrors clinical services in a hospital to manage complex trauma cases as well as routine sick and non-surgical medical cases;
a surgical company capable of two site operations of short duration during a 'step up' (the element projected forward will provide limited surgical capability);

a shock trauma platoon (STP) capable of deploying forward into the close HS base to provide:

• sections to reinforce the close health platoons;
• a freestanding and non-surgical resuscitation facility between R1 and R2E; and
• an R2LM surgical facility with a short-term capability and capacity (supplemented by specialist surgical staff);

Army’s preventive medicine assets centralised into two platoons and a hazard assessment team (HAT) under the preventive medicine company; and

• a dental company able to provide up to five deployable teams.
Table 2–1: 2nd General Health Battalion scalability matrix

<table>
<thead>
<tr>
<th></th>
<th>Resuscitation</th>
<th>Operating theatre</th>
<th>Recovery</th>
<th>Intensive care unit</th>
<th>Ward</th>
<th>Evacuation</th>
<th>Initial operating capability</th>
<th>Size (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>STT</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>90 min</td>
<td>50 x 50</td>
</tr>
<tr>
<td>STP</td>
<td>3</td>
<td>-</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>-</td>
<td>90 min</td>
<td>100 x 100</td>
</tr>
<tr>
<td>STP + LST</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>-</td>
<td>90 min</td>
<td>100 x 100</td>
</tr>
<tr>
<td>R2E Small</td>
<td>2</td>
<td>1</td>
<td>-</td>
<td>2</td>
<td>15</td>
<td>3</td>
<td>48 hr</td>
<td>200 x 200</td>
</tr>
<tr>
<td>R2E Medium</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>30</td>
<td>6</td>
<td>72 hr</td>
<td>300 x 300</td>
</tr>
<tr>
<td>R2E Large</td>
<td>4</td>
<td>4</td>
<td>8</td>
<td>6</td>
<td>60</td>
<td>6</td>
<td>72 hr</td>
<td>500 x 500</td>
</tr>
</tbody>
</table>
3rd Health Support Battalion

This organisation (see Figure 2–4) provides C2 and management of ARes health specialists who support the deployed health capability. Its key capabilities are as follows:

- recruitment, development and nurturing of ARes health professionals capable of augmenting other deployable health capabilities (including rehabilitation and surgical capabilities for close and general health battalions) to provide an enhanced HS effect;
- an expanded regional presence to attract and retain ARes health professionals; and
- lead ‘high end’ clinical health mission-specific training for Army.

Under Plan BEERSHEBA the health support battalion (HSB) will be realigned. This development is laid out in Figure 2–5.
1st Psychology Unit

1 Psych Unit is a fully integrated ARA and ARes organisation (see Figure 2–6). Its key capabilities are as follows:

- a deployable AAPsych capability to provide task-specific psychology support teams (PsST) which may be through augmentation of close and general health battalions;
- centralised management of all operational mental health capability within the raise, train, sustain and augmentation functions of the general HS mental health and psychology sections;
- dedicated specialist capability development and operational analysis; and
- standardisation of mission-specific training for all deployable PsST.

Figure 2–5: Plan BEERSHEBA – alignment of health brigades
Support requirements

HE (see Figure 2–7) deploy with integral mobility and internal communications. Other than the HSB, HE are not self-sustainable. They require support from the supported force, including:

- **Linguist support.** The HE may deploy with attached ADF linguists or vetted locally employed civilians or civilian contractors to provide interpreter or translator support.

- **Health support service support.** The HE requires CSS from the supported force, as described in Chapter 10.

- **Protection.** Depending on the threat level within the AO, additional protection for HE may be required from the supported force.

- **Communications support.** This requires voice and information systems and adequate bandwidth, particularly for the transmission of imagery and telemedicine.

- **Sustainability support.** Sustainability support is required to provide more permanent HF and to reduce the burden on the health and logistics systems.
Figure 2–7: Medic providing humanitarian care in Banda Aceh, Indonesia, with interpreter support

**Medical specialists.** Operational and/or environmental considerations may warrant the deployment of medical specialists.

**Veterinary support.** Operational and/or environmental considerations may require the deployment of a veterinary officer (VO)/veterinary team (VT).
Support responsibilities

Health structures are assigned support responsibilities under a range of C2 options. These support categories are as follows:

- **Integral health support.** This support is organic to land force elements (FE). Personnel are responsible for providing R1 support, which includes first response and primary health care.

- **Close health support.** Close HS is available within land force formations and is additional to, and builds upon, that provided within FE. In addition to providing R1 support to the parent unit, close HS provides R2 health care to the formation. The HF is equipped with treatment capabilities that can include basic laboratory, basic imaging and pharmacy. The focus is on resuscitation, sustaining care, stabilisation and evacuation.

- **General health support.** This is support that may not be provided routinely at the FE or formation level, but which needs to be available to a deployed force. It can be either deployed forward when required (eg, to manage an unexpected casualty surge) or provided from the force support area. The HS capabilities provided are R2LM and R2E.

- **Mounting and non-deployable health support.** Mounting support is the Role 3 (R3) and Role 4 (R4) health care provided from the national or international support base and is more permanent in nature. It includes military and civilian HF in the national support base (NSB) as well as coalition facilities outside the AO.

Command and control

**Command.** C2 and health accountability must be clearly established in OPORD. The preferred C2 arrangement is for all HF to be deployed under a single health commander to maximise the clinical effects of scarce resources. Where this is not possible, C2 arrangements must specify health governance and technical control arrangements.

**Joint health command.** Commander Joint Health commands Joint Health Command (JHC) and is responsible for generating and sustaining garrison HS. The interdependent nature of garrison HS and deployed HS requires consultation between JHC and HQJOC.

**Technical control.** Technical control is the provision of specialist and technical advice. The Surgeon General Australian Defence Force (SGADF) exercises technical control over health services, both in garrison and on deployment. SGADF provides strategic health policy, strategic health advice, health research
and clinical governance. SGADF nominates health technical authorities, who are clinical or professional experts responsible for advising SGADF and ensuring a nationally consistent Defence approach to issues within their area of expertise.

**J07 Headquarters Joint Operations Command.** The J07/Director Health at HQJOC is responsible for technical control of HS to operations.

**Responsibilities.** Health is a command responsibility and requires active participation and support from all ADF members, from the individual to the highest level of command. Commanders have direct influence over factors that determine HS. They must consider the health risks of operational and tactical plans, including the impact of casualties and how they are to be treated and evacuated.

**Health commander.** The joint task force (JTF) health commander, supported by a joint health staff, has technical control of all clinical capabilities within the AO.

**Health element commander.** HE are deployed under operational command of the JTF commander, who ensures that HS is delivered rapidly, effectively and efficiently without interfering with the force mission. Their responsibilities include:

- commanding and coordinating their assigned HS resources;
- implementing the operational HSP and developing tactical HSP in support of tactical actions;
- controlling casualty/patient management within the nominated dependency;
- controlling the reception, storage and distribution of medical supplies within the nominated dependency;
- controlling the maintenance of medical materiel within the nominated dependency;
- controlling health prevention activities within the nominated dependency;
- training HS personnel; and
- HS liaison commensurate with the level of command and established liaison protocols.

**Health staff.** The health staff, which includes specialists, supports a formation HQ and is responsible for the following:

- providing health advice and support to the formation commander and other staff branches;
- planning and coordinating HS in consultation with the personnel, operations and logistics staff;
- preparing and monitoring the implementation of the HSP;
• assisting the personnel, operations and intelligence staff in preparing BC and DNBI casualty estimates and statistics;
• exercising technical control over the provision of HS in the AO;
• providing casualty regulation (CASREG) within the AO;
• liaison regarding evacuation, including:
  • coordinating air and ground evacuation, and
  • ensuring that road clearance information is passed to ground ambulance assets;
• monitoring HS strengths and the allocation of medical resources;
• forwarding health information and intelligence to the intelligence staff;
• obtaining updated health threat and intelligence information from the intelligence staff; and
• managing the disposal of captured medical materials.

**Health threat assessment.** A health threat platoon or a HAT is deployed to conduct a detailed health threat assessment of environmental and occupational hazards, including the analysis of animal, vector and waterborne diseases. It assesses local health infrastructure, sanitary conditions and local diseases. The assessment is the basis for health preparation of the deploying force, in-theatre prevention and treatment activities and post-deployment health care, and to meet the requirements of the Department of Veterans’ Affairs.

**Veterinary.** VO provide capabilities that can be deployed in the following roles:
• *Joint land combat and population protection.* VO maintain the health and welfare of MWD and support force preservation through contributions to preventive medicine.
• *Population support.* VO can directly provide veterinary care to the animals of communities affected by conflict or natural disaster.
• *Indigenous capacity building.* Veterinary capability can be delivered through cooperative veterinary engagement with HN veterinary and agricultural personnel, services and organisations.
• *Information operations.* Positive veterinary contributions to animal disease/livestock production and welfare can shape the perceptions, attitudes and understanding of target population groups.

**Other staff.** The health-related responsibilities of the staff are described in Annex A.
Medical liaison

The primary responsibility of medical liaison is to maintain the flow of health information and coordinate efforts across the lines of effort. The general duties of an LO are set out in LWD 5-1-4, *The Military Appreciation Process*. While the detailed duties of a medical LO will be mission-specific, their broad responsibilities are as follows:

- to ensure the flow of health information and intelligence;
- to manage patients and the transfer of clinical data between the sending and receiving organisations;
- to ensure the effectiveness and continuity of treatment and evacuation; and
- to integrate casevac and ensure best use of casevac assets.

Medical liaison can be performed as follows:

- **Specialist medical liaison officers.** Specialist medical LO may be provided by whole-of-government, joint, civilian or allied forces and JHC capabilities. These LO are responsive to the supported HQ but are not under command.
- **Normal duties.** Health liaison is performed by all health staff to facilitate the flow of information. Liaison is established with flanking units, allies, local hospitals and non-government organisations (NGO).
- **Embedded health officers.** Army health officers may be placed in civilian hospitals, allied force HQ or civilian organisations. While not dedicated LO, they provide a link with other organisations to maintain situational awareness of Australian casualty and patient information.

An example of liaison is the attachment of an LO to Emergency Management Australia during Operation VIC FIRE ASSIST (2009). The LO was responsible for advising Emergency Management Australia on Defence capabilities and notifying JOC of potential tasks. Tasks included providing a forensic dentist, equipment for the coroner's office and a HAT.

Annex:

A. Health teams
Annex A to Chapter 2

Health teams

Health teams are described in Table 2–2.

<table>
<thead>
<tr>
<th>Team Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resus team:</td>
<td>Capable of resuscitating up to 10 high-priority casualties in a 24-hour period to a dependency of 250 pers. The 2 GHB Resus team has a secondary role to provide primary health care to 1000 pers or assist in the care of inpatients. 1 x Tricon(1) per team.</td>
</tr>
<tr>
<td>Surgical team:</td>
<td>Can operate on up to 10 pers in a 24-hour period. Deploys with sufficient supplies for 15 procedures, then requires resupply to maintain surgery. Requires a CSSD, Recovery, an ICU and availability of blood products. 3 x Tricon per team. CSSD has 1 x Tricon(1) + 2 x pallets, 3 pers.</td>
</tr>
<tr>
<td>Recovery beds:</td>
<td>To recover non-critical care postoperative patients. Provide care for 10 x pers per 24 hours. Will usually deploy with an R2E(L) or R2E(M).</td>
</tr>
<tr>
<td>Intensive care team:</td>
<td>Employed with a surgical team. Provide inpatient care for 2 x critically ill patients (ventilated and non-ventilated) simultaneously IAW holding policy directed in the HSP. 1 x Tricon(1) per team.</td>
</tr>
</tbody>
</table>
## Health Support

<table>
<thead>
<tr>
<th>Ward beds: 15 x beds per ward 4 x wards per R2E(L) Ward = 8 x pers</th>
<th>Provides inpatient care for up to 15 pers simultaneously IAW with holding policy directed in HSP. Secondary role to provide isolation ward. 1 x Tricon(1) per ward.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pathology</strong> 1 x scientist per dedicated resus bed. Primary role to support OT and ICU. Manage blood products. Provide stat lab testing. 1 x Tricon(1) per scientist.</td>
<td></td>
</tr>
<tr>
<td><strong>Imaging team:</strong> 3 x pers per R2E(L) Provide X-ray with contrast if required. Ultrasound to support primary health, trauma and hospital patients. Radiation advice to commanders. 1 x Tricon(1) per team.</td>
<td></td>
</tr>
<tr>
<td><strong>Pharmacy team</strong> 2 x pharmacists, 1 x OPSUP 298. Provides 21 x DOS of Class 8 to supported dependency. Secondary role is to provide over-the-counter and dispensing capability. Manage Class 8 cold chain from agreed point to support dependencies. 1 x 20 ft reefer. 1 x Tricon(1).</td>
<td></td>
</tr>
<tr>
<td><strong>Rehab/physio team:</strong> 2 x teams per R2E(L) 1 x physio, 1 x PTI per team. Each team is able to treat a PAR of approx 2500 x pers. A team is able to provide inpatient, outpatient and rehab treatments as required. 1 x Tricon(1) per team.</td>
<td></td>
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</tbody>
</table>
### Ground evac team:
- **Teams:** 3 x teams per R2E(L)
- **Team size:** 2 pers
- **Functions:**
  - Surface transport of casualty rearward.
  - Provide ongoing casualty care during evac process.
  - Hand over casualty to the triage officer at destination HF.
  - 3 x ambulances with SCES per surgical company.

### Dental team:
- **Teams:**
  - 2 x teams per R2E(L)
  - 1 x team per BSP
- **Team size:** 2 to 3 pers
- **Functions:**
  - Support a dependency of 1000 pers.
  - Provide routine dental treatment, including emergency and preventive treatment.
  - Can conduct annual dental examinations if dental records are available.
  - Can assist in disaster victim identification.
  - 1 x Tricon\(^{(1)}\) per team.

### Mental health team:
- **Teams:** 2 x teams per R2E(L)
- **Team composition:**
  - Task-driven composition.
  - The team consists of 1 x psychologist and 1 x examiner.
  - Can support up to 750 troops.
  - Can conduct up to 16 mental health screens per day with a work ratio of 3 days screen: 1 day admin.
  - CIMHS.
  - Individual psychological assessment and counselling.
  - Training support and human factors advice.
  - Advise commander on mental health issues.
### Contents

<table>
<thead>
<tr>
<th><strong>HAT:</strong> Team = 4 to 16 pers</th>
<th>Provides force health threat assessments, disease outbreak investigation, and an environmental laboratory. Provides specialist chemical, entomological, epidemiological, medical, microbiological, parasitological, public health, radiological and scientific support. The HAT is configured depending on occupational and environmental health threats and force disposition. 2 x Unimog, 1 x hard shelter.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>EOH section:</strong> 5 x sections 3 x teams per section Team = 3 pers Team = 1 x G-wagon + trailer</th>
<th>Supports a BG-size AO or a force maintenance area. 1 x EOH team provides close support to a CT or BG. 1 x EOH section provides close and general support to a BG or Bde. Provides advice, evaluation, and control of EOH threats to mitigate manpower wastage. The EOH section is configured depending on occupational and environmental health threats and force disposition. An EOH is self-deployable and comes with 7 DOS.</th>
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</table>

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<tr>
<th><strong>STT:</strong> 2 x resus beds 1 x critical care bed (6 hours) Team = 12 pers Team = 2 x Unimogs</th>
<th>1 x STT provides close support to a CT or BG. Provides advanced resus beyond the ‘golden’ hour. A light self-deployable specialist trauma team. Equipped for 18 high-priority trauma casualties. Provides 24-hour support up to 72 hours for 18 casualties before resupply and rest. Air transportable = 2 x large pallets.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STP:</strong></td>
<td>Consists of a C2 element and 3 x STT. Can be deployed individually or joined to provide with the LST to form an R2LM. Can be tailored to provide the required clinical effect to land, amphibious or SF operations.</td>
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<tr>
<td>1 x HQ = 3 pers</td>
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</tr>
<tr>
<td>1 x G-wagon FFR + trailer</td>
<td></td>
</tr>
<tr>
<td>3 x STT</td>
<td></td>
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<tr>
<td>1 x LST</td>
<td></td>
</tr>
<tr>
<td><strong>LST:</strong></td>
<td>Combines with an STP to provide DCS to a CT or BG. Equipped for 6 x surgical trauma casualties. An integrated part of the STP which provides it with Manning and equipment and cannot be deployed independently. Air transportable = 1 to 2 x large pallets.</td>
</tr>
<tr>
<td>Team = 4 to 7 pers</td>
<td></td>
</tr>
<tr>
<td>1 x Unimog</td>
<td></td>
</tr>
<tr>
<td>1 x G-wagon</td>
<td></td>
</tr>
<tr>
<td><strong>VT</strong></td>
<td>One VT can provide sustained veterinary support for a dependency of up to 10 MWD teams in the deployed environment. Support to CIMIC and environmental health outcomes, including control programs for stray and feral animals. Training of health pers in emergency care of injured MWD.</td>
</tr>
</tbody>
</table>

**Note:**
1. All Tricon estimates exclude tentage.
Chapter 3

Health effects

In my own case, on the battlefield in Korea – November 1952 – I was wounded leading a 12-man infantry patrol to capture an enemy-held outpost. As a consequence I rapidly became interested in war surgery and casualty evacuation.

MAJGEN WB James, ‘Casualty evacuation – looking back’

Prevention

Preventive health is the public health effort of the ADF to protect and promote the health of its personnel. It focuses on minimising DNBI and the impact of health threats, particularly in relation to communicable diseases and injuries. Preventive health requires a planned and integrated approach to maximise the effectiveness of health countermeasures.

Components of preventive health

The components of preventive health are individual health standards, occupational health, environmental health, health promotion and fitness, and health information and surveillance.

Individual health standards. Casualty prevention is underpinned by individual health standards that ensure that ADF personnel maintain a level of health and physical fitness appropriate for operational duties. Physical conditioning, immunisation, prophylaxis and the application of specific health countermeasures can significantly reduce the incidence of DNBI.

Occupational health. Occupational health activities prevent and control occupational illness and injury through the identification of occupational threats and the implementation of countermeasures. Occupational health activities are the basis for HLTINT input into the planning process for current and future operations.

Environmental health. Environmental health activities prevent and control injury or illness caused by the environmental conditions and surroundings of the AO. Environmental HE assist with the prevention and control of communicable diseases and vectors; and develop environmental countermeasures to minimise health threats.

Health promotion and fitness. Health promotion strategies support physical health, mental wellbeing and the early detection of health risk factors. Health promotion and fitness activities include:

- routine medical and dental examinations;
- the provision of appropriate vaccinations, immunisations and prophylaxis;
- regular physical activity under the supervision of physical training instructors or HS fitness leaders;
- mental health services to promote psychological wellbeing, including self-management and resilience training; and
- the provision of health information and education.

Health information and surveillance. Health information is the collection of health data concerning disease, health infrastructure and environmental conditions. Health surveillance is the process of monitoring the incidence of wounding, injury and illness among deployed personnel with a view to casualty prevention.

Preventive medicine process

The preventive medicine process consists of the detection, assessment and control of health threats, the protection of personnel, and the management of casualty prevention.

Detection and assessment. The rapid identification and minimisation of health threats is central to reducing casualties and maximising operational effectiveness. Preventive medicine personnel should be deployed as part of both the reconnaissance mission and the advance party.

Health threat assessment. A HAT is a specialist capability drawn from the platoons within a preventive medicine company. The HAT may deploy for short durations as a standalone team, or as part of an environmental occupational health (EOH) section. It provides assessment to support the force during the insertion; reception, staging, and onward integration, or extraction phases (baseline and closure surveys). It is a short-term deployable option, capable of monitoring changing threats and hazards within the AO that may be used on enduring operations to reinforce deployed EOH personnel and force health protection. (eg, due to relocation, new capabilities or activities, disease, or environmental impacts). The health threat assessment considers the following:

- diseases endemic to the AO;
• the health status of enemy forces or the HN population, likely enemy casualties or the disease profile of the HN population;
• the status, location and capability of enemy or HN medical infrastructure;
• health threats posed by enemy weapon technologies and the potential interface with evacuation;
• enemy compliance with the LOAC and Geneva Conventions;
• projected environmental conditions and factors associated with urban, tropical, cold and desert AO;
• occupational, environmental and operational threats;
• CBRN and industrial environments (eg, toxic industrial chemicals and environmental industrial hazards);
• battle injuries and HS stress;
• own force disease and injury estimates, including likely locations, time frames, density and casualty types; and
• potential lines of effort to be supported.

Control and health threats. Force health protection is everyone’s responsibility. The implementation, maintenance, and reinforcement of individual and collective preventive health efforts are the responsibility of commanders during all phases of an operation. Deployed environmental health officers and preventive medicine technicians support commanders by providing EOH specialist advice and recommendations, which are critical to force health protection. The deployment and employment of EOH early into the AO, during the reconnaissance, insertion, and reception, staging and onward integration phases will mitigate the loss of personnel through DNBI.

Protection of personnel. Comprehensive vaccination programs, preventive dentistry, mental health promotions, improved disease prophylaxis, effective health threat detection, improved health threat controls and better personal protection aid in the protection of the deployed force.

Health surveillance. Real-time health threat monitoring, sensors, integrated individual and collective protection systems, vaccination tracking, and automated health surveillance systems enhance prevention. Health surveillance is described in Chapter 6.

Preventive medicine responsibilities
Preventive medicine activities such as reducing exposure to disease and environmental hazards enhance unit effectiveness.
Commanders. All commanders are responsible for the health of their subordinates and should ensure that preventive health programs are implemented. This may involve the following:

- ensuring that troops understand and comply with orders and instructions issued for the protection of their health;
- monitoring the health of troops and ensuring that routine hygiene and sanitation duties are performed; and
- ensuring that all subordinate commanders are aware of the methods of minimising, recognising and treating DNBI.

Preventive medicine support operators. FE may be provided with preventive medical support operators who assist commanders with preventive medicine tasks. For example, on both military and humanitarian operations, operators may be tasked with fogging (see Figure 3–1) to prevent the spread of insect-borne communicable disease.

Figure 3–1: Fogging at a camp during Operation PHILIPPINES ASSIST 2013

Preventive medicine assets. EOH sections are responsible for the following:

- providing advice to commanders on measures to reduce non-effectiveness from sickness and injury;
• controlling animal-borne diseases, including technical consultation, entomological surveillance and the reinforcement of unit pest control capabilities;
• controlling waterborne diseases, including monitoring water quality, the surveillance of water purification facilities, and technical consultation in treating water;
• controlling food-borne diseases, including the surveillance of food sources, kitchens, ice and dining facilities;
• de-infestation procedures for ships, aircraft, vehicles and backloaded cargo and equipment;
• controlling excessive occupational exposures to hazards such as ionising and non-ionising radiation, toxic gases, noise, and environmental and climatic extremes;
• identifying and investigating disease outbreaks and advising on appropriate measures to prevent recurrences;
• educating personnel in appropriate hygiene practices and the training of unit sanitation teams;
• technical consultation concerning the selection and development of camp sites and captured persons (CPERS) holding areas and camps; and
• health surveillance to detect and identify actual or potential health hazards and to formulate suitable means for minimising their effects.

Other force elements. The preventive health responsibilities of FE include:

• Engineers. Engineers are responsible for providing potable water, implementing some pest control measures and providing collective field sanitation facilities.

• Health support service enabler. CSS is responsible for laundry, bath facilities and food services (all of which may be contracted to civilians); issuing personal hygiene, pest control and sanitation supplies; and providing and repairing clothing and footwear.

Evacuation

The aim of evacuation is the safe and efficient rearward movement of casualties with en route medical care from the POI to the appropriate treatment facility as soon as possible. The characteristics of various evacuation platforms are outlined in Annex A.
As a planning principle evacuation should be conducted rearward. For example, moving a casualty from R1 to R2E is a close health responsibility.

The evacuation system should meet the following requirements:

• conform with the 10-1-2 metric;
• evacuate casualties to a healthcare facility 24/7 in all weather, over all terrain and in any operational scenario;
• provide clinical sustainment to casualties throughout the journey, using appropriately trained clinical staff;
• regulate the flow and types of casualties when circumstances require it;
• accurately track patients and equipment throughout; and
• collect and analyse data regarding the evacuation system.

Evacuation control measures

Evacuation is controlled at the highest level consistent with the distances and evacuation time involved. Usually the casualty regulation cell (CRC) of a TF HQ or another appropriate HQ controls evacuation.

Communication. Since casualties with injuries not allowing them to RTD will move rapidly through the system and rarely spend significant time at any specific level of care, communication of key information concerning their injuries and treatment is essential for optimal care (see Chapter 9 for relevant report requirements). Effective CASREG depends upon direct and uninterrupted communication. Casevac assets require direct communication with the following:

• the CRC;
• the scene of an incident;
• supported FE; and
• in-transit health personnel and the receiving HE for the provision of medical advice and the allocation of appropriate staff and equipment.

Casualty regulation. CASREG is the control of casualty and patient movement through the roles of health care. It ensures the following:

• that casualties are routed to the HF that best meets clinical needs and evacuation capabilities;
• that there is an even distribution of patients;
• that adequate beds and treatment capabilities are available for current and anticipated needs;
• that evacuation assets are controlled at the highest level to ensure that resources are allocated commensurate with casualty clinical needs; and
that a casualty is handled as little as possible within the evacuation chain.

**Special Forces casualties.** When SF personnel become casualties, they rely on the conventional forces’ health system, especially above R2, to manage, treat and track them through the system. Health personnel should be familiar with the unique requirements of SF personnel and ensure that SF personnel (and their identities) are protected while they are being managed and treated in conventional forces’ HF. These casualties are managed in accordance with ABCA guidelines. Further information can be found in Chapter 9.

**Holding policy.** A holding policy is a control measure that dictates the maximum time (days) for which casualties may be held within a treatment facility. Casualties who cannot RTD within the prescribed holding period are evacuated as soon as possible, provided that travel will not aggravate their condition. The decision to transfer casualties or patients should consider clinical, operational and transport factors.

**Evacuation priorities.** Priorities are used for the evacuation of casualties to the appropriate HF. There is no direct correlation between triage categories and evacuation priorities. Evacuation priorities are described in Annex B.

**Handover.** The following documentation is included with clinical patient handover:
- a field medical card which contains basic medical information; and
- a patient evacuation tag which contains evacuation information: diagnosis, type of casualty, patient classification, recommended treatment and personal details.

**Considerations.** The following points are to be considered:
- The casualty must be disarmed, with weapons, equipment and personal effects managed in accordance with SOP.
- En route casualty care must be provided throughout the evacuation chain from the POI to R4.
- The speed of evacuation from the POI affects casualty survival and reduces morbidity. The location of evacuation platforms and HF should ensure that appropriate treatment can commence within the 10-1-2 metric.
- A casualty who requires surgery is, wherever possible, to be evacuated from the POI directly to the most appropriate surgical facility.
- There is to be no unnecessary handling of casualties.
- Casualty exchange points and staging areas may be required where evacuation routes are lengthy.
- The need for postoperative stabilisation, careful clinical assessment for evacuation, and higher levels of care during subsequent evacuation to other
HF in the medical evacuation continuum influences the evacuation of post-surgery patients more than the need for speed.

- All casualties evacuated by non-ADF assets require tracking, care and support.

**Interdependence**

The method of evacuation, asset availability, the length of the route and the operational environment directly affect casualty holding policies, the size and capability of treatment facilities, and the location of treatment facilities.

Surges in casualty numbers may result in a temporary reduction in the holding policy to relieve congestion and to adjust the number of patients being held in the AO. A reduction in the holding policy increases tactical and strategic evacuation demand, as there will be an increased number of casualties requiring transport to support areas or the NSB.

There is some interdependence between evacuation and replenishment, as evacuation assets also provide for medical resupply, the transport of health personnel and the exchange of high-use consumables such as blankets, stretchers and splints.

**Surface evacuation**

Specialised health personnel facilitate the surface evacuation of casualties. This is effected predominately by road (see Figure 3–2), but other surface modes, such as watercraft or rail, may be employed.

Surface evacuation phases within an AO include:

- *From point of injury.* Casualties will either remove themselves from the POI or be removed by a companion. Stretcher-bearers and appropriate evacuation platforms may be available to assist the casualty to the nearest HF. Integral unit ambulances and evacuation medics will move casualties to the nearest R2 facility. However, the TF CRC may become involved in the removal of seriously injured/very seriously injured casualties from the POI via AME. This will be initiated by the BG Comd who is responsible for the evacuation of casualties to an R2 facility in all other cases. This requires the appropriate distribution of integral unit ambulances. Where casualty estimates are high, ambulances from the CHC may augment the BG.

- *To Role 2 health care.* The BG Comd is responsible to R2. The CHC responsible is responsible for moving lower priority casualties to the brigade support platoon (BSP) via surface evacuation, or the CRC will facilitate movement directly from the R2 facility via AME. R2E assets should come forward to retrieve from R2 (generally the BSP) and allow the CHC evacuation assets to remain forward in the battlespace; or at least there should be an agreed ambulance exchange point between the R2 and R2E assets, rearward of the BSP.
To Role 3/Role 4 health care. The R2E unit is responsible for evacuating casualties from R2E rearward. Evacuation to R3 and R4 facilities is generally performed by tactical or strategic AME. If required, the CRC coordinates ground evacuation. The CRC is often involved in casualty clearing other than just ground evacuation. There may also be a role for a RAAF AME staging capability.

Figure 3–2: Australian light armoured vehicle ambulance variant

**Aeromedical evacuation**

AME (see Figure 3–3) is the preferred method of forward, tactical and strategic evacuation of battlefield casualties, in the interests of speed, casualty comfort and clinical priority. Rotary wing (RW) aircraft can remove casualties from otherwise inaccessible areas, significantly reduce the time delay between wounding and evacuation, and deliver casualties to the most appropriate medical facility. However, AME is susceptible to interruption by enemy action, weather, environmental conditions and other factors. The provision of AME is described in Annex C.
Treatment time imperative

The most appropriate or best possible care should be delivered as soon as possible after wounding occurs. Casualties are to be evacuated to the most appropriate HF in the shortest time possible. The measure that governs evacuation and treatment is the 10-1-2 metric.

First 10 minutes. Control major bleeding and the airway within 10 minutes of injury using first aiders, combat first aiders (CFA) and patrol advanced first aiders.

First hour. Within the first hour of injury the following is to occur:

• R1 and R2 HE assume responsibility for treatment within the first 10 to 30 minutes, sustaining the casualty until evacuation can be effected.
• The less seriously injured are evacuated through the roles of care.
• Specialist evacuation for the most severely injured is provided by specialist evacuation teams who stabilise and assess the casualty and provide resuscitation en route.

Two hours to surgery. Surgery is provided at R2E and R3 HF. Ideally casualties arrive within 1 hour and 45 minutes after injury. This allows 15 minutes for
assessment before surgery. As evacuation within 2 hours is demanding, R2LM health care can be deployed forward in some circumstances.

**Surgery.** The deployment of forward surgery is an exercise in balancing risk and benefit, dictated by the principles of HS and the resources available (see Figure 3–4). It should be noted that most of the initial management of casualties will be the responsibility of physicians rather than surgeons.

<table>
<thead>
<tr>
<th>THE BALANCE OF FORWARD SURGERY</th>
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<tbody>
<tr>
<td><strong>Forward Surgery</strong></td>
</tr>
<tr>
<td>Proximity</td>
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<tr>
<td>Flexibility</td>
</tr>
<tr>
<td>Limited capability</td>
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<tr>
<td>dispersion of resources</td>
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<tr>
<td>potential for stagnation</td>
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<td>?</td>
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<tr>
<td><strong>Larger Units</strong></td>
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<tr>
<td>Capability</td>
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<td>Synergism</td>
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<tr>
<td>Experience</td>
</tr>
<tr>
<td>Slow moving</td>
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<tr>
<td>decreased proximity</td>
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</tbody>
</table>

Figure 3–4: The balance of forward surgery

**Treatment**

Treatment is a continuous process of health care, increasing in complexity through the roles of health care to meet the clinical needs of the patient (see Figure 3–5). Treatment is provided as far forward as possible to conserve manpower within the AO.
Figure 3–5: Treatment in an area of operations
First response

First aid. First aid (which includes psychological first aid) is the immediate care given and is delivered by two methods, as follows:

- **Self-aid or buddy aid.** This is carried out promptly at the POI. All military personnel are taught basic first aid and carry basic first aid supplies.
- **Combat first aiders and patrol advanced first aiders.** These personnel are non-medical soldiers who can provide a higher level of care to a casualty at the POI until medical personnel arrive. They focus on controlling life-threatening bleeding and supporting the casualty’s airway.

Tactical combat casualty care. Trauma care in the tactical environment has three goals: treat the casualty (save preventable deaths), prevent additional casualties and complete the mission. Tactical combat casualty care combines good tactics with good medicine. It provides immediate care in the following three phases:

- **Care under fire.** This refers to care rendered at the scene of the injury while both the first aider and the casualty are under hostile fire. Medical equipment is limited to that carried by each operator and the first aider.
- **Tactical field care.** This phase of care is rendered once the casualty is no longer under hostile fire but there is still a risk of re-engagement. Medical equipment is still limited to that carried into the field by mission personnel. The period prior to evacuation may vary considerably, ranging from a few minutes to many hours.
- **Tactical evacuation care.** This refers to care rendered while the casualty is evacuated to a higher echelon of care. Additional health personnel and equipment pre-staged in tactical evacuation should be available during this phase of casualty management.

The first phase of tactical combat casualty care is the most challenging for health personnel. Realistic training, skills maintenance (including familiarisation with issued radio equipment) and regular rehearsals will assist in the provision of optimal care under fire.

Resuscitation. Resuscitation is the emergency medical treatment that stabilises the patient. Trained HS personnel initiate resuscitation as far forward as feasible and as soon as possible after wounding or the onset of illness. Resuscitation includes:

- maintenance of the patient’s cardio-respiratory function;
- control of bleeding;
- shock prevention through vascular volume replacement;
- pain relief;
Contents

• maintenance of body temperature;
• the application of dressings and splints; and
• protection of the patient from the elements.

**Stabilisation.** Sustaining care ensures that earlier efforts towards stabilisation are not compromised and includes:

• *En route care.* Medical personnel accompanying the evacuation asset provide care during evacuation. Evacuation is direct to the most appropriate HF.

• *Role 2 health care.* Health company personnel conduct examinations and observations in a relatively deliberate manner. Arrangements are made to evacuate casualties requiring a more comprehensive scope of care to an appropriate treatment facility. Care is supported by Class 8 supplies.

**Surgery.** There are two components to initial military surgery: DCR and damage control surgery (DCS). Together these two procedures cover time from the POI to more definitive care (see **Figure 3–6**).

![Figure 3–6: Relationship between damage control resuscitation and damage control surgery](image)

**Damage control resuscitation**

DCR emphasises resuscitation with haemostatic blood products and focuses on rapid control of bleeding and immediate life-threatening injuries.

DCR involves the use of multiple techniques drawn from the technical and organisational advances in HS casualty care.

Casualties presenting with any of the injuries shown in **Figure 3–7** will probably need massive transfusions and should be treated by DCR techniques.

Up to 15 per cent of casualties with severe trauma require massive transfusion, with a mortality rate in this group of 20 to 50 per cent.
Damage control surgery

DCS is a deliberately limited set of surgical procedures performed when the magnitude of tissue and organ damage is such that prolonged surgery is likely to exceed the patient’s physiological limit of recovery.

Only the minimum is done to deal with life-threatening issues or those that threaten limb viability or eyesight.

DCS is a further step in the evolution of military surgical techniques. Given battlefield constraints, especially in multiple-casualty situations, it is more advantageous to resource allocation and utilisation to perform damage control early.

DCS focuses only on immediately critical surgical interventions and delays more definitive care until a patient can be stabilised.

Specialist care

Specialist care is the performance of the full range of clinical procedures. It requires the clinical capabilities of a fully equipped hospital in a low-threat environment and is provided by allied R4 military hospitals or in the NSB.

Specialist consultation can also support lower roles of health care. Technology such as telemedicine provides deployed health personnel with access to clinical specialists in the AO.

Mental health. Psychological support helps to prevent the loss of fit soldiers by managing mental health, operational stress, and responses to critical incidents and potentially traumatic events. Early identification and intervention by commanders and mental health providers can prevent issues and concerns (see Chapter 11).

Dental care. Dental care minimises the need to evacuate dental casualties. It comprises preventive dental examinations and treatment.

RAPID RECOGNITION OF CASUALTIES REQUIRING DCR BY INJURY PATTERN

- Truncal, axillary, neck or groin bleeding not controlled by tourniquets or haemostatic dressings
- Major proximal traumatic amputations or mangled extremities
- Multiple long-bone or pelvic fractures
- Large soft-tissue injuries with uncontrolled bleeding
- Large haemothorax (greater than 1000 millilitres)
- Large haemoperitoneum

Figure 3–7: Injury patterns as predictors of massive transfusion
Veterinary support. The basic unit of veterinary capability is the VT, consisting of a VO with the assistance of a MED TECH. Veterinary support in the HS health environment may encompass one or more of the following:

- the delivery and/or coordination of clinical veterinary support to MWD in the AO, including liaison with coalition and/or civilian veterinary capabilities;
- the establishment and maintenance of veterinary treatment facilities in conjunction with or independent of other HS facilities;
- advising commanders on the veterinary aspects of the operational use and protection of MWD, including in CBRN environments;
- advising on zoonotic diseases in the AO, including treatment and prevention;
- advising and training soldiers to work safely around indigenous animals, including the enforcement of ‘no pets/mascots’ policies;
- specialist advice on the effects of CBRN attack on indigenous livestock and animals; and
- care of pack animals or other military working animals.

Historical example

While deployed in Afghanistan in 2010, CPL Silva, a MED TECH, was supporting a night infiltration of four RW aircraft. On its final approach the lead aircraft, a US Black Hawk carrying 15 personnel, crashed.

On impact, it was estimated that the helicopter was travelling in the vicinity of 250 km/h. There were three immediate fatalities, while 12 other members sustained numerous injuries. These included amputations, fractures, blunt trauma, penetrating trauma, internal injuries and traumatic brain injuries.

The medical response was activated approximately 5 minutes from aircraft impact. This was supported by CPL Silva, one CFA and a handful of Army first aiders, supported by command, protection and enabling personnel. These personnel commenced basic medical management of the casualties (catastrophic haemorrhage control, positioning etc.), triaging and siting of three casualty collection points.

Approximately 40 minutes elapsed from impact to the last casualties arriving at the US R3 surgical capability in Kandahar. This CASEVAC involved three helicopter lifts of casualties from POI. Casualties in the first two lifts were supported by a CFA while CPL Silva supported the third (opportunistic RW AME platforms).

When CPL Silva arrived at the R3 facility he moved to the emergency room, which was now in full swing with 12 resuscitation bays in operation. He assisted where
required, informing treatment teams of the casualties’ medical history, the situation and the treatment provided at POI. The resuscitation team was unable to save the life of one soldier.

Throughout the ensuing hours, all casualties received lifesaving surgery and emergency wound management. CPL Silva remained throughout the day/night, ensuring that a friendly face was present when casualties woke from recovery.

That evening CPL Silva escorted his deceased comrade’s body to the special operations task group base in Tarin Kowt.

CPL Damien Silva was awarded the Distinguished Service Medal for his actions.

Lessons learnt

‘Be great at the basics’ – all the people you train with need to be great at the basics. If we can do the basics correctly we can save soldiers lives.

Know your equipment and where it is – not just you, but your CFA. Because you never know when you will get a casualty, you always need to be prepared.

Understand that the casualty may be someone you know. The hardest thing within military medicine is that you will most likely know or be friends with the casualty you are treating. Feelings need to be put aside so that you are able to administer treatment effectively.

Annexes:

A. Platforms fitted for casualty evacuation
B. Triage and evacuation priorities
C. Aeromedical evacuation
Annex A to Chapter 3
Platforms fitted for casualty evacuation

**Capability data.** Table 3–1 details the capabilities of various ground and forward AME platforms in use by the ADF. Range and speed data are indicative only and used for planning purposes. They should not be used to plan the carriage of an individual, as factors such as air temperature, altitude and humidity can affect range and cruising speed.

---

2. Specific platform capacity will be affected by fit-out time and other variables such as airframe adaptability, and crew availability and support. For example, the maximum crew duty period for C17 AME missions is 16 hours, followed by a minimum rest period of 12 hours; and the maximum crew duty period for C-130 (and other aircraft) AME missions is 14 hours, followed by a minimum rest period of 10 hours.
### Table 3–1: Characteristics of casualty evacuation platforms

<table>
<thead>
<tr>
<th>Air Platforms</th>
<th>Seat</th>
<th>Litters</th>
<th>Ferry range (km)</th>
<th>Cruising speed (km/h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black Hawk</td>
<td>10</td>
<td>6</td>
<td>500</td>
<td>177</td>
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<tr>
<td>Black Hawk</td>
<td>10</td>
<td>6</td>
<td>950</td>
<td>150</td>
</tr>
<tr>
<td>Black Hawk</td>
<td>10</td>
<td>6</td>
<td>1340</td>
<td>200</td>
</tr>
<tr>
<td>Seahawk</td>
<td>10</td>
<td>6</td>
<td>450</td>
<td>135</td>
</tr>
<tr>
<td>Sea King</td>
<td>16</td>
<td>9</td>
<td>925</td>
<td>200</td>
</tr>
<tr>
<td>MRH 90</td>
<td>18</td>
<td>12</td>
<td>1350</td>
<td>280</td>
</tr>
<tr>
<td>MRH 90</td>
<td>18</td>
<td>12</td>
<td>1900</td>
<td>225</td>
</tr>
<tr>
<td>Chinook-D</td>
<td>33</td>
<td>24</td>
<td>610</td>
<td>225</td>
</tr>
<tr>
<td>Chinook-F</td>
<td>33</td>
<td>24</td>
<td>610</td>
<td>225</td>
</tr>
<tr>
<td>Hercules C-130 H</td>
<td>91</td>
<td>74 + 2 attendants (or 70 + 6 attendants)</td>
<td>7685</td>
<td>590</td>
</tr>
<tr>
<td>Hercules C-130 H</td>
<td>91</td>
<td>3</td>
<td>7685</td>
<td>590</td>
</tr>
<tr>
<td>Hercules C-130 J</td>
<td>121</td>
<td>94 + 2 attendants (or 90 + 6 attendants)</td>
<td>7685</td>
<td>590</td>
</tr>
<tr>
<td>Hercules C-130 J</td>
<td>121</td>
<td>4</td>
<td>7685</td>
<td>590</td>
</tr>
<tr>
<td>Ground Platforms</td>
<td>Seat</td>
<td>Litters</td>
<td>Ferry range (km)</td>
<td>Cruising speed (km/h)</td>
</tr>
<tr>
<td>------------------</td>
<td>------</td>
<td>---------</td>
<td>------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>LR 110 ambulance (6x6)</td>
<td>6</td>
<td>4</td>
<td>600 (sealed road) 480 (cross-country)</td>
<td>60 (sealed road) 40 (cross-country)</td>
</tr>
<tr>
<td>G-wagon ambulance (6x6)</td>
<td>6</td>
<td>1 fixed + 1 convertible</td>
<td>800 (sealed road) 640 (cross-country)</td>
<td>80 (sealed road) 30 (cross-country)</td>
</tr>
<tr>
<td>ASLAV-A</td>
<td>6</td>
<td>2</td>
<td>600</td>
<td>80</td>
</tr>
<tr>
<td>M113-A</td>
<td>4</td>
<td>2</td>
<td>480</td>
<td>40</td>
</tr>
<tr>
<td>PMV-A (Bushmaster)</td>
<td>4</td>
<td>1 fixed +1 convertible</td>
<td>600</td>
<td>90 (planning)</td>
</tr>
<tr>
<td>Sprinter 4x2</td>
<td>0</td>
<td>1</td>
<td>600</td>
<td>120</td>
</tr>
<tr>
<td>Sprinter 4x4</td>
<td>0</td>
<td>1</td>
<td>600</td>
<td>120</td>
</tr>
<tr>
<td>Sprinter patient transfer vehicle</td>
<td>3</td>
<td>2</td>
<td>600</td>
<td>120</td>
</tr>
</tbody>
</table>
Annex B to Chapter 3

Triage and evacuation priorities

Triage and evacuation are different activities, with no direct correlation between either category.

Triage decisions are difficult, often placing the triage officer in an ethical dilemma. Competency levels and experience with trauma and MASCAS, rather than rank, may be a better indicator of capability for the role of triage officer.

Triage priorities

The following triage categories are used:

• **T1** – immediate (red). T1 is the highest priority and the following factors apply:
  • immediate intervention is required to save and stabilise an individual with life-threatening injuries; and
  • the casualty has an expected high chance of survival.

• **T2** – delayed (yellow). T2 is the next priority and the following factors apply:
  • the general condition of the casualty permits a delay in active intervention or surgery without endangering life; and
  • the casualty has a good prognosis.

• **T3** – minimal (green). T3 is the next priority and the following factors apply:
  • the casualty has minor non-capacitating problems needing minimal treatment with no urgency; and
  • treatment can often be provided by first aiders.

• **T4** – expectant (blue). T4 is the lowest priority and the following factors apply:
  • the casualty has serious or multiple injuries with poor survivability;
  • treatment requires intensive therapy with extensive use of personnel, equipment and stores, or time;
  • the casualty should be given basic supportive and analgesic treatment; and
  • this triage category is only used in a MASCAS situation; when such casualties they occur in isolation, they would normally be triaged as immediate.
• **Dead (black).** Lifesaving resuscitation is attempted in most cases before a casualty is declared dead. A casualty can only be certified dead by a medical officer (MO).

**Mass casualty treatment priorities**

Evacuation precedence, which may be upgraded or downgraded at each succeeding level of care, determines how quickly a patient will be evacuated within the evacuation system. The categories of precedence are as follows:

• **Priority 1 (urgent).** Life is immediately threatened. Rapid evacuation, urgent resuscitation and/or surgery are required to save life, limb or sight.

• **Priority 2 (priority).** Life or limb is in serious jeopardy. Evacuation should be conducted as soon as possible.

• **Priority 3 (routine).** Life or limb is not in serious jeopardy. Evacuation should be effected as soon as a suitable transport mode is available.

Casualties requiring evacuation to a HF should be evacuated as soon as possible within the constraints of the tactical situation and, if required, to meet the time constraints for resuscitation and surgery.
Annex C to Chapter 3

Aeromedical evacuation

Responsibilities. Each Service has responsibilities for the provision of AME, as follows:

• the RAN provides forward and tactical AME in the maritime AO;
• Army Aviation provides forward and tactical AME in the land AO; and
• the RAAF provides tactical and strategic AME.

Command and control. C2 of forward and tactical AME is provided by the AME control officer/OPSO through the CRC/PECC\(^3\). Strategic AME is provided through the responsible joint airspace control cell, located within the Air and Space Operations Centre, for the following:

• prioritising the provision of strategic AME;
• coordinating AME-trained personnel and equipment for in-flight supportive health care;
• coordinating facilities on or near airheads and air bases for the limited care of casualties entering, en route, through or leaving; and
• providing information transfers with originating, en route and destination HF concerning casualty movement requirements.

C2 of strategic AME is provided through the AME OPSO located within the air operations centre. This process is a RAAF responsibility.

Task classifications. AME tasks are classified as follows:

• \textit{Forward}. This refers to the evacuation of a casualty by air transportation from the initial POI to the first HF within the AO. Army Aviation normally conducts forward AME in the land environment.

• \textit{Tactical}. This refers to the evacuation of a patient by air transportation from one HF to another within the AO or between AO. Army Aviation may conduct tactical AME if tasked.

• \textit{Strategic}. This refers to evacuation by air transport from a deployed HF within an AO to a destination medical facility within the NSB. It may include evacuation by air from one HF to another within the NSB. The RAAF is responsible for the coordination of strategic AME and generally provides the assets. Civil agencies can be engaged to conduct patient transfer in some circumstances.

\(^3\) Patient evacuation coordination cell.
Army capability. The Army AME capability comprises the following:
- an RW aircraft with its flight crew,
- a trained and certified RW AME medical crew to provide en route care for a casualty, and
- specialist medical equipment to provide en route care for a casualty.

Casualty selection. The following criteria should be applied when assessing whether patients are to be evacuated by air:
- whether AME is necessary as a lifesaving measure,
- the evacuation priority and tactical situation, and
- casualties who require specialised treatment.

Considerations. General considerations for planning AME missions include:
- the size of the AO and the distances or flying times between planned operations and appropriate HF;
- anticipated casualty numbers;
- landing zones and reception;
- the location of refuelling and maintenance assets;
- in-flight communication, protection and escort;
- 24-hour operations and adequate numbers of both aviation and medical crews (one flight crew and one medical team does not provide a 24-hour capability);
- the number of aircraft required on standby, including the requirements for spare aircraft and the total number requiring evacuation, given the feasibility of mass evacuation and the capacity of the nominated aircraft type;
- the response time required for casualty collection in the AO, including the time taken to fly to the POI, load the casualty(ies) and return to a HF;
- the contingency plan for poor weather, aircraft unserviceability or aircraft unavailability due to higher priority tasking by commanders; and
- a contingency plan for an on-call AME capability if aircraft cannot be spared for AME standby. AME response times are likely to be significantly greater if AME is a secondary task.

Staging facilities. Staging facilities typically require the following:
- primary health care and resuscitation equipment as appropriate for operational support requirements;
logistic support such as power generation, storage for medical stores, administrative areas for staff and equipment management;
• communications for specialist medical advice;
• access to patient records;
• a lightweight transportable shelter;
• the ability to stage AME patients through the HF for periods of up to 24 hours; and
• overnight accommodation for evacuation teams, as required.

**Further reading.** Further information on AME can be found in *ADFP 1.2.3, Casualty Evacuation.*
Chapter 4

Roles

Introduction

For surgeons to be unaware of the basis of war surgery or worse still, forget them, will, at best condemn some casualties in their care to suboptimal treatment and, at worst, others to unnecessary death.1

This chapter describes the roles of all health FE available to be deployed by the Army on operations. The overall organisation of HS is outlined in Figure 4–1. Some elements will have more flexibility than others in the AO, depending on their tasks under the HSP.

Continuum of medical care. Medical care in the AO is provided in a progressive manner ranging from immediate first aid at the POI to more definitive, specialised care as the casualty progresses through the casevac chain. It is important to understand not only the time imperative necessary for casualty survival, but also the capabilities and limitations of each role of care.

HE are designated by a role number (1 to 4) which describes their functional capability to deliver a specific level of care.

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Roles of health care

First response
Non-health personnel normally provide the first response capability. This includes locating the casualty and providing first aid.

Self-aid or buddy aid is the initial first response conducted by non-health personnel prior to the arrival of trained health personnel. All ADF personnel are trained to provide first aid and basic life support.

Advanced first aid is provided by appropriately trained personnel.

Role 1
An R1 capability provides primary health care, triage, resuscitation and stabilisation. It manages minor sick and wounded for immediate RTD. An R1 HF can collect and care for casualties from the POI and prepare them for evacuation to a higher role of care. It can also provide mental first aid and limited occupational and preventive health advice to supplement measures taken by individuals and commanders.

Depending on operational requirements, an R1 HF may be supplemented with a limited casualty holding capability, primary dental care, basic laboratory testing and psychological first aid.

Role 2
An R2 capability provides clinical support based on formed health teams. This type of HF is capable of receiving and triaging casualties. It provides resuscitation and treatment of casualties with shock to a higher level than R1. The deployment of an R2 HF is mission-dependent and is generally used in the following circumstances:

- when there is a large number of personnel or the risk of a high number of casualties; and
- when geographic, topographic, climatic or operational factors may limit evacuation to higher levels of the continuum of care within treatment time imperatives.

An R2 HF provides primary healthcare services. It is capable of resuscitation, triage and stabilisation for further evacuation, and limited casualty holding with appropriate nursing support. It has basic imaging and diagnostic capabilities; primary dental support; and first aid and triage of PSYCAS with an expectation of RTD.

An R2 HF generally has prevention capabilities, including disease outbreak investigation; integrated pest management and vector control programs; theatre health threat assessment; water, air, soil and chemical sampling, analysis and
interpretation; and routine preventive medical examinations. It has a health materiel and administration capability for health records maintenance and casualty tracking.

**Role 2 Light Manoeuvre**

R2LM extends the R2 capability to provide triage and advanced resuscitation procedures up to resuscitative surgery. It is generally only used for initial crisis or warfighting deployments where direct evacuation to a primary surgical capability is impossible. The HF acts as a focal point, but may be bypassed if the situation and resources allow. Usually post-surgical cases are evacuated for stabilisation and possible primary surgery.

R2LM provides highly mobile surgical facilities, usually provided by the STP and light surgical team (LST), for a limited period of up to 72 hours.

**Role 2 Enhanced**

R2E provides secondary health care built around primary surgery, intensive care and nursed beds. An R2E HF has a health materiel and administration capability and its nodes are scalable.

An R2E HF may be employed as a small hospital or hub where the provision of R3 is not justified. It may provide force extraction psychological screening; field laboratory capabilities, including blood collection, banking and distribution; advanced diagnostic imaging capabilities; extended occupational and environmental health care capabilities; primary dental care; and operational mental health support.

R2E is the highest level of care that the Army will force-generate for operations.

**Role 3**

An R3 HF provides comprehensive secondary health care within the restrictions of the theatre holding policy. It is capable of primary and specialist surgery; advanced and specialist diagnostics; major medical and nursing specialties; casualty holding for diagnosis, treatment and holding of patients who can be treated and RTD; advanced dental support; rehabilitation support; and psychological intervention with the expectation of RTD.

The facility has a health materiel and administration capability. This includes reception and storage of medical and dental materiel and blood; repair of medical equipment; and liaison teams for casualty tracking in multinational force (MNF) operations.

R3 for the ADF is often provided by coalition facilities, with the ADF contributing either specialist individuals or discrete teams. Alternatively, this facility can be generated by joint supplementation of R2E elements to bring them to R3 status. Where this occurs, enabling contracts with major medical suppliers generally support the HF.
Role 4
R4 offers the full spectrum of definitive medical care. It is provided either from or within the NSB. While the ADF has no capability to provide this level of care, coalition partners may provide it for deployed forces in the AO.

Organisational roles

HE must be able to support many small teams in complex environments.

1st Close Health Battalion. 1 CHB provides integral and close HS health support to FORCOMD FE in land operations. Its role is to provide up to R1 HS to land-based FE during joint, combined or interagency operations.

2nd General Health Battalion. 2 GHB can task-organise elements to provide a non-surgical R2 (extended primary health care and resuscitation). Its role is to provide HS up to R2E in support of land-based elements during joint, combined or interagency operations. 2 GHB has the following capabilities:

• Surgical companies. The surgical company provides formal surgical care by carrying out surgery under general anaesthesia.
• Shock trauma platoon. The STP is a highly specialised R2LM organisation optimised for warfighting operations involving high rates of tactical manoeuvre. Its primary purpose is immediate resuscitation prior to onward evacuation.
• Dental company. The dental company provides a primary dental capability within a deployed environment, thus preventing dental disease, and promoting and maintaining the dental health of their allocated dependency. The dental company possesses all the deployable dental capabilities available to the Army.
• Preventive medicine company. This company provides operational level assessment of theatres of operation and contributes to the CBRN defence capability.

3rd Health Support Battalion. The role of 3 HSB is to force generate and manage ARes health specialists for the provision of HS to the Army.

1st Psychology Unit. The role of 1 Psych Unit is to provide operational mental health in garrison and in support of combat, peace and humanitarian relief operations to sustain capability and enhance combat effectiveness.

17th Combat Support Service Brigade. The brigade provides C2, the force generation of deployable health effects in accordance with notice to move, and operational and training health support to FORCOMD.
Support requirements

HE deploy with integral mobility and internal communications. Other than the HSB, HE are not self-sustainable on operations. They require support from the supported force, including:

- linguists,
- HS service support,
- protection,
- communications support, and
- sustainability support.

Individual roles

Medical specialists. Operational and/or environmental considerations may warrant the deployment of medical specialists. Planning considerations may require the rotation of specialists on a more frequent basis than in the supported force.

Special Forces. SF operations are carried out in austere and hostile environments. SF elements have limited medical redundancy or resupply. There may be occasions when specific short-term support has to be provided by regular Army HE. In this case medical support must be able to rapidly adjust to the SF tempo.

Veterinary support. Operational and/or environmental considerations may warrant the deployment of a VO/VT. VO use their specialist expertise to provide capabilities that can be deployed across all five lines of effort.

Roles. Veterinary capability can be provided at the following two levels:

- An R1 veterinary capability consists of a VT with a limited quantity of mission-task-specific equipment and materials which are fully transportable by vehicle or in some cases by pack. No specific platforms or facilities are required for this capability.
- An R2 veterinary capability, known as a veterinary treatment facility or VTF, is staffed by one or more VT. It has a larger range of equipment and materials than an R1 capability and requires an indoor or undercover facility in which to operate. It is usually co-located with an R2 or higher human HF and can utilise some of the associated diagnostic and surgical capabilities if required.
Joint operations

Joint Health Command. JHC manages health capability, develops strategic health policy and provides strategic-level health advice. It exercises technical control and delivers ADF garrison health support, and is responsible for health preparation of the force for operations and post-deployment health administration.

Joint Operations Command. CJOPS is responsible for the operational level of command of ADF participating in military campaigns and operations. The principal health adviser is the Director of Health, who provides the technical expertise to plan and execute deployed operational health support.

Health component commander. The JTF Health Commander has operational command of all clinical capabilities above R1 within the AO, and is supported by health staff.

Chief – Aeromedical Evacuations. The Chief – AME is the specialist staff officer within HQJOC Air and Space Operations Centre and the Aeromedical Evacuation Control Centre responsible for planning, coordinating, monitoring and controlling the aeromedical evacuation system (AES) for ADF members, approved foreign nationals and approved civilians from an AO to the NSB or within the NSB. This includes:

- planning the composition of teams and AME equipment requirements for operations, exercises and the NSB;
- determining aircraft requirements for forward, tactical and strategic AME (this may be ADF, coalition, chartered or civilian air);
- coordinating with the Chief Air HS Operations and Air Mobility Control Centre for the allocation and tasking of aircraft to strategic AME;
- coordinating, tasking and controlling strategic AME teams;
- determining requirements for facilities on or near airheads and air bases for the limited care of casualties entering, en route to or leaving the AES;
- coordinating the preparation and stabilisation of patients for flight;
- determining special requirements for patients transported by air;
- ascertaining an appropriate destination medical facility for patients to exit the AES;
- liaising with, and providing AME information and advice to, Director Health to support patient tracking;
- liaising with the 1st Joint Movement Group for AES assistance and JHC for the reception and treatment of patients returning to the NSB;
- providing AES advice to the deployed J07; and
• monitoring the AES and maintaining a database of patients evacuated to and within Australia.

Health staffing responsibilities are described in Annex A.

Annex:

A. Staff responsibilities
Annex A to Chapter 4

Staff responsibilities

Table 4–1 describes the staffing requirements in a typical deployable health operations centre (DHOC).

<table>
<thead>
<tr>
<th>Position</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>J07</td>
<td>Any Service 05/06 health practitioner with command experience</td>
</tr>
<tr>
<td>Clinical director</td>
<td>Any Service 05/06 MO</td>
</tr>
<tr>
<td>Health OPSO</td>
<td>Any Service 04 health officer</td>
</tr>
<tr>
<td>Health plans officer</td>
<td>04 health officer from any Service, but Navy position in maritime or amphibious environment</td>
</tr>
<tr>
<td>Deputy health OPSO</td>
<td>Any Service 03 health officer</td>
</tr>
<tr>
<td>Deputy health plans officer</td>
<td>Any Service 03 health officer</td>
</tr>
<tr>
<td>AME OPSO</td>
<td>Deputy operations/plans officer in smaller operations. RAAF or other credentialed officer</td>
</tr>
<tr>
<td>AME LO</td>
<td>Deputy operations/plans officer in smaller operations. RAAF or other credentialed officer</td>
</tr>
<tr>
<td>Health protection officer</td>
<td>Public health physician or environmental health officer from Army or Air Force</td>
</tr>
<tr>
<td>Health logistics officer</td>
<td>Pharmacist from Army or Air Force is preferred</td>
</tr>
<tr>
<td>Watch keepers (2)</td>
<td>E7 to 02 from any Service, but at least one Navy member if in maritime or amphibious environment</td>
</tr>
<tr>
<td>Clerks (x2)</td>
<td>Any Service</td>
</tr>
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</table>

For operations to be successful there must be clear divisions of responsibilities in all HQ. Key personnel roles are identified by designated numbers. Further information can be found in ADFP 5.0.1, Joint Military Appreciation Process.

Staff responsibilities are described in Table 4–2.
### Table 4–2: Staff responsibilities

<table>
<thead>
<tr>
<th>Staff branch</th>
<th>Health-related responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel staff</td>
<td>Provision of strength states, which are the basis for casualty estimates</td>
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<tr>
<td></td>
<td>Personnel tracking</td>
</tr>
<tr>
<td></td>
<td>DNBI estimate</td>
</tr>
<tr>
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Chapter 5

Health planning

*A general who takes nothing for granted is secure in war.*

*Attributed to the Byzantine Emperor Maurice*¹

Introduction

Because of the complexity and diversity of potential tasks, health planning has to be an integral part of operational and tactical planning. Health planners should ensure that the commander is aware of the health implications of any COA and undertake detailed health planning in support of the operational or tactical plan.

Planners must consider all available approaches and methods to plan for health support within the AO.

The HSP affects the activities of all staff; therefore health staff should be included at the earliest opportunity in operational planning considerations.

HS planning is synchronised within the MAP to ensure that it occurs in unison with the core planning processes. Health considerations contribute to the full staff MAP, as this is the method used by TF and BG HQ to plan tactical activities.

The lead health planner should have access to the commander’s endorsed risk assessment (commander’s guidance) at the start of the health planning process.

Determining the ideal relationship between proximity to surgical care and the capability of the surgical unit remains a challenge. Managing several casualties over 24 hours can completely overwhelm a unit. Dispersal of small surgical teams across the AO without including them in an integral trauma system will not be effective.

Threat assessments are produced for specific events or activities where there are multiple threat sources and it is difficult or inappropriate to apply the joint MAP and define scenarios or COA, for example, security threat assessments produced by the Defence Intelligence Organisation.

LWD 5-1-4, The Military Appreciation Process is the planning reference for land operations. Information on strategic and operational health planning is available in ADDP 1.2, Health Support to Operations.

The key consideration for health planners is the casualty estimate. The BC estimate, prepared by the S/J3 staff, provides the basis for determining the size of the HS required to support an operation.

**Health planning responsibilities**

*Principles of health support.* The principles of HS are as follows:
- conformity,
- proximity,
- flexibility,
- mobility and protection,
- continuity,
- prevention, and
- control.

*The planning process.* Health planning is a deliberate planning process and is an integral part of operational and tactical planning. Noting that HS is a scarce asset, the following are two key factors in the health planning process:
- It is important to obtain an accurate casualty estimate, as this will decide the size, location and complexity of the HS requirement.
- HS is totally flexible and can be structured to deliver tailor-made support across the whole spectrum of operations. Be mindful of the effect required.

*Planning factors.* The following factors are critical to HS planning:
- the mission and type of operation;
- the operational concept or plan;
- the anticipated duration of the operation;
- the evacuation policy;
- the health threat assessment;
- health surveillance;
- provision of the overall casualty estimate by the staff and its possible effects on the delivery of health care;
the availability of resources and the restrictions, if any, on their employment; and

staff checks.

Key considerations for health planners. Key considerations are as follows:

- **Prevention.** Minimise the impact of operational, environmental and occupational threats to which personnel are exposed. Effective casualty prevention conserves deployed force personnel and enhances combat effectiveness.

- **Treatment.** Casualties must receive prompt and effective health care. The provision of an effective system of casualty treatment has a positive effect on force morale.

- **Evacuation.** This encompasses the processes, personnel and equipment required to move a casualty from POI/retrieval to the most appropriate HF for definitive care.

Planning responsibilities

HS should be planned at the highest tactical level to maximise the use of limited resources.

**Joint operations.** The Joint Health Planning Group supports the activities of the Joint Planning Group by coordinating HS input to the operation plan and preparing any separate HS orders or instructions. COMD Joint Health is the strategic joint health adviser to the CDF for all joint health aspects of planning and operations.

**Health staff.** HS planning is conducted as part of the personnel support effort, and health components of MAP briefings are conducted as part of the S1 brief.

**Intelligence staff.** The intelligence staff is responsible for providing HLTHINT, intelligence preparation of the battlespace products in support of planning, and threat BC estimates.

**Operations staff.** In addition to coordinating the MAP, the operations staff is responsible for friendly BC estimates and rear area security.

**Logistics staff.** The logistics staff plans the logistics support to HE. This includes supply, maintenance, distribution, mortuary affairs and sustainment support. The logistics staff also plans contract support to health activities.

**Health staff.** The health staff is responsible for the following:

- submitting health information requirements (IR) and requests for information to intelligence staff;
- health planning, in order to develop the health concept supporting the COA;
Health planning considerations

The population at risk is one of the key determinants of the quantity of HS required. All entitled personnel within the AO should be included. It is on this figure that all calculations are based and it is therefore essential that it be correctly assessed.

**Health support plan.** A typical layout of a HSP is provided in Annex A.

**Legal considerations.** The following should be considered during the tactical health planning process:

- HN laws, status of forces agreements (SOFA) and memorandums of understanding;
- the LOAC and the Geneva Conventions;
- constraints imposed by mandates, directives and plans;
- the treatment of allied military forces, civilians and CPERS, and information management;
- the treatment of Defence civilians and civilians supporting the operation (eg, private military security companies or locally engaged civilians); and
- the scope of care.

**Health threat assessment.** The following should be considered as part of the health threat assessment:

- operational, occupational and environmental hazards;
- common illnesses and endemic diseases;
- hostile action and other hazards, such as the effects of weapon systems, landmines, CBRN contaminants and accidents;
- mental health threats and stressors, such as exposure to human remains, mass human suffering and friendly fire; and
- health information and intelligence.

**Friendly force considerations.** The following should be considered in relation to friendly forces:

- the size and health status of the force;
- force protection and preventive measures;
Contents

• casualty estimates, including the impact on the medical skills required, and evacuation and holding policies;
• evacuation and treatment requirements, availability and capabilities;
• airspace considerations and evacuation routes;
• the capability of allies or the international support base, including standards of care and interoperability;
• the lead nation and troop contributing nations (TCN) for health; and
• the existence in the AO of NGO providing health care.

Environmental considerations. The following environmental factors should be considered during the planning process:
• geographical factors such as climate, weather, terrain and physical distances, the condition of the infrastructure, and other factors that may influence health;
• acclimatisation, education, training and preventive measures;
• the special stores and equipment required (medical and general);
• the disposal of medical and biological waste, including environmental issues, infection control methods and future clean-up liability;
• CBRN issues such as prevention (vaccines and prophylaxis); pre-treatment; decontamination (patient, clothing, equipment); augmentation; handling and treatment; contaminated and clean evacuation chains and treatment facilities; and additional resources and supplies; and
• urban issues such as demography and the profile of built-up areas; the likelihood of the presence of IED; the attitudes of the local population; airspace; and provision of search and rescue teams (and their protection).

Operational considerations. Planning considers the following operational factors:
• the duration of the operation or tactical activity;
• the type of operation or tactical activity;
• force dispersal;
• casualty estimates – BC, DNBI, PSYCAS, expected areas of casualties and casualty densities;
• MASCAS – processing, triage, the holding policy and augmentation;
• disarming and handling the personal effects of injured soldiers;
Contents

- HA considerations – MEDROE, the requirement to treat civilians, the mandate, the additional skills and equipment required, the likely workload, and the impact on the provision of HS to the force; and
- injured or ill CPERS – health screening, disarming, personal effects, guarding, security, the inspection of HF, the movement and evacuation of CPERS, the provision of health care to CPERS camps, the system for tracking CPERS, and notification.

Civil considerations. Civil considerations are as follows:
- the civilian population in the AO;
- population issues – the socioeconomic position, diseases, nutrition, housing, refugee movement, sanitation and hygiene;
- indigenous medical capabilities, the standard of local health infrastructure and spare capacity;
- HN support;
- NGO;
- the MEDROE, and clear guidance on providing health care and transfer to civil authorities;
- contract health practitioners; and
- hazards posed by civil labour employed by the force – infectious diseases, personal hygiene, the potential for infection among food handlers, theft and contaminated water.

Health provision considerations. The following factors should be considered in the planning process:
- C2 – the appointment of triage officers (and succession planning), CASREG, networked communications, support relationships, and liaison and coordination arrangements;
- the location, defence and siting of HF;
- the impact of DNBI on the health specialties required;
- the level of care required – the number of beds, the bed occupancy rate, the number and types of health capabilities and specialists, pharmacy and blood stocking, and hospital morgue capacity;
- treatment – the time imperative and its effect on the location of health capabilities and evacuation assets;
- evacuation – the evacuation modes available; the evacuation and holding policy (far forward, forward, tactical and strategic); priorities; the airspace, road network and engineer obstacle plans; and landing zones;
Contents

- the mobility of HE and redeployment arrangements;
- the camouflaging, marking and notification of HF, equipment and personnel; and
- the health reserve.

**Health logistics considerations.** Logistics considerations for the planning process are as follows:
- links with personnel staff for patient tracking;
- the medical equipment status, reserve holdings, and the repair process and replacement policy;
- the supply status, including pharmaceuticals and blood;
- the blood sourcing, transport and holding policy;
- CSS, including laundry, showers, catering, mortuary affairs, waste disposal and sustainment support;
- the communications capability, with supported force, AME assets, and allied and civilian health infrastructure;
- the continuity of health logistics through roles of care, including proximity, stockpiling and mobility;
- the contracting and commercial support requirements;
- the handling of dead – certification of death; deaths in HF; identification processes; medical evidence for investigations; personnel tracking, personal effects and contaminated remains; and repatriation;
- health surveillance and administration; and
- interpreters.

**Planning process**

Health personnel are a key contributor to the MAP and should be involved in the initial planning process. The relevant commander is to request a health LO where a HQ does not have an integral health planner.

**Health threat assessment**

The health staff, with S2 input, updates the health threat assessment, which is generally provided by the J07 at the commencement of a deployment. This assessment is a composite of ongoing or potential enemy actions and
environmental conditions that may affect the health of the force. The health threat assessment considers the following:

- potential lines of effort to be supported;
- diseases endemic to the AO;
- projected weather conditions and factors associated with urban, tropical, cold, desert and CBRN environments;
- occupational, environmental and operational health threats;
- battle injuries and stress;
- health threats posed by enemy weapons and potential interference with evacuation;
- enemy DNBI and BC estimates, including likely locations, time frames, density and types of injuries;
- the health status of enemy forces, likely enemy casualties and enemy health capabilities; and
- enemy compliance with the LOAC and the Geneva Conventions.

**Risk assessment**

The health staff informs the commander of the health risks of the plan. This includes a statement of risks, likelihoods, consequences and recommended mitigation strategies. The MAP provides for risk management for general operational issues. A risk matrix is provided in Annex B.

Commanders must be able to justify and defend any decisions that do not comply with best practice and the applicable Australian standards. Noncompliant decisions need to be conscious and defensible, and commanders must seek to work within the best practice framework and apply common sense within a risk management framework.

Risk is quantified by the following:

- projected casualties – BC, DNBI and PSYCAS;
- the sustainability and opportunity cost; and
- the environmental, humanitarian, political and social implications.
Mass casualty planning

Operational health staff are responsible for developing a MASCAS plan, where required. The plan forms an appendix to the HSP. Tactical staff apply and adjust this plan to suit tactical activities. The MASCAS plan should include:

- authority to advise a MASCAS situation (triage officer or health commander);
- MASCAS triage priorities;
- alterations to treatment scope and standards (evacuation and treatment);
- the diversion of evacuation assets;
- the relocation of treatment assets to the MASCAS location;
- the use of allied or civil resources; and
- the deployment of additional resources from other AO or the NSB.

MASCAS plans are to be wargamed during the MAP. The force and HE are to rehearse MASCAS responses as part of force preparation training and in-theatre training. Mission-specific training includes collective training and certification and is to cover the following:

- evaluating the ability to conduct CASREG;
- evaluating mass ground and air evacuation;
- identifying interoperability issues affecting multinational support;
- practising the cross-levelling of medical and dental materiel and blood products;
- determining the adequacy of emergency care resources; and
- testing communications and information systems connectivity and interoperability.

Triage and evacuation priorities are outlined in Annex B to Chapter 3.

Annexes:
A. Health support plan
B. Health risk management
Annex A to Chapter 5

Health support plan

At higher levels, a written HSP will be produced and issued in conjunction with relevant health staff. Health staff should be appointed early to the higher HQ to inform the HSP.

The deployed health organisation is responsible for informing the HSP, while the unit commander signs off on the risk. This process should involve consultation with brigade health staff at the earliest opportunity.

The content of a plan varies substantially with the operating environment and the level of planning. An actual example is provided in Appendix 1. Relevant aspects of the template set out in the remainder of this annex are suitable for most unit and formation activities. While general in nature, it is focused on the operational environment. A detailed template for a HSP suitable for most non-operational unit and formation activities is provided in Army Health Instruction No. 2, Health Support Plans [Annex A].

Layout

The layout of a HSP is described in the following paragraphs.

Preliminaries

The preliminaries contain the following:

• the security classification,
• the file number,
• the distribution list,
• the name and appointment of the person who compiled the plan,
• the time the plan was prepared,
• the time zone, and
• references that are relevant to the plan.

Situation

Describe the ground, the area of health responsibility and the current health situation.

Provide a summary of key events to date of a health interest. List assumptions, if any.

Describe the friendly health dependency, including the military unit(s) supported, and the numbers and disposition of personnel, civilians and MWD.
Describe the health threat, including:
• the threat to friendly forces,
• a casualty estimate by phase, and
• enemy HS capabilities and casualty estimates.
Describe the friendly health capabilities.
List the attachments and detachments.

Mission
Provide a clear, concise statement of the HS mission and essential tasks to support the operation.

Execution
Provide the intent, expressed as purpose, method and end state. The method outlines how HS will be provided to meet the commander’s intent. Include the general nature and scope of HS and the scheme of manoeuvre.
Outline the HS concept of operations, including the organisation, the phases, C2 and the health capability roles.
Describe the grouping and tasks, by phases, of the following:
• all land health capabilities, including ground and air evacuation;
• ADF health capabilities; and
• allied health capabilities.
Describe the following tasks:
• the MEDROE – the treatment of members of the ADF, allies, civilians and CPERS;
• preventive tasks and countermeasures;
• evacuation tasks;
• treatment roles and tasks; and
• movement tasks.
Describe the coordinating instructions, as follows:
• timings, including the opening and closing times of health facilities;
• key locations and boundaries, including the locations of supporting health facilities;
• treatment and evacuation priorities, including standards of care;
• holding and staging policies;
Contents

• the evacuation policy, including ground and air evacuation procedures;
• actions on CBRN and MASCAS incidents;
• the protection, marking and notification of HF, vehicles, equipment and personnel; and
• the MEDROE.

Administration and logistics
Describe the following:
• health administration:
  • the documentation of casualties,
  • the medical records kept,
  • casualty reporting, and
  • patient tracking;
• health surveillance;
• health logistics:
  • the supply and resupply of medical, dental and veterinary stores;
  • blood supply and holdings;
  • property exchange – litters and blankets;
  • medical waste disposal; and
  • the guarding of CPERS casualties.

Command and signals
Describe the following:
• the locations of key personnel;
• communications;
• briefings and meetings;
• C2;
• the appointment of the health commander and triage officer;
• CASREG, the holding policy and handover points, and the AME control centre;
• the required medical reports and returns;
• liaison;
• technical control; and
• LOAC issues.

Signature Block

There are several approaches to health planning in the AO. The example provided in Appendix 1 comprehensively illustrates the considerations for health planners. The risk assessment referred to as being in Appendix G to the estimate has been reproduced in Annex B.

Appendix:

1. Staff estimate on health support to Exercise HAMEL 2014
Appendix 1 to Annex A to Chapter 5

Staff estimate on health support to Exercise HAMEL 2014

References:


Introduction

1. **BLUF.** EX HAMEL 14 (H14) health planning considerations vary from previous years due to a reduction in high-risk activities (live fire, airborne or amphibious operations) and conduct in North Queensland (N-QLD). This allows the level of deployed health capability and evacuation assets to be reduced while not increasing the risk profile beyond what was acceptable in previous iterations.

2. **Purpose.** The purpose of this brief is to highlight to DGT the health risks that will exist in EX H14 and the mitigation measures that are available to treat this risk. DGT will need to:

   a. **NOTE** the identified health risks.
      
      (1) **NOTED/PLEASE DISCUSS**

   b. **DECIDE** which health mitigation measures will be implemented.
      
      (1) **AGREED/PLEASE DISCUSS**

   c. **ACCEPT** the resource requirement linked to each mitigation measure.
      
      (1) **ACCEPTED/PLEASE DISCUSS**
3. **Facts.** The following facts were incorporated into the 'health assessment':
   a. Shock Trauma Platoon needs to be certified to meet CAPD tasking;
   b. H14 will not include any live fire activities;
   c. H14 will not include any amphibious activities; and
   d. H14 will not include any airborne activities.

4. **Assumptions.** The following planning assumptions were incorporated into the 'health assessment'. Any significant change to the below planning assumptions will require the health assessment to be reviewed and DGT afforded the opportunity to alter the mitigation measures implemented for EX H14.
   a. H14 international elements (USA/NZ) will conduct an RSO&I program and potentially an operational manoeuvre integration phase prior to H14 STARTEX.
   b. International/Interstate participants will complete an acclimatisation period; or will comply with work/rest cycles during the first 1 to 2 weeks of EX H14.
   c. Range safety network will not have communications ‘black-spots’ across the defence and non-defence training areas.
   d. 16 Bde (Avn) cannot provide S-70/MRH-90 for dedicated RWAME. For planning purposes 2 x CH-47 would be available for opportune evacuation.
   e. Army cannot guarantee 100% availability of Emergency Management Queensland (EMQ) RWAME capability that services the N-QLD region.

**Risk assessment**

5. A health risk assessment (attachment 1) was completed IAW references A-C to identify the deployed health capability that will be required to support the requirements of EX H14. Health risks have been divided into the following categories: environmental; flora and fauna; operational; psychological; physical; and disease. Health risk consequence without mitigation has been assessed as up to 'severe' with likelihood assessed as 'almost certain'.

6. The provision of mitigation measures through the deployment of field health capabilities, acclimatisation processes and the conduct of health specific induction prior to STARTEX will reduce the assessed risk and ensure that EX H14 has implemented controls to reduce risk to 'as low as reasonably practicable' (ALARP). The dispersed nature of EX H14 will see the health risk mitigation measures vary between defence and non-defence training areas.
Close health support

7. **Outline.** Provision of ‘Role 1’ (R1) health to manoeuvre units will be supported through the 1st Close Health Battalion. Existing relationships between manoeuvre Brigades and the CHC will be leveraged to provide the required R1 support. Sufficient R1 asset is available to meet the requirements of BLUEFOR and OPFOR (these elements could assist GREENFOR when located in the vicinity – more detailed planning required as exercise construct is finalised). A limited R1 capability will also be provided to satisfy any minor ailments suffered by WHITEFOR.

8. **Attachments.** Environmental Health (EH) advice and capability for BLUEFOR can be attached from the 2nd General Health Battalion (2 GHB). This capability will mitigate risks posed by vector, water and food borne disease.

9. **Risks.** The following planning risks exist for R1 health capabilities:
   a. BLUEFOR will allocate R1 asset to support tactical planning (within context of scenario), not IAW ‘real time’ medical care requirement.
   b. Provision of R1 capabilities to support BLUEFOR, OPFOR, GREENFOR and WHITEFOR concurrently with 7 Bde CATA could exceed 1 CHB capacity. 2 GHB has been told to prepare for possible supplementation of close health capability deficiencies.

General health support

10. **Outline.** General health support will be provided by 2 GHB. General health support could be in the form of a R2, R2E or Shock Trauma capability. The level of general health support will be dictated by the RW evacuation plan and the amount of risk willing to be assumed by the EX Director. General health support is best located ‘outside the box’ as part of WHITEFOR to minimise any impact on the exercise scenario.

11. The proximity of TFTA to a R4 facility (Townsville General Hospital) provides the opportunity to reduce the level of deployed general health capability. A robust surface and air evacuation plan could remove the requirement for a deployed R2/ R2E capability.

12. **Risks.** The following planning risks exist for R2/R2E capabilities:
   a. Any interruption to evacuation capabilities would have a significant impact on the assessed level of risk.
   b. Evacuation plan (surface and air) would need bolstering to offset increased risk if capability is not deployed.
   c. No deployed holding capacity within TFTA would require all personnel with minor illnesses/injuries to be evacuated to Townsville.
d. No holding capacity within TFTA would require increased staff augmentation to JHC for LBMC, or funding for contract staffing to meet the additional dependency.

Evacuation systems

13. Surface evacuation. Protected mobility and ‘B’ vehicle ambulance variants will be available within TFTA during EX H14. Established TFTA SOP exist for the conduct of surface evacuation down Hervey’s Range Road with patient transfers conducted with the QLD Ambulance Service (QAS) in the vicinity of Rupertswood. Surface evacuation cannot be assured of meeting evacuation timeline requirements.

14. RWAME. The following options exist for provision of RWAME support to EX H14:

a. Military – 16 Avn Bde is ordered to provide dedicated RWAME platforms (current advice from 16 Avn Bde is that this is not possible).

b. Contract – Dedicated civilian RWAME response to operate 24/7 throughout EX H14. This would cost approximately one million dollars.

c. Opportune – Utilise EMQ RWAME services which consist of a Bell 412 (240 km per hour/2 stretcher capacity) and an AW139 (305 km per hour/2 stretcher capacity) out of Townsville and Cairns. No NVG capability, white light will be required to mark LZ at night.

15. TFTA has 11 designated landing zones (LZ) of which 7 are certified for access by EMQ (in an emergency EMQ will fly into a non-designated LZ). TFTA range control has SOP for management of RWAME with EMQ.

16. Risks. The following planning risks exist for evacuation systems:

a. It cannot be assured that evacuation timelines will be achieved if there is no dedicated RWAME or surgical capability within TFTA.

b. Surface evacuation options can only achieve evacuation timelines to Townsville if they are situated in the vicinity of Hervey’s Range Road on the Eastern side of TFTA.

c. QAS and EMQ are responsible for evacuation support to the entire N-QLD region and any surface or air evacuation support will be opportune, not dedicated.

d. Personnel operating within non-defence training areas will be reliant on local civilian evacuation systems.
Recommendation

17. Available mitigation options are outlined in attachment 2. It is requested that DGT review these options and decide which mitigation options they will implement for EX H14. The recommendation from Health Branch is that the following health mitigation be considered:

a. 1 CHB provide BLUEFOR and OPFOR R1 support requirement. 2 Div provide GREENFOR and WHITEFOR R1 support requirement.

b. Due to extended evacuation timelines either:
   (1) Deploy a Shock Trauma Platoon with Light Surgical Team (STP+LST) attachment (43 personnel and 7 x tricons); or
   (2) Task/Contract a dedicated RWAME platform to evacuate Priority 1 casualties to Townsville General Hospital ($XX).

c. Place R1 close health capabilities OPCON to the manoeuvre COMD.

d. Place STP+LST or RWAME capability in WHITEFOR under OPCON of the EX Director to minimise interference/confusion with exercise scenario.

e. EXCON coordinate EMQ RWAME capability through Range Control to leverage existing/rehearsed SOP for evacuation.

f. Task 17 Bde to provide additional augmentation to LBMC to offset additional dependency in Townsville.

g. Establish a WG discussion at the MPC between 3 Bde, 17 Bde and EXCON to coordinate how NODUFF casualty regulation will occur across BLUEFOR, OPFOR, GREENFOR and WHITEFOR.

h. Conduct liaison visit with Townsville General Hospital, QAS, EMQ and LBMC to ensure that all organisations are aware of activities to be undertaken, likely injuries/illnesses and communications systems to be utilised.

Conclusion

18. EX H14 represents a significant shift from previous iterations of this exercise. The shortened evacuation distance, smaller training area and reduced number of high risk activities (live fire, airborne and amphibious) significantly reduces the risk profile. This will allow for a reduction in the level of health support with potential to remove either a deployed surgical capability or a dedicated RWAME capability which have both been utilised in the past. Any changes to the planning assumptions outlined at the start of this brief would require the health risk assessment to be amended.
Attachments:

1. Health Risk Assessment
2. Health Mitigation Measures Table

Consultation:

Appendices (as appropriate):

A. Synchronisation Matrix
B. Scheme of Manoeuvre
C. Task Organisation Matrix
D. Mass Casualty Plan
E. Aeromedical Evacuation Plan
F. Health Component of CBRN Plan
G. Health Risk Matrix
H. If the MEDROE are complex, they should be included as a separate annex to the health plan
I. Veterinary Support Plan
Annex B to Chapter 5

Health risk management

Military risk management matrix

Military risk management (see Figure 5–1) uses the following two types of risk level:

- **Inherent risk.** This is the value in the matrix which corresponds with the likelihood of the risk event and the impact rating of the identified impacts with only the existing controls in place.
- **Residual risk.** This is the value in the matrix which corresponds with the likelihood of the risk event and the impact rating of the identified impacts with both the existing controls and the additional controls in place. If no additional controls have been identified, the inherent and residual risk levels are the same.

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Figure 5–1: Military risk management risk level matrix

Health risk management

Managing risk in HSP uses the same approach and logic that is applied in military risk management. A practical example of a health risk assessment is provided in Table 5–1.
Table 5–1: Example health risk assessment

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<thead>
<tr>
<th>EX H14 HEALTH RISK ASSESSMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Task Description:</strong></td>
</tr>
<tr>
<td>EX H14 will be conducted in a series of live training areas (TFTA) and semi-constructed training areas (CBTA/TTA/Atherton/Innisfail) across North Queensland and will involve troops from Army and Air Force. A small number of foreign troops from NZ and the US will also attend this exercise. Training is designed to test the ISTAR enablers from X Bde and will require deployment of a MCB (BLUEFOR) and Bn Grp (OPFOR) with WHITEFOR and GREENFOR components deployed across all semi-constructed and live training areas. It is expected that up to X personnel would be deployed in support of EX H14. Manoeuvre elements will utilise a mixture of fixed wing, RW, armoured and soft skin vehicle variants throughout the exercise. Integrated manoeuvre activities with mounted and dismounted troops pose the greatest risk to participants. There will be no live fire, airborne or amphibious activities undertaken during EX H14.</td>
</tr>
<tr>
<td><strong>2. Identify Stakeholders:</strong></td>
</tr>
<tr>
<td><strong>3. Identify hazard(s) within task (hazards within the task leading to a consequence):</strong></td>
</tr>
<tr>
<td>Environmental – Heat illness and injury; sunburn; bush fire; cyclone; flood; movement over broken ground.</td>
</tr>
<tr>
<td>Flora and Fauna – Crocodiles; sharks; box jellyfish; snakes; spiders and other stinging insects; stinging nettles; feral pigs.</td>
</tr>
<tr>
<td>Operational – Close proximity blank firing; joint mounted/dismounted operations; vehicle rollover; airmobile operations; night refuelling; night movement; fall from heights.</td>
</tr>
<tr>
<td>Psychological – Cultural integration (foreign forces); separation from family; extended hours; arduous living conditions; observation of a major incident/event.</td>
</tr>
<tr>
<td>Physical – Fall from heights; heat injury/illness; acclimatisation; movement over broken ground.</td>
</tr>
</tbody>
</table>
Diseases – Vector-borne (Ross River, dengue, Barmah Forest virus and tick typhus), waterborne disease (amoebic dysentery, giardiasis and cryptosporidiosis); food-borne disease (similar to waterborne); zoonotic disease (brucellosis and Q-fever); soil-borne disease (mellodosis and hookworm).

**ASSESS**

4. Existing Controls (detail the existing controls [if any] to control the identified hazards):

   - **Environmental** – Existing Defence policy is available for dealing with heat illness/injury. Training area specific response plans exist for dealing with natural disasters and environmental threats.
   - **Flora and Fauna** – Eradication programs and repeated training activities have developed knowledge amongst deploying ADF members.
   - **Operational** – Current training level and standard (TLS) reduces likelihood of incident and policy exists for phased transition through TLS.
   - **Psychological** – Mandated response to critical incidents in accordance with existing Defence policy will reduce the incidence of long-term negative outcomes as a result of any event.
   - **Physical** – Existing policy to be reinforced through the induction presentation prior to STARTEX.
   - **Diseases** – Existing policy in relation to use of permethrin dipping, mosquito nets and long sleeves/trousers will minimise exposure.

5. Detail the consequence of each hazard occurrence (with existing controls in place):

   - **Environmental** – Severe (possibility of VSI or fatality from heat related illness/injury).
   - **Flora and Fauna** – Major (possibility of bite/sting from a poisonous animal/insect/reptile).
   - **Operational** – Major (possibility of significant fall or crush injuries as a result of combined operations or motor vehicle accident).
   - **Psychological** – Major (potential to witness a significant incident).
   - **Physical** – Major (potential for motor vehicle/aircraft accident or incident. Acclimatisation issues could exist for interstate/international troops).


<table>
<thead>
<tr>
<th>Disease – Major (potential for significant water or vector borne disease outbreaks).</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Detail the likelihood of each consequence occurring (with existing controls in place):</td>
</tr>
<tr>
<td>Environmental – Almost certain (number of non-acclimatised visiting interstate/international forces increases likelihood of heat illness/injury).</td>
</tr>
<tr>
<td>Flora and Fauna – Possible (number of forces on the ground will disperse most animals/reptiles and basic precautions reduces exposure to insects and flora).</td>
</tr>
<tr>
<td>Operational – Likely (historical data indicates a likely MVA during in-load/out-load of exercise participants).</td>
</tr>
<tr>
<td>Psychological – Likely (team nature of all military activities indicates that any major incident is likely to be observed).</td>
</tr>
<tr>
<td>Physical – Almost certain (historical data indicates muscular-skeletal injuries will occur during a protracted field exercise).</td>
</tr>
<tr>
<td>Disease – Almost certain (limited outbreaks of gastrointestinal disease are normal given rudimentary living conditions on field exercises).</td>
</tr>
<tr>
<td>7. What level is the highest assessed risk (with existing controls in place):</td>
</tr>
<tr>
<td>Severe.</td>
</tr>
</tbody>
</table>

**CONTROL**

<table>
<thead>
<tr>
<th>8. Detail what additional controls are required to reduce the assessed risks to ALARP (not above low) and who is responsible for implementing the controls:</th>
</tr>
</thead>
<tbody>
<tr>
<td>To be determined when DGT FORCOMD has outlined health support capabilities to be deployed on EX H14.</td>
</tr>
<tr>
<td>9. Detail the consequence of each residual hazard occurrence (with additional controls in place):</td>
</tr>
<tr>
<td>To be determined when DGT FORCOMD has outlined health support capabilities to be deployed on EX H14.</td>
</tr>
<tr>
<td>10. Detail the likelihood of each consequence occurring (with additional controls in place):</td>
</tr>
<tr>
<td>To be determined when DGT FORCOMD has outlined health support capabilities to be deployed on EX H14.</td>
</tr>
</tbody>
</table>
### Contents

11. What level is the highest residual risk assessment (with additional controls in place): Low/Medium/High/Extreme (Delete as appropriate)

<table>
<thead>
<tr>
<th>MONITOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. Monitoring (detail how and who is responsible for monitoring the effectiveness of the control mechanisms):</td>
</tr>
</tbody>
</table>

**Risk Assessment Approval**

**Prepared by:**
(Rank, Name, PMKeyS) | Signature/Date

**Prepared by:**
(Rank, Name, PMKeyS) | Signature/Date
Chapter 6

Health intelligence

At the request of Major-General Downes, the Acting Director of Public Health in Rabaul had drawn up in 1937 a survey of the medical and hygienic aspects of the Territory of New Guinea.¹

Introduction

Health knowledge is critical to clinical excellence, planning, service improvement and rapid adaptation. Health knowledge and governance support technical control of clinical processes. This knowledge exploits health data to improve HS. It consists of reports and returns, health documentation, clinical health governance and operational evaluation.

Health intelligence

HLTHINT is used to plan operational and tactical HS to ensure that the HSP is responsive to the unique aspects of a mission. It comprises general and technical intelligence.

General health intelligence. General HLTHINT results from the collection and processing of health information affecting friendly forces. It also assesses the effects of those health factors on enemy forces. This information is available from open sources in most countries. HLTHINT requirements include:

- global disease outbreaks, especially in areas of anticipated operations;
- health threats in the AO – to establish appropriate prevention and treatment programs;
- the level of compliance with the LOAC regarding the respect and protection of health personnel, facilities and vehicles;
- foreign military, enemy and civilian health capabilities and support infrastructures;

¹. Walker, A. 1957, Australia in the War of 1939–1945: The Island Campaigns, Australian War Memorial, Canberra, p. 2.
Contents

- environmental health factors, epidemiology and morbidity factors;
- the health implications of the operating environment, including topography, climate, fauna and flora; and
- population, attitudes to foreigners, entry requirements (eg, visas, vaccinations and HIV testing), living conditions, nutritional profile, the health aspects of customs/religious practices, languages, drug abuse and prostitution.

Technical health intelligence. This refers to information sourced from professional and scientific conferences, patents, professional journals, the media and site visits. Technical HLTHINT requirements include:

- new CBRN agents or release methods and the effectiveness of prophylactics;
- intelligence concerning the pathological impact of new weapons systems;
- new biomedical technology, such as medical equipment, prosthetics, surgical techniques, pharmaceuticals and medications; and
- biotechnology, including research and development programs of military and medical interest.

Health aspects of the intelligence cycle

HLTHINT is a product of the intelligence cycle, which involves the following four primary phases:

- direction,
- collection,
- processing, and
- dissemination.

Direction. In the direction phase the intelligence staff plans intelligence collection. The health component of the force collection plan is prepared based on the health IR and is developed by health staff. Indicative health IR are detailed in Annex A.

Collection. The collection management cell of the TF HQ controls collection. While health professionals can collect health information, the Geneva Conventions do not extend protection for HLTHINT activities. Sources that can be exploited include:

- Open sources. These include professional journals, government publications, media and research reports, and international disease and environmental alert reports.
• **Friendly forces.** Health information may be provided through free exchange with allies, ADF patients who are treated in local health facilities, visitors to the area of interest and the indigenous population.

• **Observation.** HS personnel report health-related information that could be obtained through casual observation in the course of their normal duty.

• **Reporting.** Health information of potential intelligence value is forwarded through normal intelligence channels.

• **Reference material.** Intelligence and health staff maintain current reference material that may include HLTHINT data.

• **Captured items.** Representative samples of captured medical and dental supplies should be provided to the intelligence staff for exploitation. Remaining captured supplies should be managed in accordance with policy.

**Processing.** Processing, whereby information is transformed into intelligence, is performed by the intelligence staff with support from HLTHINT specialists.

**Dissemination.** The intelligence staff disseminates HLTHINT product to the health staff, HE and supported commanders in accordance with the collection plan. Products can include:

• foreign medical facilities reports, which provide capability information on foreign medical facilities; and

• oral or written HLTHINT reports informing medical staff at tactical, operational and strategic HQ of the relevant health and environmental situation in the area of interest. The format for the HLTHINT report is shown in Table 6–1 in Annex A.

**Health intelligence report.** The purpose of this report is to inform medical staff at tactical, operational and strategic HQ of the health and environmental situation in the area of interest. The format for the HLTHINT report is shown in Annex A.

**Health intelligence responsibilities**

**Health reconnaissance.** This is conducted by health personnel in theatre. A template for presenting information from a reconnaissance is shown in Annex A.

**Intelligence staff.** The intelligence staff produces HLTHINT.

**Health elements.** HE contribute information to the intelligence cycle. They also have extensive IR of the intelligence system.

**Further reading.** Further information on the intelligence cycle and HLTHINT is contained in *LWD 2-0, Intelligence and Health Policy Directive No. 125, Provision of Health Intelligence to the Australian Defence Force Health Services.*
Health surveillance

Health surveillance is the process of monitoring the incidence of wounding, injury and illness of deployed personnel. This requires the systematic collection, collation, analysis, interpretation and dissemination of health information in order to identify health threats and trends in health care. This allows the development of interventions that target the health threat or emerging trend and minimises the numbers of casualties.

The responsibility for collation, analysis and interpretation lies with the senior health officer of the deployed force. All HE are responsible for conducting health surveillance and submitting regular health surveillance reports.

Health surveillance provides commanders and health staff with quantitative data on the health of the force and health threats. This involves the following:

- gathering data from patients’ encounters with the healthcare system and their exposure to health threats;
- classifying encounters in terms of effects and probable causes, and aggregating information to identify trends;
- analysing and investigating trends, and publishing and disseminating the analysis results;
- using the data to conduct investigations;
- designing interventions to control threats and protect personnel; and
- assessing the effectiveness of the interventions.

The uses of health surveillance data include:

- advice to commanders on the health status of their forces;
- the early identification of changing or emerging health threats in an AO;
- the development and ongoing review of health countermeasures, including the AO policy on vaccination, prophylaxis and microbial pre-treatment;
- prioritising the most effective use of HS resources, including the rapid and appropriate tasking of preventive health assets;
- updating HLTHINT databases;
- providing human factor information that can be used to reduce vulnerability by improved warfare system design; and
- quantifying the effects of preventable injury, illness and wounding in deployed forces, such as days lost.
As a member of the World Health Organization, Australia classifies diseases in accordance with the International Statistical Classification of Diseases and Related Health Problems (ICD-10). In addition to providing international standard diagnostic classifications, ICD-10 classifies injuries caused by war-like operations. STANAG 2050, *Statistical Classification of Diseases, Injuries and Causes of Death* is used to describe diseases, injuries, causes of injuries, operations and causes of death.

EpiTrack is the health surveillance tool used by the ADF to capture primary care data during peace and operations. It provides morbidity surveillance and casualty reporting. EpiTrack is used for the following purposes:

- to provide quantitative data to support planning, resource allocation and trend analysis by ICD-10 codes; and
- to trigger investigation, preventive measures or command action to reduce the impact of health threats.

**Health monitoring**

Health monitoring means monitoring a person to identify changes in their health status because of exposure to certain substances. It aims to control exposure to harmful substances and prevent negative health impacts. While health monitoring deals with an individual’s health status, results may be applied to similar exposure groups.

An integrated focus on health issues throughout a deployment, including the post-deployment phase, ensures that the individual is appropriately cared for and provides critical data for ongoing HS planning.

**Annex:**

A. **Health intelligence requirements**
Annex A to Chapter 6

Health intelligence requirements

Health intelligence

Health intelligence report. This report informs medical staff at tactical, operational and strategic HQ of the health and environmental situation in the area of interest. Information on Australian and coalition HF are not to be included in any HLTHINT reports. The report format is outlined in Table 6–1.

Table 6–1: Health intelligence report

| 1. | Security classification |
| 2. | Precedence |
| 3. | SIC: P3A |
|   a. | DTG of release |
|   b. | Report as at (DTG) |
|   c. | Source of information |
|   d. | General information (topography, climate, water) |
|   e. | Demographic, social, political information |
|   f. | Public health information (water supply, potability) |
|   g. | Insect, plant and animal hazards |
|   h. | Military trauma hazards (unconventional weapons systems) |
|   i. | Civilian health services (organisation and administration, civil) |
|   j. | Diseases of military importance (endemic diseases, attack) |
|   k. | Military health services (ORBAT, medical logistics, quality of) |
|   l. | Civilian and military HF (capacity, availability, access) |
|   m. | Medical materiel (production capabilities, stockpiles) |
|   n. | Medical training, research and development |
Intelligence requirements

Diseases. Intelligence regarding diseases may include:

- the endemic diseases in the AO that could affect ADF personnel;
- the important diseases with incubation periods of less than/greater than 15 days;
- the geographic distribution of important diseases in the AO associated with elevation, terrain and vegetation;
- the operationally important diseases limited to select geographic areas;
- the historical trends and variations (incidence, prevalence) of diseases in the AO through a yearly cycle;
- the distribution of disease (communicable, trauma and chronic disease) in the civil population;
- communicable diseases in the AO forecast to be significantly drug-resistant – identify the drug resistance;
- significant disease outbreaks that have occurred in refugee populations;
- disease outbreaks that can be projected in refugee populations if no preventive or corrective measures are taken;
- the risk of introducing new disease problems into susceptible refugee populations;
- the possible effect of the distribution of disease in the civil population on medical support requirements associated with civil–military cooperation;
- the status of AIDS and HIV in the civil population and the estimated HIV seropositivity rate, and the strategic economic and military impact;
- the status of tuberculosis in the civil population and the presence of drug-resistant strains;
- the status and HN management of major zoonoses, especially rabies;
- diseases that pose a direct threat to the operational status of MWD; and

2. Department of National Defence, Canada, and Canadian Forces Health Service Group, Health Services Support to Operations, Department of National Defence, Ottawa.
• diseases that affect the quarantine status of MWD for redeployment to Australia.

Environment. Intelligence regarding the environment may include:
• the environmental characteristics in the AO that could impair the health of ADF personnel (water supply quality/potability, waste disposal practices, the environmental contamination status, the presence of vectors, and heat and humidity);
• the status of public infrastructure such as the piped water supply, the surface water supply, water treatment plants and systems, and sewage treatment systems;
• the major sources and locations of industrial and agricultural pollutants;
• indigenous venomous, dangerous and/or poisonous animals and plants that may be present in the AO and their distribution; and the habitat, terrain and elevation where they might be encountered; and
• the types of local antivenom supplies.

Healthcare infrastructure and capabilities. Intelligence regarding healthcare infrastructure and capabilities may include:
• the number and location of fixed site healthcare treatment facilities located in the AO (number, bed capacity etc.);
• the relative quality of service relative to modern standards of health care (equipment/facilities, staff availability and training/competency);
• the number of major hospitals with a helipad, and the overall evacuation capabilities (air and ground) that exist;
• the capabilities of the healthcare facilities and the services and clinical specialties available;
• the location, capacity and screening capability of major blood banks; and
• the major pharmaceutical plants and their product quality and certification/approvals agencies and processes.

Enemy health capabilities. Intelligence regarding enemy health capabilities may include:
• the types of enemy HS units, and their number and locations in the AO;
• the types and extent of enemy HS;
• the relative health status and health readiness of the enemy; and
• the capacity and readiness of HS structure.
Enemy military capability. Intelligence regarding enemy military capabilities may include:

- the major weapon systems and associated health risk characteristics for combat and other deployments; and
- enemy CBRN capability, types of delivery systems and agents, yields, and the doctrine for their employment.

Public health services. Intelligence regarding public health services may include:

- organisation and administration;
- routine and emergency healthcare capabilities;
- sanitation, sources and potability of water, waste disposal, and pollution;
- drug and substance abuse;
- insect and pest control measures;
- the care and use of animals; and
- veterinary capabilities and infrastructure, including civilian, government and NGO veterinary personnel, organisations, facilities, programs and laboratories.

Fixed healthcare facilities. Intelligence regarding civilian and military fixed healthcare facilities may include:

- locations;
- proximity to airports and seaports;
- addresses and telephone numbers; and
- a description of each facility (including bed numbers); the quality and quantity of the medical staff; the medical and dental laboratories; blood bank, radiology and morgue facilities; and surface/air ambulance.

Military health services. Intelligence regarding military health services may include:

- organisation and structure,
- health doctrine,
- the quality of health care, and
- evacuation plans and capabilities.

Public health programs. Intelligence regarding public health programs may include:

- their administration and organisation;
Contents

- their capabilities;
- their staffing (physicians, nurses and technicians); and
- activities such as health examinations, disease testing, vaccinations and preventive medicine.

**Environmental factors.** Intelligence regarding environmental factors may include:
- the climate and terrain;
- temperature extremes; and
- the fauna and flora, either dangerous or medically significant.

**Diseases.** Intelligence regarding diseases may include:
- problems in the area and at particular locations;
- the level of national concern;
- the programs in place to solve the problems; and
- outbreaks and/or epidemics.

**Demographic factors.** Intelligence regarding demographic factors may include:
- population density,
- migratory habits, and
- the age profile of the population.

**Social factors.** Intelligence regarding social factors may include:
- living conditions;
- customs, religious and gender practices that may affect health care;
- nutrition; and
- attitudes to foreigners.

**Political factors.** Intelligence regarding political factors may include:
- the popularity and stability of the government,
- government priorities for improving health,
- terrorist activities, and
- whether the country has closed or open borders.

**Health reconnaissance.** A template for presenting this information is shown in Table 6–2.
### Table 6–2: Health reconnaissance format

<table>
<thead>
<tr>
<th>Column</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>S</strong></td>
<td>SIZE</td>
</tr>
<tr>
<td></td>
<td>CAPABILITY (R2/R2LM/R2E), CAPACITY (BEDS/CAS STATE/CAS CALC/HOLDING POLICY)/PAR (DEPENDENCY/AME STRAT/ME/HNF)/EXPANSION</td>
</tr>
<tr>
<td><strong>A</strong></td>
<td>ACCESS</td>
</tr>
<tr>
<td></td>
<td>MSR/LOC/SR/FLIGHT LINES/KEY TERRAIN/CHOKE PTS/HLZ/RUNWAY C-130/C-17/CESNA/ROAD IN – SURFACE/WASHOUT/SERVICE ROUTE</td>
</tr>
<tr>
<td><strong>D</strong></td>
<td>DEFENCE</td>
</tr>
<tr>
<td></td>
<td>SUPPORTED?/LOAC/UNSCR/OFOF/THREAT STATE/PERIMETER SY</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td>CONCEALMENT</td>
</tr>
<tr>
<td></td>
<td>LOAC/UNSCR/NEED/RED CROSS POLICY/LIGHT DISC</td>
</tr>
<tr>
<td><strong>H</strong></td>
<td>HARDSTANDING</td>
</tr>
<tr>
<td></td>
<td>AVAIL/PREFERRABILITY/SIZE/SUITABILITY/PRIORITY OF EFFORT/HIGHER FMN</td>
</tr>
<tr>
<td><strong>A</strong></td>
<td>ACCOMM</td>
</tr>
<tr>
<td></td>
<td>OWN/HNF/PERS/CAS/HOLDING POLICY/DURATION/SUSTAINABILITY/SPT SERVICES/SANITATION</td>
</tr>
<tr>
<td><strong>P</strong></td>
<td>POSITION</td>
</tr>
<tr>
<td></td>
<td>GEO LOCALITY/BLUE FCE/WATERWAYS (DRAINAGE)/THREATS/MSR/LOC/APOD/APOE/HLZ</td>
</tr>
</tbody>
</table>
Chapter 7

Specific environments

Cold! I thought I knew it but Korea taught me otherwise. Cold so intense that even the ground was frozen solid and rivers iced up whilst a bone-chilling variable wind swept over the barren landscape.

_PTE Desmond Guilfoyle, 1 RAR, Korea^1_

Introduction

HS is structured to provide timely health care for diverse wounds and illnesses in challenging operational environments. Extreme environments impair human and equipment performance. In addition to amended work–rest cycles and fluid intake, they require specific preventive and treatment actions.

Planners should consider the environmental impact on the provision of HS in tropical, desert, cold weather and CBRN environments.

It is not always practicable to locate the most sophisticated levels of care within the immediate reach of the main military population at risk. The inability to deploy health facilities close to units in contact in various environments requires progressively more sophisticated care between the POI and the delivery of definitive care.

Tropical environment

The tropics (hot-wet and hot-dry) are characterised by high temperatures and humidity. Humidity is seasonal and includes a monsoonal period. Movement is very difficult and ground-based visibility is often limited to a few metres. Good roads away from populated areas are rare.

DNBI can be significant in the tropical environment because of the increased prevalence of communicable diseases, vector-borne diseases, insect and snake bites, and heat casualties. The provision of HS may be affected by the following:

- EOH factors, which need to be considered by operational and health planners before deployment;
- the need to avoid native habitation and areas where the incidence of malaria, dengue or scrub typhus is known to be high;
- acclimatisation, psychological preparation, water discipline, the use of mosquito nets, preventive medication, food hygiene and field sanitation, which are needed to reduce the incidence of DNBI;
- greater reliance on AME as ground travel may be difficult;
- reliance on waterways for evacuation, noting tidal flow and vulnerability to attack;
- monsoonal weather, which may either curtail or halt AME, ground evacuation and medical resupply;
- R1 and R2 HS because of the increased risk of infection and evacuation difficulties;
- isolated FE, as these, regardless of size, require medical self-sufficiency because of the urgency of treatment and evacuation difficulties;
- movement in dense vegetation, which may prevent the establishment of major forward operating bases, thus affecting the location of R2 HS;
- greater psychological stress from an increased sense of isolation and the close vegetation;
- an increase in heat exhaustion, skin infections and discomfort from the heat, humidity and heavy rainfall;
- air-frame and backpack weight limitations, which can affect equipment selection over difficult terrain;
- unserviceable equipment, which may degrade health capability;
- the forward deployment of medical supplies and specialist storage facilities, as enemy action or adverse weather conditions can hinder resupply for protracted periods;
- the need for blood to be supplied forward for surgical teams; and
- the effect of harsh conditions on medical supplies, balanced against uncertain evacuation and resupply, and the need to provide air-conditioning, if available, for storing sensitive electronic equipment and unstable goods.
Desert environment

Desert terrain, which may include steppes, varies considerably. Typically it lacks water and vegetation, where it exists, is sparse. Roads are usually scarce and primitive. Temperatures can vary from over 50 °C to freezing point within a day. Visibility, due to dust or sand, can change from kilometres to metres in minutes. Strong winds and dust storms can last for days. Figure 7–1 shows an evacuation being conducted after an IED attack during a route clearance in a desert environment.

Significant factors that affect the HS capability include:

- troop concentrations, which will be high-priority targets for enemy indirect fire;
- force health protection measures such as acclimatisation, vaccinations, adequate clothing for temperature extremes; sun and glare protection; water discipline; water purification; physical fitness; training in the treatment of local illnesses; personal hygiene; and specific first aid measures for snake, scorpion and spider bites;
- dust and vector control, which is critical for infection control procedures;
- dust and particulate matter, which irritates the eyes and the respiratory tract;
Contents

- medical self-sufficiency, as forces are dispersed over large areas and extreme weather conditions can isolate forces for considerable periods;
- an increased reliance on AME because of dispersion, the lack of infrastructure and, in mountainous desert, major obstacles to vehicle movement;
- temperature, density and dust, which may affect the payload and/or exceed the operating limits of AME aircraft;
- the storage of medical supplies, which requires air-conditioned facilities and refrigeration; and
- maintenance and redundancy of medical equipment, which is crucial to HS because extremes of temperature and the effects of sand and dust degrade the equipment.

Cold environment

Cold weather (cold-wet and cold-dry) can complicate operations, with freezing rain, fog, hard frost, snow and ice, coupled with cold winds and an increase in static electricity. The tempo of operations slows down, time becomes more critical and the effort required to overcome a hostile environment can sometimes be more urgent than defeating an enemy. Figure 7–2 depicts a stretcher carry in Korea.

The following factors affect HS capability in cold environments:

- preventive measures such as acclimatisation, appropriate clothing and equipment, physical fitness, proper diet and the maintenance of morale;
- the priority given to establishing heated health facilities for treatment;
- the fact that cold weather slows the healing process and the potential for an increased rate of DNBI, with generalised hypothermia and injuries and illness such as frostbite and trench foot;
- as BC can deteriorate quickly in cold weather, the need for an emphasis on AME, with alternatives where the weather prevents air evacuation;
- as altitude sickness and continuous operations at altitude can adversely affect health personnel; the importance of a strict rotation policy;
- as rapid weather changes can cause FE to become isolated, the critical need for self-sufficiency;
- a lack of local health infrastructure, which reinforces the need for R3 health facilities for the operation’s duration;
- the requirement for appropriate storage facilities, and the establishment of distribution methods, for unstable drugs and blood;
• the necessity for medical equipment to be suitable for the environment; and
• psychological issues resulting from cold weather, which degrade performance and contribute to personal neglect, inactivity and carelessness.

Figure 7–2: Stretcher-bearers carry a casualty in Korea, 1951

Historical example
In 2005 Australia deployed a medical team to Pakistan and Kashmir as part of Operation PAKASSIST to provide healthcare assistance following a severe earthquake in the area.
The team comprised 140 personnel, including medical personnel, a command element, an aviation detachment, and logistics and communication personnel. Four helicopters provided the mobility to extend medical care from the remote town of Dhanni to assist civilians in the surrounding region who needed medical attention as a result of the earthquake.

Much of the health care provided during Operation PAKISTAN ASSIST was carried out in trying conditions, often in sub-zero temperatures. The medical staff providing the health care had limited road access into remote communities in mountainous terrain.

**Chemical, biological, radiological and nuclear**

CBRN effects in the battlespace are usually localised long-term hazards posing considerable environmental and operational limitations and restrictions.

A CBRN environment is likely to lead to many casualties in the short to long term. This, and the potential reduction in HS effectiveness as a result of a CBRN incident, will result in MASCAS situations. This affects triage, treatment times and holding policies. HS assets may need to be augmented to decontaminate (see Figure 7–3) and treat casualties. Duty periods may need to be reduced by a factor of 50 per cent or more due to the debilitating effects of the environment.

The Australian Army has a very limited CBRN capability. Countermeasures are outlined in *LWD 3-9-7, Operations in a Chemical, Biological, Radiological and Nuclear Environment*.

The side effects of medical countermeasures may degrade a soldier’s performance in the short term. Commanders should be made aware of this in the health planning of any operation where CBRN is a likely risk.

Triage personnel work with decontamination elements to determine whether the casualty requires lifesaving procedures before decontamination.
The supported force is responsible for the decontamination of casualties, clothing, equipment and health facilities. Where possible, casualties should be decontaminated before evacuation to limit contamination of evacuation assets and to minimise CBRN-related fatigue in evacuation personnel.

Decontamination may extend the time for handling wounds, thereby affecting survival rates. A contaminated casevac and treatment chain may be established until the casualty can be decontaminated and handed to a clean treatment area.

The combination of CBRN and conventional injuries requires complex handling and creates an additional casualty management burden. Clinical procedures may need to be modified to accommodate combined injuries such as contaminated shrapnel wounds.

HS elements are not responsible for contaminated personnel. Personnel will be handed to HE after decontamination.
Health facilities should be located in clean areas just outside the hazard area, supported by a downwind casualty decontamination capability. Isolation wards should be established following possible exposure to a contagious biological agent to prevent secondary epidemics.

Commanders should be advised on casualty prevention and the continued effectiveness of CBRN casualties.

Significant factors that affect the HS capability in a CBRN environment include:

- higher casualty rates and different injury patterns factored into casualty estimates, HS plans and medical supplies;
- the requirement for health personnel and patients to have ongoing CBRN protection, via personal protective equipment or collective protective measures;
- increased individual fluid requirements due to the use of protective equipment, making casualty monitoring more difficult and increasing the likelihood of heat stress;
- the psychological injuries that may occur as a result of fear and the reaction to seeing others contaminated;
- indirect casualties due to performance degradation as a result of the use of personal protective equipment, heat illness and the inappropriate use of antidotes; and
- decontaminated walking wounded, who may have to be placed in a casualty bag and made litter patients to prevent further contamination.

Key logistics considerations include:

- an increased requirement for water for drinking and decontamination;
- HS assets with scaled sets of medical and decontamination equipment;
- reliance on an increased resupply of medical supplies, blood products and bottled oxygen, especially as oxygen cannot be produced in a CBRN environment;
- specialised drugs and supplies; and
- the requirement to hold patients in segregated areas, which burdens the logistics system.

It is critical that lead-in and in-theatre training and rehearsals be conducted for CBRN incidents. There will be inadequate numbers of health personnel to deal with MASCAS, so first aid and CFA training has increased importance.

Specific information on CBRN-related health care is contained in Health Manual Volume 13, Chemical, Biological, Radiological and Nuclear Health.
Chapter 8

Employment on operations

We treated severe trauma from machete and gunshot wounds, mine injuries and motor vehicle accidents, as well as various infectious diseases not seen in Australia. We treated everyone, from the newborn to the very aged. We saw the stoicism that was displayed by the many who had lost so much, and who still had a long way to go.

MAJ Beverly Wright, Operation TAMAR

Introduction

The primary role of HS is to preserve combat power. It may also contribute to strategic goals by providing humanitarian health care to civilian populations. Deployed HE should be capable of supporting various lines of effort in all threat environments.

HS is structured to provide critical time health care for diverse wounds and illnesses in challenging operational environments.

It is complex because of the difficulties in locating, treating and evacuating casualties who may be dispersed over large areas and subject to enemy actions. HS personnel and assets may also be subject to enemy action.

Operational phases

The deployment of HS is generally conducted in four phases: pre-deployment, employment, sustainment and post-deployment.

The pre-deployment, deployment, conduct and redeployment of HS will be planned and executed in accordance with the overall brigade or formation movement plan. The unit movements/emplaning officer must understand their roles and responsibilities for the coordination of unit movements/emplaning.

Phased activities are described in Table 8–1.
## Table 8–1: Health support during operational phase

<table>
<thead>
<tr>
<th>Phase</th>
<th>Health support activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-deployment</td>
<td>Operational HS planning&lt;br&gt;Gathering health information&lt;br&gt;HAT deploys with survey team to identify health threats and countermeasures&lt;br&gt;Force medical and dental clearances&lt;br&gt;Immunisation and prophylaxis&lt;br&gt;Training FE in preventive measures&lt;br&gt;Psychological threat evaluation&lt;br&gt;Force psychological preparation&lt;br&gt;Health contribution to force briefings&lt;br&gt;Specialist packaging of health supplies&lt;br&gt;RTA contamination or quarantine issues&lt;br&gt;Early deployment of preventive HE to mitigate environmental and occupational threats&lt;br&gt;Health surveillance and casualty reporting systems&lt;br&gt;Mission-specific training&lt;br&gt;Health preparation of MWD, including quarantine compliance&lt;br&gt;Training of health personnel in the emergency care of MWD</td>
</tr>
</tbody>
</table>


General considerations

The HS is structured to provide health care for a complex spectrum of injuries and illnesses, under critical time imperatives, in challenging operational environments. Extreme environments may degrade human and equipment performance. In addition to carefully managed work–rest cycles, specific preventive and treatment actions are required.
Major unit equipment is containerised for deployment, and needs careful packing and handling to prevent damage during movement.

The physical environment must be considered in the deployment of HS (see Chapter 7).

Deployed HE operate in accordance with the force health protection system, which has the following two subsystems:

- **Primary health care system.** The primary health care system provides primary care to national standards where possible. Primary health care system facilities (including physiotherapy, physical conditioning and reconditioning) have a limited ‘low dependency’ holding capacity for minor injury, sick and mental health cases.

- **Environmental and occupational health system.** The EOH system identifies, assesses and mitigates EOH threats. Two groups provide this capability:
  - EOH detachments provide the basic EOH assessment and control functions organic to a BG and may be allocated to an HS team/patrol base in high health threat environments. The platoon HQ provides an environmental health officer and health inspector to the supported formation S07 cell to provide force health protection technical advice and inspection service.
  - HAT can conduct an extended range of scientific surveys. HAT deploy with all larger JTF, or force extraction teams for smaller operations, where the health estimate has identified significant (or unknown) environmental or occupational risks. The HAT forms part of the intelligence, surveillance and reconnaissance and CBRN defence capabilities.

**Holding policy**

A holding policy is a C2 measure that indicates the maximum time (typically expressed in a number of days) that patients may be held within a treatment facility or an operational theatre. The holding policy is initially a strategic planning consideration. After deployment, operational level planners will implement and vary the holding policy as the situation changes.

The period established by the holding policy starts on the day the patient is admitted to a HS facility.

The holding policy is a guide. The actual selection of a patient for evacuation is based on clinical judgment.

The holding policy provides planning guidance and assists HE to establish schedules. Patients who, in the opinion of the responsible MO, can be RTD within
the prescribed holding period remain in the HF. If they cannot be RTD within the prescribed holding period they are evacuated to the most appropriate HF as soon as possible, provided that travel will not aggravate their condition. In this instance the treating MO does not have to hold the patient for the entire holding policy time before evacuation. This procedure helps free up beds.

While a clinician may recommend that a patient be retained beyond the stated holding policy, this decision should be ratified by the theatre staff. Due to their awareness of the availability of health resources and the operational plan, they are able to balance the clinical and operational risks.

Holding policies may be revised as follows:
- for planned increases in patient numbers, such as immediately prior to offensive operations, to enable beds to be cleared where possible;
- to adjust the number of patients being held in the joint force area of operations (JFAO), such as during a draw-down of the force; or
- when unplanned increases in patient numbers occur, such as in the case of an epidemic or MASCAS.

These situations typically result in an increase in the number of patients requiring evacuation to the main support area, consequently increasing the requirement for evacuation assets and placing pressure on the CASREG system.

The holding policy should match both the capability of health assets and the availability of evacuation platforms.

**Force protection**

DNBI are a constant risk to deployed personnel. HSP and related orders are to include force preventive health measures to reduce or eliminate the incidence of DNBI. This enhances operational health readiness, conserves the combat potential of a force and protects individuals against health threats.

**Protection.** Permanent health personnel are categorised as noncombatants and are entitled to protection from attack under Additional Protocol 1 to the Geneva Conventions\(^1\) (see Chapter 13).

**Employment.** Several obligations limit the employment of HS personnel. While they may carry weapons, they can only use them in their own defence or to defend wounded and sick in their charge.

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Support. While operational commanders are responsible for the defence of health assets from within their own resources, there may be situations in which health personnel will have to take an active part in protecting their own site or a larger area. Health commanders need to consider this in their planning and risk analysis prior to deployment.

Siting. It is critical that commanders carefully consider the site for HS which have unique LOAC implications. HS units should not be placed on the perimeter of a defended locality, but totally within or totally outside any position (if outside, the HS unit will require a security detachment). The location of HF should be as accessible as possible but well separated from fuel and ammunition dumps, reserve forces or other high-value enemy targets.

Commanders should seek legal advice and briefings from health advisers as to the limitations of using noncombatants in the field for activities other than those used for defence of patients and self-defence.

On operations commanders must recognise and accept the risks associated with the employment of health personnel outside their primary defensive and specialist roles.

Defensive and siting considerations should not be considered in isolation when conducting a site appreciation. Defensive measures for CSS organisations can be divided into active and passive defensive measures. Further information on the siting of HE can be found in *LWP-CSS 4-0-1, Combat Service Support in the Theatre* [Chapter 4].

Figure 8–1 shows a large, accessible, level and well-drained HS site.
Preventive medicine capabilities. These include:

- **Role 1.** The EOH detachment provides low-level occupational and preventive health advice and local control measures.
- **Role 2.** The EOH section provides disease outbreak investigation, integrated pest management and vector control programs; local health threat assessments; food and water quality programs; and field sanitation monitoring.
- **Role 2 Enhanced.** The HAT provides disease outbreak investigation, an environmental laboratory and theatre health threat assessment. Specialised staff provide chemical, entomological, epidemiological, medical, microbiological, parasitological, public health, radiological, and scientific services.

Figure 8–1: 1st General Health Battalion, Exercise TALISMAN SABRE 13 – a typical site layout
Lines of effort

Adaptive campaigning requires HS that can support multiple lines of effort, often simultaneously. Each line of effort carries implications for HS, and health organisation and skills need to accommodate diverse tasks within joint, multinational and interagency frameworks. Annex A details considerations for providing humanitarian health care.

In all lines of effort, treatment eligibility matrices and the MEDROE need to be carefully articulated and balanced against the size of the health asset deployed.

Joint land health support

The joint land HS line of effort involves actions to secure the environment, remove organised resistance and set conditions for other lines of effort. The ability to treat and evacuate BC is the major consideration in employing HS in joint land operations. Other considerations include the tactical limitations of HS, especially of forward surgical teams tasked in close support, and the time imperative regarding casualty treatment.

Offensive activities. Employment considerations include:

• The augmentation of R1 and R2 HE as different forms of manoeuvre and threat capabilities affects casualty estimates, the health workload and the location of HE.
• The movement of HE/sub-elements should be coordinated so that casualties can be treated while the other treatment elements prepare to move.
• In conventional warfighting, ground evacuation assets may be pre-positioned to support intense offensive activities such as breaching threat defences and an assault on the final objective.
• A higher likelihood of wounded CPERS may create a need for interpreters and security piquets to facilitate treatment.
• Ground evacuation may be hindered by lengthened and unsecured evacuation routes as FE achieve success.
• Ground evacuation may be hindered as it travels against the flow of traffic, especially during an advance.
• Casualty collection and treatment is extremely difficult under enemy defensive fire, with heavier reliance on hand carriage.
• The need to achieve surprise may prevent the pre-positioning and/or marking of health facilities.
Defensive activities. HS is generally more difficult to provide in defensive activities. While there may be lower casualty rates than in offensive activities, enemy actions complicate the provision of HS. Employment considerations include:

- Predictions as to where casualty densities will be greatest must be considered (e.g., there may be high BC rates as a result of enemy artillery and CBRN weapons).
- There may be an increased number of casualties among health and evacuation capabilities.
- Extra medical supplies may need to be distributed in cases of isolation.
- Depth, dispersion, obstacles, threat attacks and refugee movement may complicate evacuation. Therefore planners need to consider:
  - the integration of ground evacuation routes and obstacle plans;
  - specific routes and movement priorities for ground evacuation assets;
  - redundancy – the use of cargo or other vehicles to evacuate casualties; and
  - the requirement for FE to evacuate casualties while simultaneously withdrawing.
- Mortality and morbidity may increase during retrograde movements due to casualties not reaching surgical facilities within optimum time frames because:
  - the withdrawal may be in contact and AME may be impossible because of enemy action;
  - HS and logistic elements may congest routes, slowing the rearward speed and preventing the forward journeys of ambulances;
  - R2E HE will relocate further to the rear in preparation for withdrawal to prevent movement while holding casualties in postoperative care; and
  - casualties who cannot be evacuated may have to be abandoned and, where this occurs, appropriate health personnel and supplies must be left with them.
- In retrograde operations consideration should be given to synchronisation of the rearward movement of health assets to ensure that patients and/or personnel are protected throughout the manoeuvre.
Protection of the population at risk

The determination of the population at risk is based on force strength, which determines the health dependency and troops at risk of illness or injury.

The population at risk includes coalition forces and other personnel providing support to the Australian effort (as defined in the MEDROE).

The provision of HS to a local population can have an operational and strategic effect. Recent operational experience has shown that this can become the centre of gravity for the operational commander.

This line of effort provides protection and security to threatened populations to set the conditions for the re-establishment of law and order. ADF HE may be part of either a whole-of-government or an international effort. An example is Operation TAMAR in Rwanda (1994 to 1996). The primary mission of the deployed HE was the provision of HS to approximately 5500 UN personnel. However, 75 per cent of the health effort was humanitarian health care for the local population (see Figure 8–2).

Figure 8–2: Medic providing humanitarian care in Kibeho, 1994
Employment considerations include:

- The early deployment of preventive medicine/environmental health/force health protection personnel is essential to evaluate the immediate AO; provide health information and situational awareness; estimate casualty types and numbers; and determine health threats to the population and FE.
- HLTHINT requirements include information on all health and health-related (NGO and infrastructure) assets in the AO.
- Logistics considerations include the operational viability period, local contracts and the development of the supply chain (including Class 8 and cold).
- Robust and enforceable MEDROE should be in place which clearly state treatment eligibility and the capability of land force health assets.
- Commanders need to be aware that any expansion of the population at risk requires a commensurate increase in the health capacity (personnel, Class 8, and equipment) allocated.
- Demographic, cultural, religious and gender sensitivities may affect treatment.
- The skills mix and equipment required to support a civilian population must be considered.
- The requirement for security and protection is an important factor.
- The potential for MASCAS situations must be considered.

Public information

This line of effort seeks to inform and shape the perceptions, attitudes, behaviour and understanding of target populations. The provision of HS (including veterinary support) to a civilian population can positively influence the attitudes of a population, for the following reasons:

- Civilian health facilities are often the first to be destroyed and the last to be rebuilt.
- Local healthcare services may lack personnel, facilities or resources, often as a result of targeting by insurgents or collateral damage.

The provision of health care to civilian populations is complex and requires integrated planning between military forces, NGO and other government organisations. HE should be tasked and provided with treatment eligibility matrices and MEDROE that can be explained to local communities.
Population support

This line of effort establishes, restores or temporarily replaces essential services in communities. It may include defence aid to civil community tasks, defence force aid to civilian authorities, humanitarian relief, peacekeeping and disaster relief.

A force may deploy with a health mission as part of population support, or humanitarian health care may be provided using spare HS capacity. Other examples are as follows:

- Operation VIC FIRE ASSIST was a defence aid to the civil community task during the 2008/2009 bushfire season. The ADF health contribution included two primary HS teams, a psychological support team, RAN dentists to provide forensic support to the Victorian State Coroner and a HAT.

- During Operation PAKISTAN ASSIST the ADF deployed a health team to Pakistan to provide healthcare assistance following the 2005 earthquake. A total of 9500 medical treatments (including five births), at least 4000 immunisations, and 74 AME were conducted.

Indigenous capacity building

This line of effort nurtures the establishment of local and central government, security, police, legal, financial and administrative systems. It may include the provision of transferable skills, the restoration of confidence in local health providers, equipment repair and maintenance, and strategic health planning. This requires education and planning skill sets that are not normally contained within a HS capability.

The sustainability and appropriateness of health standards within the population should be used as the basis of any intervention. However, in long-term engagements with a fragile security situation, the rebuilding of civilian health infrastructure may facilitate land health disengagement.

Multiple lines of effort

Operation PAKISTAN ASSIST in 2005 is an example of ADF HE supporting multiple lines of effort. ADF equipment and supplies were also gifted to Pakistan. This gift supported indigenous capacity building and improved the community’s ability to rebuild after the earthquakes.

Urban environment

Urban areas are characterised by high-rise buildings, commercial and industrial sectors, established infrastructure (see Figure 8–3), and dense residential sprawl. Urban operations pose challenges for HS, particularly in the provision of safe evacuation. Operations are made more difficult by the resident civilian population.
Urban operations are likely to be characterised by high levels of duress and casualties. This imposes unique HS considerations, including the level at which critical care has to be provided, and the challenge of evacuation.

Lessons emerging from recent operations indicate the following:

- HS units need a high degree of autonomy, which includes self-sufficient HS.
- The location, identification and initial treatment of casualties is generally more difficult.
- The ability to provide skilled initial care and to stabilise BC as close to the POI as possible is vital.
- Given the dispersed nature of HS and the difficulties of evacuation, a life-saving surgical capability well forward is vital.
- Evacuation by AME may be impossible.
- Evacuation, when the mode is limited to heavily protected vehicles or by foot, is often delayed, slow and dangerous.

Factors that affect the provision of HS in urban environments include:

- an increased incidence of wounds to the head, neck and chest; small fragment and secondary missile wounds; respiratory problems; fractures; and injuries due to IED, including burns, contusions from flying debris, blindness, crush injuries, embolisms and bleeding from blast overpressure;
increased physical and psychological stress as a result of continuous close physical threat, increased troop density and higher casualty rates;

an increased threat from toxic military or industrial materials such as natural gas, chlorine, ammonia, industrial explosives and fertiliser-based bombs;

the requirement for greater protection of health facilities, as there are no rear areas and non-linear and asymmetric warfare is more likely;

the possibility that enemy TTPs (tactics, techniques and procedures) will differ with different weapon types and uses, targeting primary and secondary responders to incidents, and the potential noncompliance with the LOAC;

a requirement for specially equipped rescue teams to extract casualties from within armoured vehicles and/or buildings or under rubble;

the possibility that AME will be hindered by landing zone security, obstacles, flight hazards and degraded visibility, meaning that secure corridors for AME should be established if possible;

the requirement for R1 and R2 HS to ensure that casualties can be stabilised as far forward as possible and to cope with the dispersed nature of HS and the difficulties of evacuation;

an increased percentage of deaths from snipers, creating a risk to forward treatment elements providing care of BC;

degraded communications because of urban sprawl and high-rise buildings, meaning that supported forces may require other forms of communication with HS assets, such as markers or panels, to signal where they may be found;

the need to stockpile medical supplies as route destruction, vertical resupply and movement through areas under enemy observation and fire may hinder resupply; and

an increased likelihood of providing HS to allies and HA health care to civilians, which requires clear MEDROE while suitable medical supplies and skills should be provided for HA health care.

An example of a surface evacuation vehicle is shown in Figure 8–4.
Counterinsurgency operations

The political nature of an insurgency means that counterinsurgency (COIN) operations are not solely a military effort. Defeating an insurgency requires not only the neutralisation of insurgent military capabilities, but also the resolution of the root causes of the political and socioeconomic grievances that were the catalyst for the insurgents' activities.

COIN requires a comprehensive approach that integrates the instruments of national power. These capabilities should be integrated and flow from the strategic, through the operational, to the tactical level. Effective COIN often utilises task-organised, joint, combined and interagency organisations.

Civilian casualties as a result of military operations are a serious problem with a negative effect on the overall ability of a force to conduct successful COIN operations.

**Force protection.** Insurgents can deliberately interdict and engage CSS elements as they are often considered ‘soft targets’ with limited or no response capability. Therefore, CSS assets must be hardened, have situational awareness and communications, and be thoroughly trained in infantry minor tactics to protect themselves and others.

**Medical symbols.** Insurgents do not always respect or recognise international medical protection symbols.
Health support. COIN is physically and psychologically punishing. Personnel will routinely be placed in stressful situations and the necessity for increased awareness and focus will place constant high demands on individuals.

Casualty rates will be relatively high. Evacuation is often dangerous and time-consuming, given the dispersed nature of HS units and their operating environments. Medical services may be under significant pressure, particularly specialist medical support at R2 and R3 facilities. In some cases (eg, critical incident management) specialists will be required to move forward to provide essential services.

Improvised explosive devices and landmines. IED produce a wide range of injury types to many body regions caused by the full range of injury mechanisms (see Figure 8–5).

Several measures can be taken to augment the in-theatre HS capability, including:

- acclimatisation of the force before deployment;
- regular refresher training for all personnel in CFA;
- the provision of first aid qualified personnel to the lowest level;
• education on force protection measures;
• careful management of health professionals, including the rotation of specialist personnel; and
• maintaining close relationships with coalition partners.

**Special Forces.** SF relies heavily on self-sufficiency for medical treatment and evacuation (see Chapter 3).

**Local health capacity building.** This is important and may require health education and clinical initiatives. In more remote areas HS units should also be prepared to conduct health clinics (general practitioner or nurse) and where possible facilitate dental and veterinary support.

### Littoral environment

Operations in a littoral environment pose significant challenges for health planners, inter-Service liaison and coordination, and casevac. The Gallipoli campaign of 1915 and the Normandy landings in 1944 remain outstanding examples of what can go wrong in amphibious operations.

The shallow waters that exist throughout our region are complex, as shown in Figure 8–6. They comprise a wide range of natural variables that can affect the efficiency and effectiveness of weapons systems. These waters are generally poorly surveyed and contain strong currents and high levels of turbidity, all of which can significantly restrict the freedom of manoeuvre for ADF maritime forces.

Amphibious forces provide the operational and tactical level commander with flexibility, agility and independence across the range of military activities.
Figure 8–6: Environmental characteristics of the littoral battlespace

**Threats.** Threats to an amphibious assault include variable tides, prevailing weather conditions, enemy surface and subsurface elements, and likely substantial artificial obstacles on the air or sea points of disembarkation.

**Amphibious operations**

Evacuation support to amphibious operations has to consider a high probability of casualties, a lack of suitable airfields for fixed wing (FW) AME, and a greater than usual reliance on afloat medical facilities.

**Command and control**

**Commander amphibious task force.** The naval officer commanding the amphibious TF is responsible for all aspects of the planning and conduct of an amphibious operation. These responsibilities include developing the overall plan for casevac.

Amphibious operations present additional challenges for treatment and evacuation. The initial stages of amphibious operations may be associated with the following:

- a high probability of casualties,
a lack of a suitable airfield for FW AME,
• a greater reliance on RAN medical facilities,
• limited space for the deployment and employment of medical capabilities due to other operational priorities, and
• additional reliance on RW assets for essential operational tasks other than AME.

Land forces will have most of their organic medical support assets still embarked during the early stages of an amphibious force lodgement. A typical scenario afloat is illustrated in Figure 8–7.

Figure 8–7: Army vehicles embarked on an amphibious landing platform

Operational planning must consider the early deployment/lodgement of health assets ashore to establish a viable evacuation chain from the battlefield to the afloat medical facilities, using both air and surface means. Other considerations include:

• medical personnel still embarked may be required to assist with evacuation and treatment until health facilities can be established ashore,
• the evacuation plan and preferred destination for casualties will vary during the operation as HF are established ashore,
the regulating HQ will be required to coordinate the evacuation process with the transfer of HS capability ashore,
• the regulating HQ will be required to closely manage the evacuation of personnel to coalition facilities or to other afloat facilities,
• evacuation equipment must be suitable for use in opportunity watercraft or RW aircraft, and
• transport assets may be assigned ‘dedicated’ or ‘on call’ for evacuation for forecast casualty surges.

Special operations casualty evacuation planning factors

It is difficult to provide a generalised concept for evacuation in support of special operations. However, there is usually a great need for self-sufficiency for medical treatment and evacuation. There are several reasons for this, as follows:

• Long range of action. Special operations may be conducted far from conventional deployed HF, lines of support will be long and there may be communications difficulties. Evacuation is provided as part of an extended HS umbrella.

• Hostile battlespace. Special operations are often conducted away from friendly conventional forces or in areas under enemy control, making it impossible to utilise existing civilian infrastructure and making evacuation a high-risk operation.

• Operational security. This needs to be maintained to avoid informing others of the existence of an operation, or attracting enemy attention to it, thereby jeopardising either current or future similar operations. In small group operations that need evacuation, this will effectively end the mission, and evacuation and force extraction will be combined.

• Limited health and logistic support. Due to their nature and complexity, special operations can be conducted in remote locations with extended lines of communications, which can result in limited health and logistic support availability.

• Evacuation challenges. SF present unique evacuation challenges due to the types of operations conducted.

Where evacuation is required, and considering operational risks, assets will be made available to collect and transfer casualties based on standard maritime, land or air evacuation platforms. This will be part of the SF health plan. Evacuation times may be longer than usually accepted.
It is also important to manage patient anonymity throughout casevac.

Annex:
A. Humanitarian assistance/disaster relief
Annex A to Chapter 8

Humanitarian assistance/disaster relief

Crisis planning process should, if necessary, compress the planning steps but not discard them. Historically a major cause of problems in the ADF response to these situations has been a lack of adequate planning.

HS elements may be tasked with providing humanitarian health care to a civilian population. This may either precede or accompany the humanitarian assistance and disaster relief (HADR) provided by civilian agencies and NGO. Health commanders are to understand the roles and mandates of all agencies providing health services in the AO. Effective civil-military liaison is required to eliminate duplication of effort and to ensure that harmonious and cooperative working relationships are maintained. Health planners should develop treatment eligibility matrices and MEDROE that balance HADR with operational HS requirements and capabilities.

HS will usually take the lead from indigenous government organisations or NGO as an enabling effect.

The size of the health force will determine the size of the security force.

Humanitarian assistance in conjunction with warlike operations

HADR tasks may be given to health units within the AO. This may be part of a wider campaign to win the support of the population at risk or as part of support to the HN. Health commanders should be fully aware of the commander’s intent, the MEDROE and the requirements for force protection. It is important that health planners and commanders use the appropriate risk management matrix (see Annex B to Chapter 5) in all phases of deploying health units and personnel.

Humanitarian assistance conducted as a dedicated Defence activity

From a combat perspective the deployment operation is more benign in these situations. HADR may be delivered in Australia; however the physical environment can still be hostile and dangerous (eg, in bushfires, floods or pandemics). HE may be part of a wider civilian response. They will be supported by Australian civilian agencies, indigenous government organisations and NGO. Effective liaison plays a key role in the efficiency of Defence support to HADR in these circumstances.

Emergency Management Australia (within the Attorney-General’s Department), is the Commonwealth agency tasked with coordinating governmental responses to emergency incidents.

JOC plans, controls, conducts and evaluates the ADF contribution to government-directed HADR operations. CJOPS relies heavily on advice from the local ADF commanders who provide the initial response.
Population support historical example

The ADF provided humanitarian support to the tsunami disaster relief effort in Indonesia from December 2004 (see Figure 8–8). Medical and engineering assistance was provided in the North Sumatra and Aceh provinces.

Figure 8–8: Checking the health of an Indonesian patient

The ADF effort was part of a joint, multinational and interagency effort involving the ADF, the NZ Defence Force, the Department of Foreign Affairs and Trade (DFAT), and Emergency Management Australia. The ADF provided the following:

- water, tentage, medical supplies, blankets, emergency provisions and logistical support;
- the Anzac Field Hospital, operated jointly by medical personnel of the ADF and the NZ Defence Force; and
• HMAS KANIMBLA, which delivered engineer personnel and provided floating support and a logistics base for relief and reconstruction work.

General considerations
Considerations for the provision of humanitarian health care include:
• the need for health personnel to understand the mandate, status of forces agreements, memorandums of understanding, the MEDROE, the roles of allies and NGO, and military, civilian and any other agreements;
• security considerations, such as local population access to military facilities, perceptions of bias against groups and differing healthcare standards, which may cause unrest;
• the availability of HN capabilities, including medical infrastructure, public health standards and capabilities, and the quality of health and veterinary services;
• the existence of NGO providing health care in the region and the extent of their programs;
• cultural, religious and gender sensitivities (eg, in blood transfusion procedures);
• preventive medicine, food service sanitation, advice on potable water supplies and waste disposal, vector control, and DNBI prevention;
• the requirement for geriatrics, paediatric and obstetric capabilities;
• environmental and operational conditions that may reduce force and healthcare effectiveness;
• the possible limitation, or even total absence, of HF, meaning that basic services in the affected area may be disrupted;
• the logistic implications of supporting both deployed forces and civilians, including non-standard items such as prosthetic/orthotic devices;
• the general health and education of the local population;
• significant health threats, which may include infectious diseases and indigenous diseases;
• the evacuation of sick and wounded citizens, and repatriation arrangements on completion of treatment;
• the opportunity for the re-establishment of HN health capability and public health resources;
• the need for interpreters to support health personnel;
• the use of joint assets for primary health care or evacuation;
as the animal dimensions of HADR can be significant, the need for veterinary support requirements to be considered early in the assessment process; and

- public affairs support to manage media and information issues.

Compilation of recent lessons for health

Considerations for the provision of HADR health care include:

- the requirement to clearly establish C2 arrangements for a hospital staffed by ADF (including a JTF J07) and civilian medical staff; for example, different drug administration protocols between military and civilian staff can cause conflict in joint military-civilian medical facilities;

- the medical requirement for access to large volumes of medical information, including diagnostic aids, texts, drug dosages and treatment tables, which will strain communications capacity and bandwidth;

- the need for arrangements to deal with a large influx of bodies and remains;

- the fact that most non-medical personnel deployed will not have experienced dead bodies or human deprivation;

- competition for reserve health specialists from military and government agencies and NGO;

- the requirement for return to Australia psychological screening (RTAPS) to be completed in the AO prior to departure; and

- the requirement for outcomes of the RTAPS and post-operational psychological screening to be formally reported to higher HQ.
Chapter 9

Reports, returns and documentation

*If the medical records of the last war are well drafted, information of great sociological importance will be deducible. In the next war, which I imagine will occur at no greatly distant date we shall be able to forecast better what preparations must be made for the fighting forces.*

Sir George Knibbs, Commonwealth Statistician

Introduction

Health reports, returns and documentation, their maintenance and information management provide direct administrative support to healthcare teams. This applies equally to casualties from the ADF or allied forces, CPERS and noncombatants. As such, the health administration system should be compatible with allies' and civilian health information systems.

Health knowledge and governance support technical control of clinical processes. This knowledge exploits health data to improve HS. It consists of reports and returns, health documentation, clinical health governance and operational evaluation.

Robust health information maintenance is important.

Information management

Casualty regulation

CASREG is the process that directs casualties to the medical facility best able to manage their condition in terms of the medical specialty required, the availability of a treatment capability and the medical facility capacity. Regulation ensures the efficient routing of casualties to appropriate treatment facilities to achieve an even distribution of patients. It also informs casually tracking as part of the wider personnel tracking system.

The CASREG cell is to be embedded within the highest level HQ. It is responsible for the coordination of evacuation outside the AO.

As casualties are not necessarily evacuated sequentially through facilities at each level in the evacuation chain, CASREG minimises casualty handling. It prevents the routing of evacuation platforms from one treatment facility to another in an attempt to find available beds or a treatment capability, and ensures an even flow within the treatment and evacuation system.

The key steps in evacuating a casualty using the CASREG system are as follows:

- identify the casualty, including their condition and location;
- prioritise the response, including the determination of fitness for travel by a specific mode;
- task the evacuation platform;
- stabilise the casualty;
- transport the casualty;
- report the casualty’s disposition; and
- report the asset’s disposition/availability.

Casualty tracking

Casualty tracking is part of CASREG and of broader force personnel tracking. It is the precise and continuous monitoring of the location and intended destination of a casualty or patient in the evacuation and treatment chain. It requires transparency and cooperation from all health facilities involved in the casualty chain.

The casualty tracking system identifies when a casualty presents and their subsequent movement through treatment facilities. The system monitors the individual’s health status, readiness implications for the FE of origin, and family and media sensitivities.

The system must accommodate the tracking of ADF personnel in third party evacuation and treatment chains. It must also track casualties from other forces, CPERS, and civilian casualties and patients in the ADF system. As such, casualty tracking involves the transfer of information between and among nations and civil health organisations.

Personnel tracking

A casualty’s geographic location at any time is tracked by the Defence corporate HR system.
Coalition operations
During coalition operations Australian health personnel will be able to access the US Joint Theater Trauma Registry. This is an extensive database of every US HS casualty. It allows for retrospective analysis of HS injuries and the identification of potentially survivable injuries.

Health documentation
Health documentation should be clear and comprehensive. It should be interoperable throughout the AO and use standardised formats. Health documentation provides the following:

- health records of the clinical condition and treatment of each patient so that continuing treatment may be related to past events and the information used to notify the patient’s next of kin;
- information to FE for the preparation of personnel strength returns;
- accurate assessments of pension entitlements;
- statistical records for planning and historical purposes;
- materials for medical research; and
- information that may be used in tracking patients.

Copies of health documents and records (appropriately labelled and packaged) should move with the casualty or patient throughout the healthcare system.

Under ABCA agreements the ADF uses standardised health documentation for treatment, evacuation and reporting. These are usually advised prior to deployment.

Allied health records. HE may admit, treat, transfer and discharge members of allied forces as specified in the MEDROE. Each HE is responsible for providing the appropriate national authority with information concerning casualties of the nation concerned, through the CRC.

Language differences, systems compatibility and record-keeping practices complicate multinational casualty tracking functions, all of which make interoperability evaluation and training paramount requirements.

In any ABCA operation, nationally managed health treatment facilities are responsible for supplying a casualty’s national authorities with information concerning their soldiers, either directly or through national channels.

Where electronic transfer of patient information is not possible among ABCA coalition partners, nations use a manually completed field medical card. Each Army provides its own.
The minimum information required to be recorded and available on each ABCA casualty is as follows:

- service personnel identification number;
- rank or grade;
- surname;
- other names;
- unit;
- nationality;
- religion;
- date/time group (DTG) of injury or illness;
- treatment provided, including DTG and dosage of a medication; and
- DTG of any tourniquet applied.

The patient’s evacuation category is to be noted on either the card or its envelope.

**Medical confidentiality**

As detailed in the Privacy Act 1988 and Health Directive 610, Privacy of Health Information of Defence Members and Defence Candidates, health personnel must maintain medical confidentiality and privacy in any discussions with non-medical personnel. When a member’s condition needs to be discussed with non-medical personnel, the individual’s consent should be obtained if possible. If this is not possible, or where consent to discuss medical details is not given, only general information should be provided to non-medical personnel.

Exceptions to consent requirements apply when the following is the case:

- the information provided is necessary for the safety of the individual or others;
- the disclosure of the information is authorised by law;
- there is a suspicion of unlawful activity or disclosure is necessary for certain law enforcement operations; and
- the patient cannot give consent and information is provided to a person responsible for the patient to enable appropriate care.

The identities of SF personnel should be carefully managed so as not to compromise SF operations.

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2. The Act, as amended by the Privacy Amendment (Private Sector) Act 2000, contains the information privacy principles and the national privacy principles.
Information and statistics

EpiTrack is the basis for the collection, evaluation and monitoring of illness/injury data on all deployed personnel who report for medical treatment, on both an outpatient and inpatient basis.

General reports and returns

Commander’s diary. The commander’s diary, sometimes referred to as a war diary, is a legal record of current operations. All orders, directives and instructions originating from the HQ, both hard copy and electronic, are to be included in the diary. The commander normally designates an appropriate staff officer to maintain the diary. Its contents are described in LWD 5-1-1, Staff Officers’ Guide.

After-action review. The after-action review is a professional discussion of an event, focused on performance standards, which enables soldiers to discover for themselves what happened, why it happened and how to sustain strengths and fix weaknesses. LWD 5-1-1, Staff Officers’ Guide provides guidelines for the use of after-action reviews.

Post-activity report. A post-activity/post-operations report records the outputs of the after-action review, including observations and lessons on what was gained from the activity. LWD 5-1-1, Staff Officers’ Guide provides a suggested layout template for the rapid development of a post-activity/post-operations report.

Lessons identified. In the course of an operation there is always the potential to improve TTP, equipment, doctrine or training. All ranks are responsible for ensuring that observations are recorded and for suggesting possible improvements for the benefit of future activities. LWD 5-1-1, Staff Officers’ Guide provides a simple matrix template which should be widely distributed to ensure maximum input.

Health reports and returns

The requirement for health reports and returns will generally be included in the HSP and SOP. Reports may include:

• casualty situation, update and data collection reports;
• health services infrastructure reports;
• environmental health reports;
• medical situation and spot reports;
• notification of casualties and fatalities;
• notification of diseases;
• health surveillance reports; and
Medical reports and returns

Medical reports and returns to be used in operations are detailed in Annex A. The requirement for a HLTHINT report is detailed in Annex A to Chapter 6.

The requirement for medical reports and returns will be included in the SOP. Requirements for specific operations, as well as timings for submission, are to be detailed in the HSP.

The security classifications to be used in health reports and returns are to be determined through consultation with the operations/intelligence staff and the policy detailed in the OPORD and SOP.

Multinational reports and returns

Any treatment facility may admit, treat, transfer and discharge nationals of other countries. Facilities are responsible for providing reports and returns to the national authority regarding personnel of their nation.

The following publications guide the format, content and distribution of multinational reports and returns:

- ABCA Coalition Health Interoperability Handbook; and
- STANAG 2132, Documentation Relative to Medical Evacuation, Treatment and Cause of Death of Patients.

Captured persons reports and returns

HE holding wounded or sick CPERS should record information and submit reports in the same way as for any other CPERS. Record keeping, reports and returns for CPERS are described in LWP-G 0-1-10, Military Police Tactics, Techniques and Procedures.

Annex:

A. Medical reports and returns
Annex A to Chapter 9

Medical reports and returns

The medical reports and returns used in the AO, detailed on the following pages, are as follows:

- a '9-liner';
- a casualty situation report;
- a medical situation report;
- notification of casualty (NOTICAS);
- medical casualty reporting (MEDICAS); and
- certification of death.

The requirement for medical reports and returns will be included in the SOP. Requirements for specific operations, as well as timings for submission, are to be detailed in the HSP for the operation.

The security classifications to be used in medical reports and returns are to be determined through consultation with the operations/intelligence staff, and the policy is to be detailed in SOP, the HSP for the operation and appropriate administrative instructions.

A '9-Liner'. The evacuation process is initiated by a formatted request (see Table 9–1). Forward evacuation is initiated by a 9-liner. The detail within the request enables the tasking of appropriate evacuation assets and destination facilities. Tactical and strategic evacuation is initiated via a request to the CASREG cell, usually using a movement request or an AME request. The evacuation request formats will be common in a coalition environment to support interoperability and will be confirmed via the HS order. The example shown in Table 9–1 is for illustrative purposes only as these reports change periodically and are mission-specific.
### Table 9–1: Example 9-liner

<table>
<thead>
<tr>
<th>1. Location – Grid at LZ or pickup point</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Call sign and Frequency (at LZ)</td>
</tr>
<tr>
<td>3. Precedence</td>
</tr>
<tr>
<td>A. Urgent &lt; 2hrs</td>
</tr>
<tr>
<td>B. Priority &lt; 4hrs</td>
</tr>
<tr>
<td>C. Routine &lt; 24hrs</td>
</tr>
<tr>
<td>(Pri 1)</td>
</tr>
<tr>
<td>(Pri 2)</td>
</tr>
<tr>
<td>(Pri 3)</td>
</tr>
<tr>
<td>4. Specialist Equipment</td>
</tr>
<tr>
<td>A. None</td>
</tr>
<tr>
<td>B. Hoist</td>
</tr>
<tr>
<td>C. Extraction</td>
</tr>
<tr>
<td>D. Ventilator</td>
</tr>
<tr>
<td>E. Other</td>
</tr>
<tr>
<td>5. Patients by Type</td>
</tr>
<tr>
<td>L – Litter</td>
</tr>
<tr>
<td>W – Walking</td>
</tr>
<tr>
<td>E – Escort (Child Patient)</td>
</tr>
<tr>
<td>6. Security of Site</td>
</tr>
<tr>
<td>N. No enemy in area</td>
</tr>
<tr>
<td>P. Possible enemy in area</td>
</tr>
<tr>
<td>E. Enemy in area</td>
</tr>
<tr>
<td>X. Enemy in area, armed escort required</td>
</tr>
<tr>
<td>7. Marking of LZ</td>
</tr>
<tr>
<td>A. Panel</td>
</tr>
<tr>
<td>B. Pyrotechnics</td>
</tr>
<tr>
<td>C. Smoke (+ colour)</td>
</tr>
</tbody>
</table>
D. Strobe

E. Other (eg, strobe)

8. Nationality and Status

A. International Security Assistance Force – Military

B. International Security Assistance Force – Civilian

C. Military – non-International Security Assistance Force

D. Civilian – non-International Security Assistance Force

E. Opposing Forces/POW/Detainee

F. Child

9. Terrain at LZ

% slope

Vegetation

Obstacles

Security at pickup point

Number of passengers

Vehicle securing site

Direction to enemy

10. Medical Information

Casualty number

A. Age

T. Time

M. Mechanism of Injury

I. Injuries Sustained

S. Signs and Symptoms

Airway clear Y/N
The purpose of the casualty situation report, as shown in Table 9–2, is to inform medical staff at tactical and operational level HQ of the casualty situation within a health service unit.

Table 9–2: Example casualty situation report

<table>
<thead>
<tr>
<th>Serial</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>(b)</td>
</tr>
<tr>
<td>1.</td>
<td>DTG of release.</td>
</tr>
<tr>
<td>2.</td>
<td>Report as at (DTG).</td>
</tr>
<tr>
<td>3.</td>
<td>Health service facility.</td>
</tr>
<tr>
<td>4.</td>
<td>Patients remaining from previous reporting period.</td>
</tr>
<tr>
<td>5.</td>
<td>Battle casualties admitted (total):</td>
</tr>
<tr>
<td>A.</td>
<td>Priority 1.</td>
</tr>
<tr>
<td>B.</td>
<td>Priority 2.</td>
</tr>
<tr>
<td>C.</td>
<td>Priority 3.</td>
</tr>
<tr>
<td>6.</td>
<td>Non-battle casualties admitted (total):</td>
</tr>
<tr>
<td>A.</td>
<td>Priority 1.</td>
</tr>
<tr>
<td>B.</td>
<td>Priority 2.</td>
</tr>
<tr>
<td>C.</td>
<td>Priority 3.</td>
</tr>
</tbody>
</table>
The purpose of the medical situation report, as shown in Table 9–3, is to inform medical staff at operational and strategic level HQ of the health service situation in an AO or support area.

**Medical situation report.** The purpose of the medical situation report, as shown in Table 9–3, is to inform medical staff at operational and strategic level HQ of the health service situation in an AO or support area.

**Table 9–3: Example medical situation report**

<table>
<thead>
<tr>
<th>Serial</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>(b)</td>
</tr>
<tr>
<td>7.</td>
<td>Discharged (total):</td>
</tr>
<tr>
<td></td>
<td>A. Returned to unit.</td>
</tr>
<tr>
<td></td>
<td>B. Transferred to military facilities.</td>
</tr>
<tr>
<td></td>
<td>C. Transferred to civilian facilities.</td>
</tr>
<tr>
<td></td>
<td>D. Deceased.</td>
</tr>
<tr>
<td>8.</td>
<td>Patients held at time of report (4 + 5 + 6 - 7).</td>
</tr>
<tr>
<td>9.</td>
<td>Patients awaiting evacuation (total):</td>
</tr>
<tr>
<td></td>
<td>A. Litter.</td>
</tr>
<tr>
<td></td>
<td>B. Walking.</td>
</tr>
<tr>
<td>10.</td>
<td>Outpatients treated but not admitted.</td>
</tr>
<tr>
<td>11.</td>
<td>Waiting time for initial wound surgery.</td>
</tr>
<tr>
<td>12.</td>
<td>For units with AME teams:</td>
</tr>
<tr>
<td></td>
<td>A. Number of AME missions during reporting period.</td>
</tr>
<tr>
<td></td>
<td>B. Number of AME missions planned for next reporting period.</td>
</tr>
<tr>
<td></td>
<td>C. Number of AME teams out of area and expected return dates.</td>
</tr>
</tbody>
</table>
### Contents

<table>
<thead>
<tr>
<th>Serial</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>(b)</td>
</tr>
<tr>
<td>3.</td>
<td>Medical evacuation status:</td>
</tr>
<tr>
<td></td>
<td>A. Name of unit/organisation.</td>
</tr>
<tr>
<td></td>
<td>B. Number of patients treated since last report.</td>
</tr>
<tr>
<td></td>
<td>C. Number of patients admitted since last report.</td>
</tr>
<tr>
<td></td>
<td>D. Number of patients evacuated since last report.</td>
</tr>
<tr>
<td></td>
<td>E. Number of patients returned to duty since last report.</td>
</tr>
<tr>
<td></td>
<td>F. Number of patients died since last report.</td>
</tr>
<tr>
<td></td>
<td>G. Number of patients presently held.</td>
</tr>
<tr>
<td></td>
<td>H. Number of patients awaiting evacuation.</td>
</tr>
<tr>
<td>4.</td>
<td>Hospital status:</td>
</tr>
<tr>
<td></td>
<td>A. Name of unit/organisation.</td>
</tr>
<tr>
<td></td>
<td>B. Number of operational beds.</td>
</tr>
<tr>
<td></td>
<td>C. Number of available beds.</td>
</tr>
<tr>
<td></td>
<td>D. Significant personnel shortages.</td>
</tr>
<tr>
<td>5.</td>
<td>Medical logistic situation:</td>
</tr>
<tr>
<td></td>
<td>A. Significant shortages of medical and dental (Class 8) supply items.</td>
</tr>
<tr>
<td></td>
<td>B. Significant major equipment deficiencies.</td>
</tr>
<tr>
<td>6.</td>
<td>Mass casualty situation:</td>
</tr>
<tr>
<td></td>
<td>A. Cause.</td>
</tr>
<tr>
<td></td>
<td>B. Location (name/grid reference).</td>
</tr>
<tr>
<td></td>
<td>C. Number of casualties.</td>
</tr>
<tr>
<td></td>
<td>D. Unit(s) affected.</td>
</tr>
</tbody>
</table>
Notification of casualty report. The purpose of the NOTICAS, as shown in Table 9–4, is to inform FORCOMD of a non-elective/unplanned admission to either a civilian or military hospital facility. For deceased (fatal), missing-believed-dead, missing/very seriously ill or very seriously injured, seriously ill or seriously injured, or captured casualties, the initial NOTICAS or notification of fatal casualty (FATALCAS) message (see Table 9–3) is to be sent to the addressees highlighted by the user and must, as a minimum, contain the serials highlighted by the user.

The NOTICAS/FATALCAS must not be delayed while information on the other serials is awaited. In such cases follow-up NOTICAS/FATALCAS messages are to be sent to all addressees.

Table 9–4: Example notification of casualty report

<table>
<thead>
<tr>
<th>Serial</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)</td>
<td>(b)</td>
</tr>
<tr>
<td>7.</td>
<td>Epidemic situation:</td>
</tr>
<tr>
<td></td>
<td>A. Disease.</td>
</tr>
<tr>
<td></td>
<td>B. Location (name/grid reference).</td>
</tr>
<tr>
<td></td>
<td>C. Number of patients.</td>
</tr>
<tr>
<td></td>
<td>D. Unit(s) affected.</td>
</tr>
<tr>
<td>8.</td>
<td>Remarks.</td>
</tr>
</tbody>
</table>

Security Classification (See Note (a))

Special Handling Instructions (STAFF-IN-CONFIDENCE) or (MEDICAL-IN-CONFIDENCE) for 'illness' type casualties

Precedence Action (IMMEDIATE for FATALCAS, Missing-believed-dead, Missing, VSI or SI: PRIORITY for all other NOTICAS)

Precedence Info (ROUTINE)

From (member’s responsible unit, or the unit to whom casualty is first reported, or the military hospital unit)
TO

1. (Service Headquarters) (For Army include address
   ARMY COORD CANBERRA and DGPERS-A)
   (For Navy include DGNPT) (For Air Force include AFO
   DGPERS-AF)

2. (appropriate Command Headquarters) (For Army AHQ)

3. (if appropriate, the relevant unit/establishment and local
   DCO which will provide personal contact in the
   State/Territory in which the emergency contact of the
   member resides)

4. (member’s responsible unit if not the reporting unit and
   local DCO)

5. (if appropriate, Service unit nominated to provide
   compassionate message traffic for members overseas)
   (for example NWCC)

6. DHSB, DSMA, HQDEFCOMMUNITYORG

7. SCMA (for ARMY Other Ranks only) DOCM-A (for Army
   Officers) APA in region for Army Reserve Officers and
   Other Ranks)

8. DEFPAY MELBOURNE (only included for FATALCAS,
   Missing-believed-dead, and Missing classifications)

INFO: 1. INSERT LOCAL AREA HEALTH SERVICE FOR YOUR
REGION

SIC: ABA/(and as appropriate, WUA/WUS, WAL/WAE,
    WAP/WAE)

SUBJECT: NOTICAS (plus amplifying casualty classification
    e.g. FATALCAS, Missing, VSI etc.)

A (Full name of member, rank, Service number, Unit and
    Full-time or Part-time member.) See Note (b)

B (Religion of member)

C (Date of birth, if known)

D (Date, time and place of – insert as appropriate – death/last
    sighting/accident)
<table>
<thead>
<tr>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E</strong></td>
</tr>
<tr>
<td><strong>F</strong></td>
</tr>
<tr>
<td><strong>G</strong></td>
</tr>
<tr>
<td><strong>H</strong></td>
</tr>
<tr>
<td><strong>I</strong></td>
</tr>
<tr>
<td><strong>J</strong></td>
</tr>
<tr>
<td><strong>K</strong></td>
</tr>
<tr>
<td><strong>L</strong></td>
</tr>
<tr>
<td><strong>M</strong></td>
</tr>
<tr>
<td><strong>N</strong></td>
</tr>
<tr>
<td><strong>O</strong></td>
</tr>
<tr>
<td><strong>P</strong></td>
</tr>
</tbody>
</table>
Contents

Notes:

a. NOTICAS message is unclassified except when a higher classification is justified for reasons of security. NOTICAS message is unclassified except when a higher classification is justified for reasons of security.

b. Where multiple casualties are involved, such as in a vehicle accident or aircraft crash, serial A is to read ‘Multiple Casualties see Schedule’.

c. Following last serial of message a subheading ‘SCHEDULE’ is to be added followed by details of casualties involved.

d. For the first casualty, details required at serials A, B, C and G of this message should be listed in the Schedule as A1, B1, C1 and G1, the second casualty as A2, B2, C2 and G2 and so on until all casualty details are listed. Where more than one emergency contact is required to be informed Serial G may be listed as G1A, G1B and G1C.

Notification of medical condition. A MEDICAS is raised by the treating Defence HF staff or the responsible Defence medical authority, after liaison with a civilian HF, for all admissions to civilian or military hospital facilities for non-elective purposes.

MEDICAS messages on psychological issues must be raised by medical staff for reporting purposes. All MEDICAS messages are to be classified as MEDICAL-IN-CONFIDENCE. The format for the MEDICAS is shown in Table 9–5.

Table 9–5: Example notification of medical condition report

<table>
<thead>
<tr>
<th>SECURITY CLASSIFICATION (See Note (a))</th>
<th>MEDICAL-IN-CONFIDENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRIVACY MARKING</td>
<td>MEDICAL-IN-CONFIDENCE</td>
</tr>
<tr>
<td>PRECEDENCE ACTION</td>
<td>IMMEDIATE for FATALCAS,</td>
</tr>
<tr>
<td></td>
<td>Missing-believed-dead,</td>
</tr>
<tr>
<td></td>
<td>Missing, VSI or SI</td>
</tr>
<tr>
<td>PRECEDENCE INFO</td>
<td>ROUTINE</td>
</tr>
<tr>
<td>FROM</td>
<td>Treating Defence Medical Facility</td>
</tr>
</tbody>
</table>
TO 1. JHSA CANBERRA (for XO)
   JHC
   HQJOC (for operational deployments/force assigned to JOC)
   Member’s Health Unit (for SMO or CO – if not the reporting/treating unit)
   Relevant Area Health Service (for SMO)
   For Army – DAH
   For Navy – FLTSPTFOR (for FMO)
   For Air Force – HQAC AME
INFO: Navy – DGNHS
      Air Force – HQHSW
SUBJECT: MEDICAL CONDITION NOTIFICATION
A Defence Instruction (General) PERS 11-2 – Notification of Australian Defence Force and non-Australian Defence Force Casualties
B NOTICAS signal reference
1. Member ID (Name, Rank and PMKeyS number with prefix M for male and F for female)
2. Consent to notify PEC Given/Withheld/Unable (see note (b))
3. Diagnosis, if known
4. Current location of casualty
5. Brief clinical summary
6. Treatment given/planned
7. Prognosis (including estimated time off work/non-deployable (PLAN))
8. Will an update be sent? (If so, when)
9. POC
Certificate of death. An example proforma for the certification of death is provided in Figure 9–1.

![Certificate of death proforma](image)

**Notes:**
MEDICAS message is unclassified except when a higher classification is justified for reasons of security.
If member refuses consent, then only basic information can be provided to PEC.
Chapter 10

Health logistics

Without supplies neither a general nor a soldier is good for anything.

Clearchus, 401 BC

Introduction

The main objective of the health logistics system is to ensure that deployed health services are not jeopardised through lack of critical supplies.

Health logistics is a fundamental part of any HSP and has several distinguishing features, as follows:

• Medical equipment is protected under the Geneva Conventions, but only if stored and distributed separately from other commodities.
• There is a critical interdependence between treatment capability and health logistics support.
• Medical supplies require tight controls and specialised management due to their technical nature, limited shelf life, sensitivity to storage and transport conditions, and national and international regulation.
• The clinical environment requires high standards of accommodation and guaranteed reticulated services such as power and water (the requirement for which increases with the level of care) to effectively complete their tasks.
• Many medical supplies, particularly blood products, have special transport and lift capacity requirements.

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General logistics support

Medical equipment maintenance

Medical equipment is a critical component of patient care. Such equipment can be technically complex, susceptible to the effects of the environment and movement, and difficult to repair, and requires periodic servicing and recalibration.

The maintenance and replacement procedures for medical equipment are to be contained in the maintenance and HS plans for the operation. This includes the provision of redundant equipment and repair pools to accommodate times when equipment is being repaired or replaced.

The maintenance of medical equipment is categorised as follows:

- **Operator maintenance.** Health personnel are responsible for operator maintenance. These procedures are contained in the operator's manual supplied with each medical and dental item.
- **Technical maintenance.** RAEME is responsible for the technical maintenance and management of medical and dental equipment.

Information on the maintenance of medical equipment is contained in the following publications:

- *LWD 4-2, Maintenance Support (Developing Doctrine)*; and
- *Health Manual, Volume 24 Health Materiel* [Chapter 1].

Medical and clinical waste

The health commander oversees waste disposal to ensure that it is done safely and poses no risks.

Engineer and logistic elements and HE work together to collect, segregate, store and treat solid and liquid clinical and related wastes from deployed HF. Clinical and related waste is treated where it is generated, when operationally feasible. Treatment achieves the following:

- waste rendered non-infectious and unrecognisable,
- a significant volume reduction,
- residues suitable for recycling or disposal, and
- minimum levels of hazardous or toxic by-products.

Where clinical and related waste cannot be treated where it is generated, loose bags of waste are placed in a secondary container for transport to a treatment facility. These containers are lockable, rigid and leak-proof and are appropriately marked. The logistics system is responsible for its collection and disposal.

Support engineering

HE are normally self-contained for the initial phase of a deployment. However, support engineering is required to provide more permanent facilities and to reduce the burden on the health and logistics systems. Typical support engineering tasks include:

• the construction of HF using flat-pack accommodation units with the necessary fittings, furniture and sanitary appliances installed (while construction is an engineer responsibility, health staff provide design advice);
• providing a dust-free clinical environment, which prevents condensation and water ingress;
• rehabilitating existing facilities (HE are generally given first priority on any existing buildings that are found to be suitable);
• siting for close access to AME facilities and isolation from sources of noise and dust, with a layout that supports good clinical practice and an efficient flow of casualties (siting and layout considerations are detailed in this publication); and
• constructing, repairing and maintaining services such as the supply of water (potable and non-potable) and electric power. This may require generator backup.

Logistic support

Catering. Patient catering includes postoperative and convalescent diets, 24-hour meal availability and a surge capacity. An MO authorises the special ration requirements for patients. This authority allows catering staff to procure rations not available under the ADF ration scale. Cultural and religious sensitivities need to be considered in patient diets.

Laundry. An organic laundry may be deployed to provide this support at R2E and above. Supporting CSS elements undertake this task at R1 and R2 through a civilian contractor. Operational conditions dictate the most suitable laundry method. Options include:

• the employment of local civilians or the use of contracted laundering services;
• a dispose and replace program; and/or
• the use of integral laundry facilities at R2E level and higher.

Showers and latrines. These facilities are not an Army capability and have to be provided externally. Contract arrangements are considered in the HSP.
Medical supplies

Medical supplies comprise medical and dental stores, pharmaceutical items, medical and dental equipment, and associated repair parts.

Responsibilities
Health and CSS elements are responsible for the supply and maintenance of medical goods.

As medical supplies are protected by the LOAC, logisticians must understand the implications for their transport and storage.

Where legal or LOAC constraints exist, health staff should ensure that medical and dental commodities, including blood and blood products, are managed in accordance with these constraints.

The following responsibilities apply within the health logistic system:

• Health service support. CSS elements are responsible for:
  • the supply and distribution of medical supplies,
  • the distribution of blood supplied through the health staff, and
  • the technical maintenance and repair of deployed medical and dental equipment.

• Health logistics personnel. These personnel are responsible for the oversight of health logistics, managing and controlling the blood supply, operator maintenance of equipment, and the supply of medical gas.

• Pharmacists. Supply elements and HE generally have a pharmacist to meet legal requirements for the request, issue and use of medical commodities and blood. The pharmacist is responsible for technical control and management; issue and tracking; storage, including refrigeration and stock rotation; and drugs security.

Management
Medical supplies are managed in accordance with the management of other classes of supply. However, the following specific points need to be considered:

• Requests for, and the issue and administration of, some medical commodities should be preceded by a professional clinical specialist decision.

• Drugs of addiction in particular are subject to special legislative and legal control.

• Adherence to the provisions of the Geneva Conventions precludes the storage of medical materiel with other commodities.
Stockholding. Stockholding levels are determined by casualty estimates, treatment regimes, holding policies, resupply cycles and storage constraints. Stockholding is expressed as days of operating stock based on anticipated consumption rates. Medical consumption is unpredictable.

Replenishment. Replenishment generally takes place on a combined automatic and on-demand basis. The replenishment process is specified in OPORD. Replenishment includes:

- **Controlled items.** Requests for controlled items (such as restricted drugs or drugs of addiction) are submitted directly to the appropriate logistic element for release and distribution. Blood is distributed to HE by the fastest possible means, normally air.
- **Non-controlled items.** Most medical items are not controlled or restricted and are obtained by demand based on forecast usage.

Sources of supply. Medical supplies are sourced from the NSB, from deployed medical warehouses, through cooperative support arrangements with allied forces or by local procurement. Local procurement considerations include the technical expertise, production capability and quality control of local suppliers.

Distribution and storage. Medical supplies must be stored and distributed correctly to prevent accelerated chemical degradation or loss of potency. Storage requirements are included in the product information for each item. The major factors affecting storage and stability include:

- compliance with the provisions of the LOAC for the protected status of health materiel;
- specific packaging and storage requirements to ensure the safety and efficacy of unstable medical supplies, including temperature control, humidity and/or security measures;
- the specific security and accountability measures for scheduled medications;
- the method of destruction for unstable medical supplies that have not been maintained at the required temperature or have reached their expiry date;
- the specific packaging and handling requirements for substances that are flammable, corrosive and/or radioactive; and
- the special handling of fragile commodities.

Medical gases. Health logistics elements distribute medical gases.
Disposal. Pharmaceuticals and other medical materiel pose serious environmental hazards if disposed of improperly, and may require controlled disposal methods, as follows:

- Expired drugs or materiel are never issued to any external agency, but rather are disposed of in accordance with health directives.
- In some circumstances, certain consumables such as whole blood may be donated to local agencies before the expiry date in accordance with the force gifting policy.
- The disposal of narcotics and other controlled drugs is subject to explicit ADF health directives and Australian legislation.

Blood and blood products

Blood is a critical treatment item. The resuscitation and stabilisation of a wounded and bleeding casualty requires blood replacement. R2E and R3 HF require a secure supply of blood and blood components.

Transfusion services require protocols for sudden demand that have both volume and speed imperatives.

Blood and blood products should be available in large quantities as far forward as possible. As blood is perishable, refrigeration and other storage requirements make its use in forward areas problematic.

Recent coalition experience has shown that the number and severity of casualties can exceed the ability of blood banks to keep up with transfusion requirements. In this case donor panels (also known as ‘walking blood banks’) are established to rapidly supply blood in MASCAS or disaster scenarios. Panels comprise local ADF donors who supplement stocks during surge. While this only occurs in extreme situations because of the limited deployed collection and testing capability, it is a consideration for health planners, particularly in amphibious operations and disaster relief.

Types. Blood and blood products include whole blood, red cell concentrates, platelet concentrates and plasma components. These products are distributed as follows:

- Forward HE will generally use IV fluids;
- R1 and R2 elements generally use red cell concentrates and volume expanders; and
- R2E and R3 elements generally use whole blood and blood products.
Minimum requirements. As a minimum the blood system should meet the following requirements:

- be able to receive blood and blood components of a minimum standard as set out in National Safety and Quality Health Service Standards, Standard 7, Blood and Blood Products;
- possess containers with temperature monitoring data loggers to confirm that blood has remained within temperature parameters during transport in accordance with AS 3864: Medical refrigeration equipment – for the storage of blood and blood products;
- possess a pathology capability to provide blood pre- and post-transfusion testing and cross-matching;
- be able to move, store and distribute blood and blood components and dispose of clinical items used in blood administration;
- maintain the continuity of records from donor to recipient; and
- collect, process and test blood on an emergency basis.

Supply sources. The supply of safe blood and blood products to all surgical elements is mandatory. Blood products may be sourced from the following:

- the Australian Red Cross Blood Service (the preferred source of supply);
- emergency donor panels; and
- third party provision of screened blood and blood products (caution should be exercised as many countries, HN and UN members do not meet Australian standards).

Control. The technical health chain controls blood. The health commander’s staff controls the ordering and distribution of blood in the AO, supported by CSS elements. Blood and blood products are usually distributed by air using AME assets.

Policy. The policy and process for providing blood to an AO is covered in Health Manual, Volume 16, Transfusion Medicine.

Handling of dead

Mortuary affairs is primarily a command responsibility and is a personnel (S1/J1) function.

The mortuary affairs section holds dead bodies/remains until they can be repatriated. Where possible any tubes or devices applied or inserted should be left in place until the coroner has taken custody. Heath documentation will always accompany the body.

Deployed health staff do not routinely conduct post-mortems on ADF members deceased on operations. If a post-mortem examination is carried out, the post-mortem report is a medical document and a copy must be filed in the medical records of the dead person.

The OPORD will detail the procedures for the provision of mortuary support. The Defence Casualty and Bereavement Support Manual [Chapter 3] provides further information on mortuary affairs.

It is not essential that a mortuary facility be co-located with a HF, nor is there a clinical or technical requirement to do so.

While health staff are not responsible for mortuary affairs, they should be aware of the following two documents:

- A Medical Certificate of Cause of Death, commonly known as a Death Certificate, is an important legal document and can only be completed by a coroner or medical practitioner.
- A Certificate of Death is a formal document issued by a state/territory Registrar of Births, Deaths and Marriages or in some cases by a commissioned MO of the ADF.

Details on body recovery tasks can be found in ADDP 3.20, The Military Contribution to Humanitarian Operations [Chapter 3].
Chapter 11

Mental health and psychology support

Introduction

Modern military operations, be they humanitarian, peace support or combat, are complex, multifaceted and dynamic. The challenges faced by deployed military personnel are as much psychological as they are physical, military or political. Deployment can involve demanding and uncertain situations that have powerful effects on the performance and wellbeing of individuals and teams.

Functions

Psychological support to operations is provided across the three phases of the Force Generation Cycle: Readying, Ready and Reset.

Readying phase. Psychological support fosters the psychological readiness of individuals, teams and units/contingents. Psychological readiness is linked to confidence in skills and equipment, effective leadership, morale and unit cohesion. Support can include resilience training and advice to command.

Ready phase. Force maintenance and force enhancement are the primary focus during this phase, both prior to and during operational deployment. Psychological support during the Ready phase includes:

• Force maintenance. Attention is given to eliminating and reducing manpower attrition as a result of psychological factors that threaten operational effectiveness. Appropriate preventive strategies, timely identification and treatment for those experiencing difficulties, and the provision of timely and relevant advice to the command chain are important interventions for force maintenance.

• Force enhancement. Psychology can contribute to individual, team and mission effectiveness by providing specialist support and advice in operational and personnel management areas.

• Critical incident mental health support. Following a potentially traumatic event/critical incident commanders can initiate CIMHS. The aim is to identify individuals at risk following exposure and to provide intervention strategies to mitigate and alleviate possible psychological difficulties.

• Operational mental health screening. This task facilitates the identification of the need for and the provision of early intervention for individuals, and
includes briefings, and, if required, an individual screening interview with a mental health professional or provider. Special psychological screening may be conducted with selected personnel in psychologically demanding and stressful occupations midway through deployment. RTAPS is usually conducted within the AO no later than seven days after a member’s return to Australia (RTA). Commanders are briefed on trends reported by unit members in a way that safeguards privacy and confidentiality. When members of a deployed unit complete RTAPS, the unit’s commander may be advised of trends and issues reported by unit members (this data is de-identified and confidential). This enhances organisational understanding of the human factors associated with each mission to assist in the development of future training and support activities and command decision-making.

• **Decompression.** Decompression refers to the period from when the individual is removed from their active operational role to when they take post-deployment leave. Psychological support can provide individuals and commanders with strategies and advice on how to manage unhelpful reactions and behaviour that may occur when they RTA.

**Reset phase.** Here the focus is on enabling members to reintegrate into their home and work routine. Army group psychology tasks can include mental health surveillance, training, specialist advice and support to commanders.

Individuals identified at RTAPS may require further support. A major activity in this phase is post-operational psychological screening, conducted three to six months post-deployment. This identifies individuals who may require mental HS.

**Principles of employment**

**Psychology support team**

Underpinning the planning process for employment of psychology assets is the use of a PsST as an embedded asset in the deployed force. PsST contain at least two people, one of whom must be a registered psychologist. The team’s composition will be influenced by the nature of the task, the time frame and the operational requirements/limitations.

Some tasks (e.g., psychological screening and CIMHS responses) may require augmentation by additional assets.

Additional psychology assets are usually deployed with force insertion extraction groups to ensure that RTAPS is completed before units RTA prior to the RTA of formed bodies.
Roles of the psychology support team members

The roles of PsST personnel are as follows:

- The psychology officer will coordinate and supervise all the tasks of the PsST.
- The psychological examiner provides mental HS, including psychological first aid and psychological screens. An examiner can only work under the supervision of a psychologist.
- The psychology officer will coordinate and supervise the PsST and provide psychological intervention and support, including psychological assessment, advice to command on mental health and organisational health issues for the AO, and psychological screening.

Roles and tasks of the psychology support team

The role of a PsST on operations is to establish, manage and provide mental health and psychology services to commanders and personnel. It can provide close and general support and delivers the following:

- psychological screening;
- acute and brief mental health interventions;
- psycho-education and mental health awareness programs;
- CIMHS responses;
- advice to commanders on operational mental health issues;
- occupational psychology services (including referrals and limited personnel selection);
- surveys of personnel issues such as morale;
- operational mental health surveillance; and
- support to decompression activities.

Characteristics

The PsST is not administratively self-supporting and requires administrative and logistic support.

Capability

As a guide, a PsST comprising two capability bricks can provide primary mental health care and occupational psychology services for up to 1000 combat force personnel or 1500 combat support personnel.

A PsST is capable of conducting a maximum of eight mental health screens (eg, RTAPS) per screener, per day at a work ratio of three days screening to one day of administration.
More detailed assessment and treatment sessions can only be conducted by psychologists. Psychologists can conduct a maximum of four assessments per day.

Planning considerations

Operational planning

Operational planning for the employment of psychological capability is part of the health planning process. Planning considerations include the number of troops to be supported, the likely requirement for psychological support to identified groups, the intensity of operations and the anticipated rates of mental health injuries. Psychology support requirements will be articulated in operations-specific HSP.

Support

The continuum of mental HS includes:

- **Provision of mental health first aid.** This may involve self-support and/or aid from peers. It may be supplemented by brief intervention with trained mental health providers. Mental health first aid is usually delivered close to the location where functional impairment occurs.

- **More comprehensive psychological assessment and brief interventions or treatment by trained personnel.** This may be delivered near to the location at which a functional impairment occurred, or to a member elsewhere within the AO.

- **Formal clinical assessment and tailored treatment by an appropriately qualified and experienced mental health professional.** Serious and chronic cases of functional impairment may require evacuation from the AO.

- **Psychiatric assessment and treatment, including hospitalisation.** Depending upon the availability of clinical/psychiatric assets, the member may need to be evacuated to the NSB.

Psychological injury management

Members who are not able to reliably or safely perform their primary duties on operations due to the effects of a psychological injury may be evacuated. A few days of rest and recuperation is often sufficient to restore full functionality.

Within medical evacuation priorities, members experiencing psychological injuries are normally categorised as Priority 3. Where there is an immediate concern of risk of harm to self or others, the individual is to be evacuated as Priority 2.

Any redeployment of a specialist capability such as a psychological asset should occur in consultation with the J07.
Limitations

Access to a psychiatrist for specialist medical advice may not be possible in the operational environment. Depending on the communications capability, consultations with a psychiatrist via a teleconference may be available.

PsST provide brief interventions only and are not administratively self-sufficient. They rely on external elements to support movement and logistic requirements.

A psychological examiner cannot provide mental health care or occupational psychology services without the supervision of a registered psychologist.

Integration with other capabilities

PsST can be flexibly deployed and will be force assigned to the appropriate HQ, logistics or HE depending on the nature of the operation.

A PsST can be employed with rehabilitation teams. Some personnel undergoing rehabilitation for physical injuries may also experience mental health and adjustment challenges. Early intervention and education with such personnel can aid with treatment compliance and recovery.

Vulnerabilities

The capacity of the PsST may be overwhelmed in some situations, depending on the tactical situation and what the mission entails. There should be consultation with the chain of command/J07 to determine whether resources need to be reallocated and/or surge capabilities requested. Short notice, on-call teams coordinated through 1 Psych Unit exist to address such instances. The following are examples of potentially overwhelming situations:

- disaster relief,
- humanitarian aid,
- complex warfighting, and
- MASCAS.

C2 arrangements can be complicated as the PsST is usually embedded in a larger support element under command of that element’s CO. Technical control is usually held by the force J07. Technical advice is also provided directly to the PsST by the CO of 1 Psych Unit, a specialist operational psychology asset.

A PsST will rarely exceed five personnel and has limited redundancy. The PsST manages this through detailed forecasting but, when unforeseen potentially traumatic incidents occur, the demand for services may exceed capability.

Networking and information

The PsST requires access to the DRN and DSN.
Chapter 12

Interoperability

There is only one thing worse than fighting with allies – that is fighting without them.

Sir Winston S Churchill (1874–1965)1

Introduction

Interoperability is the capacity to integrate FE to deliver a health effect in land, joint, combined and interagency operations.

At the lowest level, interoperability is a shared understanding of procedures and doctrine, supplemented by basic communication links between commanders. At the highest level, it involves completely integrated forces.

The provision of HS is a vital consideration for joint, multinational and interagency operations. The continuum of HS depends upon close cooperation and effective coordination between contributing elements. Where HS is provided under joint, combined or interagency arrangements, standards of care and accessibility should be comparable to those provided within Australia.

Australia places a high priority on interoperability with ABCA nations given the likelihood of a multinational casualty treatment and evacuation system. Health capabilities should also be interoperable with potential MNF partners.

Land operations

During land operations, HS is typically provided through the organisation hierarchy. This can range from the provision of HS at platoon through to BG level.

The HS allocated to a BG should conduct collective training with the supported force to consolidate habitual relationships. These include, for example, command, understanding of dependencies and TTP.

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Levels of interoperability (see Chapter 5) include:

- the provision of health LO and supplantation of formation health planning/operations staff, inclusive of the CRC function;
- individual MET TECH integrated into platoon-sized FE;
- close health platoons in support of BG;
- a shock trauma team in support of a BG; and
- R2E elements in support of a reinforced combat brigade.

**Joint operations**

The provision of HS to a deployed Australian force is primarily joint and integrated. This interdependence optimises the effectiveness of HS in an AO. Joint HE could comprise health personnel from all Services.

**Joint staff.** In a joint environment the health commander is part of the joint interagency TF HQ and is responsible for providing health staff support to commanders and commanding the activities of deployed health assets above R1. The roles and responsibilities of health staff on a TF HQ are generally the same as for health HQ staff.

**Royal Australian Navy.** The RAN is responsible for the following:

- HS in submarines, in both major and minor fleet units and at base ports;
- health treatment facilities and evacuation in ships allocated to that role in maritime and offshore operations; and
- AME support to maritime operations.

**Australian Army.** The Army is responsible for the following:

- health treatment within the land AO and along the lines of communication where surface evacuation is employed,
- surface evacuation in the land AO,
- forward and RW tactical AME in the AO, and
- landing force HE in amphibious operations.

**Royal Australian Air Force.** The RAAF is responsible for the following:

- HS at fixed or expeditionary air bases;
- the conduct of tactical and strategic AME;
- HS on RAAF aircraft and at appropriate locations in the tactical and strategic (FW) AES; and
• the staging of casualties at fixed or expeditionary air bases in the AES.

Joint units. Where possible, health units are to be staffed by joint health personnel. This increases Service interoperability.

Further reading. Further information is available in ADDP 1.2, Health Support to Operations.

Combined operations

HS to multinational operations is generally the collective responsibility of those nations involved. The objective of health planning in a multinational operation is to ensure that HS is provided in the most effective and efficient manner.

ABCA interoperability doctrine allows a coalition to gain significant benefits within a theatre of operation at the operational level by the following means:
• optimising the health footprint without a loss of effectiveness,
• reducing costs to all contributors,
• making the best use of HN and local resources,
• ensuring that the health needs of the coalition force are met, and
• reducing planning times.

HS to multinational operations requires strict procedures for the integration of processes and the sharing of health information. Medical procedures, information sharing and the degree of integration are agreed before the start of operations and are promulgated in the HSP.

Health planners need to be aware of and fully understand the following:
• the coalition mission,
• the coalition health objectives,
• the coalition concept of HS,
• each contributing nation’s participation,
• Australian caveats and constraints that may affect the coalition,
• the impact of Australian force rotation policies on the operations, and
• Australian and coalition health assumptions.

Irrespective of naming conventions, the skills and standards of health professionals in HN, other countries and other forces may not be the same.
Lead or role specialist nation

The provision of one or more specific medical functions or roles may be assumed by one nation, designated as either the lead nation or the role specialist nation. The lead nation may assume the responsibility for coordinating medical support provided by other nations within its AO. It will often have its own MEDROE and special pharmaceutical and equipment requirements.

Lead nation support may take the following forms:

• the provision of human resources (military and/or civilian) and equipment necessary to deliver all the HS required by a combined force, with that nation being responsible for C2 of the delivery of support; and

• responsibility for C2 of the delivery of HS while other nations contribute resources as agreed, as such a division of effort, while making integration complex, eases the lead nation’s resource load.

The lead nation generally issues a HSP for needs common to all contingents, and a Chief Health Officer is appointed to coordinate and regulate the HS system.

Interagency operations

Health planners should be aware that the ADF health effect may be complicated by several factors in an interagency environment. Therefore it is important when considering the appointment of health LO that they are of appropriate rank and experience. Other considerations include:

• NGO;
• contractors;
• other government agencies (ie, Emergency Management Australia, DFAT, the Department of Immigration and Border Protection and AusMAT); and
• coalition forces and hierarchies.

Coordination is required to ensure that all agencies are dispersed throughout the AO to meet the dependency and to ensure efficiency of effort. NGO may not deal directly with the ADF due to concerns about its impartiality. LO should consider the complexity of interagency operations in dealing with NGO and other agencies.
Command and control

C2 relationships among HS components are defined and embodied in the command directives issued to each national component commander. Australia always retains national command to the integral health level.

**Health component commander.** The JTF health adviser (J07), as the health component commander, has technical control of all clinical capabilities.

**Health element commander.** HE commanders ensure that HS is delivered rapidly, effectively and efficiently in support of the mission. Commanders are identified and appointed on the basis of the type and size of the deployed force.

**Deployed Health Operations Centre.** The DHOC is the health commander’s HQ within the JTF and works directly to the JTF commander as a component HQ (see ADDP 1.2, Health Support to Operations).

The size and responsibilities of the DHOC will vary with the mission, complexity and size of the force. The DHOC controls and coordinates the health effort within the JFAO on behalf of the JTF commander. It also manages the common health picture. On some operations, the DHOC may be tasked with commanding the force-assigned HE on behalf of the JTF commander.

A DHOC can be formed on an existing health HQ or by allocation of personnel to a HQ JTF. It is task-organised based on the mission, the capabilities of assigned elements, potential support from HN or HN partners, anticipated health threats, specific operational environmental factors, the requirement for specialists, and size of the HQ JTF.

**Command relationships**

Operational HS requires centralised control with decentralised execution. Command relationships, establishing supported and supporting relationships either among or between components, help to integrate HS.

**Supported commander.** Supported commanders are responsible for all aspects of an assigned task and are allocated resource priority. They should indicate to supporting commanders their specific mission requirements and associated coordinating instructions. A health commander would be the supported commander on an operation with health and humanitarian care as the primary mission.

**Supporting commander.** Supporting commanders provide forces, equipment, logistics or other assistance to a supported commander as required. They should advise the supported commander on the availability and most appropriate employment of their assets. Supporting commanders are responsible for completing the mission/tasks allocated to them by the supported commander. A
A deployed clinical coordination centre may be established on operations where an R2E or R3 HF is deployed. The centre is the interface between the JTF Health
Commander/J07, HF and individual health personnel. The lead clinician in the centre is the clinical director of the joint trauma system.

**Aeromedical evacuation control**

The aeromedical evacuation control centre is a division of the air and space operations centre in HQJOC. It is force assigned to CJOPS and provides centralised control of assigned AME resources. It is responsible for coordinating and tasking strategic AME from a JFAO to and within the NSB except where other strategic arrangements exist.

The CRC/patient evacuation coordination cell, in conjunction with operations staff, manages and prioritises tasks for forward and tactical RW AME, considering the availability of platforms and HF.

**Health liaison.** This is provided by the health LO.

Commanders and staff require health situational awareness to inform risk management and operational decision-making. Situational awareness is maintained by health LO embedded within their HQ.

Health LO should clearly communicate their health requirements to civilian, diplomatic and military stakeholders. A robust civil–military liaison system is required to eliminate duplication of effort and maintain harmonious and cooperative working relationships.

Health liaison will be established with other government agencies, coalition partners, international government organisations, local hospitals and NGO. Specific points of contact should be identified at every level of the relevant organisation’s structure.

The detailed duties of a health LO will be mission specific; however, their broad responsibilities are as follows:

- to maintain situational awareness and ensure the two-way flow of information and intelligence between the LO’s HQ and subordinate HE,
- to coordinate the health effort,
- to manage patients and the transfer of clinical data between the sending and receiving organisations, and
- to ensure effectiveness and continuity of treatment and evacuation.

**Considerations.** Considerations for planning HS for multinational and/or interagency operations include:

- the use of existing cooperative support agreements with other TCN;
- the specified standards of care for the operations, as it is an Australian responsibility to provide health care above the agreed specified standard;
• varying standards of preparedness, underlying fitness and health care between TCN, as these will affect casualty estimates when Australia is the lead nation and responsible for planning;
• the fact that some elements of support will inevitably remain national and operate in parallel with lead nation arrangements;
• differing blood supply policies among nations; and
• the requirement for Australian health personnel to understand the differences in terminology and health capabilities of TCN.

Notification of death. This is a national prerogative. When a patient (military or contractor) has died, the responsible health commander must notify the force or country to which the patient belongs. The MEDROE is to state this obligation.

Further reading. ADDP 1.2, Health Support to Operations is the primary ADF reference for multinational and interagency operations.

Support from civil sector on military operations

The provision of HS may rely on support and assistance from international health agencies, government health organisations and philanthropic organisations. Effective liaison between the ADF health system and the civil health infrastructure is required to facilitate this support.

Support available from the civil sector can include specialist services that may be available within the AO on a contract basis to complement health capability in theatre.

Host nation support. This comprises the civil and military assistance provided to a force that is located in, or transiting through, HN territory. It may include:
• the provision of goods and services, arranged by the logistics staff;
• the acquisition of health items from the HN;
• the consumption of HN products or services; and
• the provision of locally employed civilians in HF.

Status of forces agreement. The J07 is responsible for ensuring that health issues are included in the SOFA. These include the provision of medical supplies, access to medical facilities and the disposal of clinical waste.

Another important element of the SOFA is clinical credentialling (currency, national registration and licensing with an accredited training body/board) of the deployed health workforce. This is a particularly important consideration when treating HN personnel.
Philanthropic organisations. The functions of philanthropic organisations complement HS. They can provide comforts, amenities, equipment and entertainment. For example, the Australian Red Cross Society provides aid to sick and wounded persons receiving hospitalisation or convalescing while serving in Australia or overseas. The international body (the International Committee of the Red Cross) provides assistance to CPERS.

Within the national support base. Where Army health assets are deployed in support of disaster relief organisations they may be able to draw on national, state and territory health and logistics assets. The Australian Red Cross Society also provides aid, especially blood products.

Further reading. HS has to operate within the civil–military framework established for an operation. *LWD 3-8-6, Civil–Military Cooperation* is the primary reference for this framework.

Support to civil sector on military operations

Inherent in the delivery of health care are the risks associated with assuming tactical responsibilities for the provision of services that would normally be within the remit of civil agencies. Poorly planned HS has the potential to create discord within the local population, in particular where short-term effort is not supported by long-term provision.

While there is no absolute obligation to accept civilian wounded and sick, once civilian patients have been accepted it is not permissible to discriminate against them on any grounds other than medical.

The HSP should consider treating civilian casualties (eg, obstetric and paediatric) in the AO.

Planning. Planning requires timely intervention over the course of a defence response (see Figure 12–1) where a civilian population is involved.
Noncombatant evacuation operations. Noncombatant evacuation operations are conducted in support of DFAT. When their lives are endangered by war, civil unrest or natural disaster, Australians and approved foreign nationals are evacuated to Australia or to safe havens. HE may be tasked with the following:

- tailoring an appropriate health response to the situation,
- providing HS to FE, and
- health screening and treatment of evacuees.

The provision of HA is described in Annex A to Chapter 8, and noncombatant evacuation operations are described in ADDP 3.10, Noncombatant Evacuation Operations.

Support to civil sector in non-military operations

HADR can be carried out as a standalone operation. HE may be tasked with the following:

- providing HS to the deployed force;
- supplementing local health assets; and
• indigenous (ie, local) capacity building with civilian health agencies.

The health aspects of HADR are likely to differ from those in other military operations, particularly concerning injury and illness profiles, the population mix, and the structure of the medical response required. HS could include the provision of AME teams, supplementary health teams, preventive health teams, and CIMHS teams.

When planning blood support for HA missions operational planners should consider the balance of local blood groups based on ethnicities, the proportion of patients likely to be of child-bearing age and paediatric care.

Civil–military cooperation. The role of civil–military cooperation is to act as the interface between the military and civilian population in the AO (see LWD 3-8-6, Civil–Military Cooperation).

Defence Assistance to the Civil Community. The Defence Assistance to the Civil Community tasks do not involve the use of force. The joint operations support staff is the lead ADF co-ordinating body. The main health effects are prevention, treatment and evacuation.

Health references

ABCA and NATO health references are listed as follows (the list is not comprehensive and changes regularly).

Australian references include:
• HB 1/2014, Provision of Emergency Health Support to Civilians;
• Defence Assistance to the Civil Community Manual; and

ABCA references include Quadripartite Standardization Agreements.

NATO references include:
• AJP-4.10(A), Allied Joint Medical Support Doctrine;
• NATO STANAG 3204, Aeromedical Evacuation and other Standardization Agreement publications; and
• Allied Quality Assurance Publications.

Other references are as follows:
Contents

- Multinational Planning Augmentation Team, *Multinational Force Standing Operating Procedures*; and
Chapter 13

Geneva conventions

Introduction

The aim of the Geneva Conventions and protocols, and the subsequent Commonwealth Acts that ratify them, is to protect the victims of armed conflicts and the personnel responsible for providing treatment and patient care. They recognise the unique rights and obligations of health personnel to assist the wounded and sick during conflicts.

As Australia is a signatory to the Geneva Conventions and protocols, health personnel should understand the provisions that apply to H&S activities. They should further ensure that the tactical commander understands the consequences of violating the conventions.

All ADF personnel should understand that under Australian law they must adhere to these conventions.

The health implications of the Geneva Conventions include limitations on the employment of health personnel, priority of health treatment on the basis of clinical need, and special provisions regarding the abandonment or capture of medical materiel, facilities and personnel.

All ADF personnel are responsible for ensuring that their conduct complies with the LOAC.

An emerging trend in asymmetric warfare is that the enemy may not recognise or observe these protocols. This has implications for siting H&S and planning in the event of the death or capture of health personnel or assets.

Where a threat exists from non-state actors, commanders are empowered, subject to legal and policy advice, to remove the Red Cross insignia and fit a mounted weapon system for the protection of that platform and those within their care. However, it loses the protection that the emblem would otherwise confer.

Protected status

Protected persons, objects and localities must not be attacked. Health-related classes with protected status are described in the following paragraphs.
Sick and wounded. The wounded and sick are noncombatants and must not be attacked, provided they refrain from any further participation in hostilities.

Medical personnel. Medical personnel are noncombatants and are protected as long as they do not participate in hostilities. Categories include:

- Persons on the permanent staff of health establishments, if captured, are protected against becoming a POW. They are classified as retained personnel, and are only retained by the capturing force for the purpose of providing health care to their own troops.
- Any person temporarily assigned to medical duties, such as soldiers who are carrying wounded from the battlefield, are protected while conducting medical duties.
- Military and civilian personnel are protected while assigned exclusively to medical tasks, the administration of medical units, or the operation or administration of medical transport.

Veterinary personnel. Medical and veterinary personnel are separate and exclusive groupings in the Geneva Conventions. The presence of veterinary personnel in a medical unit does not entitle them to special protection and privileges.

Health elements, facilities and transport. These are all protected. This applies to any form of medical transportation, whether by sea, land or air. Their immunity ceases once they are used for hostile purposes and outside their humanitarian purpose. The rules governing the use and protection of medical aircraft are described in ADDP 06.4, Law of Armed Conflict.

Health materiel. Health materiel includes all equipment and supplies used exclusively for the benefit of the wounded and sick.

Civilian medical facilities. Civilian medical facilities are entitled to the same protection as military medical units.

Protected symbols

Several internationally recognised symbols and markings are used to identify protected persons, transport, facilities and materials (see Figure 13–1).
The main symbols and markings include:

- **Red cross.** A red cross on a white background is the internationally accepted symbol for protected medical and religious personnel, facilities, transports and activities.
- **Red crescent.** Muslim countries use a red crescent on a white background.
- **Red crystal.** The Red Crystal (a hollow red diamond on a white background) is another protective symbol for the purposes of the Geneva Conventions.
- **Oblique red band.** An oblique red band on a white background is used to designate hospital zones and safe havens for noncombatants.

As far as possible given the circumstances of a conflict, medical personnel, units and transports must be clearly marked with the protective emblem, as follows:

- **Personnel.** ADF health personnel are to wear the emblem on both their headgear and clothing. Temporary health personnel wear the armband when employed in health tasks, such as orderlies or stretcher-bearers. Identity cards are to be issued to medical personnel regardless of whether they are of permanent or temporary status. Under no circumstances are
they to be deprived of this identification. The content and format of an identity card are described in \textit{ADDP 06.4, Law of Armed Conflict}.

- \textit{Facilities}. Fixed and mobile HF should fly a flag portraying the protective emblem. If the unit belongs to a neutral state, the national flag should be flown together with the flag of the belligerent to which it is attached.

- \textit{Aircraft}. Medical aircraft should be marked clearly with the protective emblem, together with the national emblem, on their lower, upper and lateral surfaces, as well as with any other emblems that may be agreed upon by the parties to the conflict.

Use of the protected symbols is strongly recommended but not compulsory. If a belligerent knows that a person or facility is protected under the Geneva Conventions, the protected status of the facility or person must be respected. In practice it may be very difficult in combat for an attacker to identify and distinguish the unmarked protected person or facility.

A commander may choose not to display the protective emblem, as in the following examples:

- to conceal a military deployment which by necessity has to be located near a military objective, for example, a medical transit post adjacent to a military airfield; and

- where an enemy unlawfully targets medical personnel, a military commander may order military personnel not to wear their brassard and to reinstate the brassard without jeopardising their special protection.

Persons protected by the LOAC renounce any of their rights or obligations, regardless of whether they are either marked or unmarked. The protected status of medical personnel does not change, regardless of whether or not the symbol is displayed. The improper use of protected symbols is prohibited.

\textbf{Health implications}

\textbf{Limitations on employment}

Health personnel are noncombatants and must abstain from all acts of hostility and any intervention in military operations. They cannot be employed in any military actions other than self-defence and the protection of patients. As such they cannot be used as observers, in listening posts or on perimeter security. Limitations include:

- \textit{Self-defence}. Health personnel may carry small arms to defend themselves and their patients. They must not resist either capture or control, but may use force if the enemy fires upon the HE in contravention of the LOAC.
Guard or piquet. Health personnel may provide a security piquet for a HF without jeopardising their non-combatant status. Any use of force by a HF security force (whether health personnel or security forces) must be limited to their own and/or patient defence, and may not oppose the occupation or control of the HF by the enemy.

Weapons. Permanent health personnel may carry light individual weapons for their own and/or their patients' defence.

The limitations on the employment of health personnel affect the siting of HF. HF should not be placed on the perimeter of a CSS battalion or force support group layout, as health personnel cannot contribute to perimeter defence or provide supporting fire to other FE. Additionally, the HF must be separated from military targets such as fuel and ammunition stores.

Priority in treatment

Priority in medical treatment can only be determined on the basis of medical need. Health personnel cannot be compelled to give preferential treatment to any sick or wounded person, except on medical grounds, nor to carry out any act incompatible with either their humanitarian mission or their medical ethics. No person may be punished for carrying out medical activities in accordance with medical ethics, regardless of the nationality or status of the person treated.

Abandonment and capture

Medical materiel. When capture by the opposing forces is imminent, medical and dental materiel must not be intentionally destroyed. Every attempt should be made to evacuate medical and dental materiel and equipment. It is a command decision to abandon such materiel. Captured medical and dental materiel is neutral and protected property, and is not to be intentionally destroyed if it is functional and safe. It is treated as follows:

- A sample is sent for analysis and classification.
- If suitable for use, supplies may be used by retained health personnel to treat CPERS, or provide aid to the civilian population or refugees.
- If unfit for use or not needed by friendly forces, the captured items may be abandoned for the use of opposing forces following a command decision to do so.

Sick and wounded. A party to an armed conflict, if compelled to abandon wounded and sick, must, so far as military considerations permit, leave medical personnel and equipment to care for those left behind. The presence of such medical personnel does not exempt the enemy from providing additional assistance that may be necessary.

Medical personnel. Captured medical personnel do not become POW; instead they have special status as retained personnel. They must be treated as CPERS
and be provided with all necessary medical facilities to care for their own CPERS. CPERS who are medically qualified but not attached to the medical branch of their own forces may be required by the detaining power to exercise their medical functions on behalf of CPERS. Although prisoners, they are to be treated as medical personnel and exempt from non-health-related work.

**Health facility.** If a complete HF is captured, the facility continues to function as it was before capture, other than C2. The status quo remains until the enemy can make complete arrangements for the care of the wounded and sick.

**Captured persons.** Sick and wounded combatants are to be protected and respected, treated humanely, and cared for by any detaining power without any adverse discrimination. Each camp is provided with an infirmary for the treatment of CPERS. Retained medical personnel may be employed but, if they are not available or the numbers are insufficient, ADF health personnel must be tasked. Fit CPERS may be employed as stretcher-bearers for sick or injured CPERS.

Medical considerations for CPERS include:

- Upon capture, any urgent or necessary medical treatment should be provided according to strict medical triage criteria (regardless of whether they are CPERS or friendly forces).
- CPERS are examined, treated, evacuated and transferred to normal CPERS facilities using the same clinical criteria that apply to RTD of friendly forces.
- While nations may provide centralised CPERS treatment facilities, the capturing nation remains legally responsible for CPERS, wherever they are held or treated.
- Special facilities are to be made available for the care of disabled CPERS and for their rehabilitation pending repatriation.
- A CPERS whose condition necessitates special treatment must be admitted to any civilian or military unit where such treatment can be given.
- CPERS cannot be prevented from seeking medical attention.
- CPERS are to be adequately guarded by security forces or the military police.
- All necessary preventive measures are to be taken to ensure the cleanliness and health of camps and to prevent epidemics.
- An adequate diet and suitable medical and dental care must be provided.
- Medical inspections of CPERS are to be carried out at least once a month.
- Regular checks must be made on the fitness for work of those prisoners who are compelled to work and to exempt those who are unfit.
- An official inquiry is to be made if a CPERS dies or is injured.
Planning considerations. Given political and strategic guidance, commanders and their staffs will need to address the following:

- the location of HF in relation to combat FE and logistic facilities;
- the extent to which mobile HF in forward areas are to be camouflaged, and for which phases of an operation;
- which HF locations are to be notified to the enemy;
- the extent to which guards or piquets may be assigned to those units;
- weapons that may be carried by health personnel;
- arrangements for guarding CPERS casualties in HF;
- whether all surface evacuation transport is to be marked;
- the extent to which aircraft are to be dedicated to the AME role and marked, and thereby claim protection; and
- the defence of patients, visitors, mobile HS assets and landing zones, if applicable.

Loss of protection

Protected persons cannot renounce their rights. However, they lose their protected status in the following circumstances:

- when they engage in hostile acts, or attempt to shield military objectives from attack, other than in circumstances in which:
  - they use arms in self-defence or for the defence of the wounded and sick;
  - they are used as guards, piquets and sentries for HF protection; and
  - small arms and ammunition taken from the wounded and sick are found within a medical element;
- when an otherwise protected person in the territory of one of the belligerents is suspected of, or engaged in, activities hostile to the security of that state; and
- when an otherwise protected person in an occupied territory is detained as a spy or saboteur.

If medical facilities are used for military purposes inconsistent with their humanitarian purposes, the right to special protection is lost.
Before the protection of medical personnel and facilities is lost, a warning will normally be provided and reasonable time allowed to cease improper activities. In extreme cases, overriding military necessity may preclude such a warning.

The following are examples of harmful acts:
• sheltering unwounded combatants or fugitives in a hospital;
• making a medical establishment or unit a depot for arms and ammunition;
• setting up a military OP in HF or vehicles; and
• deliberately placing a medical unit in such a position as to prevent an enemy attack or to shield military objectives from attack.

Scenarios

The following scenarios illustrate some issues arising from the Geneva Conventions:
• Scenario 1. A HS soldier, wearing a Red Cross armband, in their weapon pit sees enemy forces attacking a neighbouring unit. At no stage is enemy fire directed at the soldier or the HE location:
  • **Question 1.** Can the HS soldier fire on the enemy?
  • **Response 1.** No. The HS soldier has the obligations that accompany being a noncombatant and hence can only fire in self-defence or in defence of the patients.
  • **Question 2.** Is the answer any different if the soldier is not wearing the Red Cross armband?
  • **Response 2.** No. The armband does not confer the obligations. This status arises from the soldier being assigned to a HS unit.
• Scenario 2. An RAAOC company clerk assigned to a HS unit has concerns about wearing a Red Cross armband in the belief that they will be asked to provide health care to a casualty beyond their first aid training:
  • **Question 1.** Is the clerk classified as permanent health personnel?
  • **Response 1.** Yes. Their duties are such that they are exclusively engaged in the administration of a HF.
  • **Question 2.** Do the Geneva Conventions require the clerk to wear a Red Cross armband?
  • **Response 2.** No. According to the Geneva Conventions there is no requirement to do so. The rights and obligations under the Geneva
Conventions accrue by the assignment to the facility, not the use of the armband.

- **Scenario 3.** An RACT driver is delivering rations to a surgical platoon as part of a schedule that will see them deliver other stores to the infantry battalion and other regimental echelons:
  - **Question 1.** Are the driver and the vehicle entitled to protection under the Geneva Conventions?
  - **Response 1.** No. They are not exclusively engaged in the administration of a HF.
  - **Question 2.** What if the driver was assigned to a HS unit and the stores run is related only to stores for use by HE?
  - **Response 2.** Yes. In this case the driver would be seen as permanent health personnel under the Geneva Conventions, and as such they, the vehicle and the stores are entitled to protection.

- **Scenario 4.** An infantry section is detailed to provide a security detachment to a HS unit. They see an enemy element infiltrating a neighbouring unit. The enemy have not fired upon anyone:
  - **Question 1.** Is the infantry section permitted to fire on the enemy elements?
  - **Response 1.** No. They are only permitted to fire in defence of themselves and the HF.
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*Walker, A 1957, Australia in the War of 1939–1945: The Island Campaigns, Australian War Memorial, Canberra*

End matter

Associated publications

This publication should be read in conjunction with the following publications:

- ABCA Coalition Health Interoperability Handbook;
- Allied Joint Publication 4.10(A), Allied Joint Medical Support Doctrine;
- Army Health Instruction No. 2, Health Support Plans;
- Australian Defence Doctrine Publication 06.4, Law of Armed Conflict;
- Australian Defence Doctrine Publication 1.2, Health Support to Operations;
- Australian Defence Doctrine Publication 1.2.1, Mental Health Support Operations;
- Australian Defence Doctrine Publication 1.2.2, Force Health Protection;
- Australian Defence Doctrine Publication 3.2, Amphibious Operations;
- Australian Defence Doctrine Publication, 3.4, Chemical, Biological, Radiological and Nuclear Defence;
- Australian Defence Doctrine Publication, 3.10, Noncombatant Evacuation Operations;
- Australian Defence Doctrine Publication 5.0, Joint Planning;
- Australian Defence Force Publication 1.2.2.1, Immunisation Procedures;
- Australian Defence Force Publication 1.2.3, Casualty Evacuation;
- Australian Defence Force Publication 5.0.1, Joint Military Appreciation Process;
- Defence Assistance to the Civil Community Manual;
- Defence Casualty and Bereavement Support Manual;
- Defence Instruction (General) – Operational 15–1, Australian Defence Policy for the Development of the Capability to Conduct Operations in a Chemical, Biological, Radiological and Nuclear Environment;
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• Future Joint Operational Health Support: Concept of Operations;
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• Health Directive No. 610, Privacy of Health Information of Defence Members and Defence Candidates;
• Health Manual, Volume 13, Chemical, Biological, Radiological and Nuclear Health;
• Health Manual, Volume 16, Transfusion Medicine;
• Health Manual, Volume 20, Preventive Medicine;
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• Health Policy Directive No. 125, Provision of Health Intelligence to the Australian Defence Force Health Services;
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• Health Policy Directive No. 275, Australian Defence Force Use of Australian Resuscitation Council Guidelines for Provision of Basic and Advanced Life Support;
• Health Policy Directive No. 412, Australian Defence Force Levels of Health Support in Operations – Dental Implications;
• Land Warfare Doctrine 0-2-1, Military Psychology for Operations (Developing Doctrine);
• Land Warfare Doctrine 1, The Fundamentals of Land Power;
• Land Warfare Doctrine 1-0, Personnel Support;
• Land Warfare Doctrine 1-1, Personnel Services;
• Land Warfare Doctrine 2-0, Intelligence;
• Land Warfare Doctrine 2-1, Intelligence Staff Duties;
• Land Warfare Doctrine 3-0-3, Land Tactics (Developing Doctrine);
• Land Warfare Doctrine 3-3-1, Employment of Army Aviation;
• Land Warfare Doctrine 3-8-5, Defence Force Aid to Civilian Authorities (Developing Doctrine);
• Land Warfare Doctrine 3-8-6, Civil–Military Cooperation;
• Land Warfare Doctrine 3-9-7, Operations in a Chemical, Biological, Radiological and Nuclear Environment;
Contents

- Land Warfare Doctrine 4-0, Combat Service Support (Developing Doctrine);
- Land Warfare Doctrine 4-1, Supply Support;
- Land Warfare Doctrine 4-2, Maintenance Support (Developing Doctrine);
- Land Warfare Doctrine 5-1-1, Staff Officers’ Guide;
- Land Warfare Doctrine 5-1-4, The Military Appreciation Process;
- Land Warfare Procedures - Combat Arms (Engineers) 4-1-1, Incident Management;
- Land Warfare Procedures - Combat Arms (Engineers) 5-2-5, Camp Construction;
- Land Warfare Procedures - Combat Service Support 4-0-1, Combat Service Support in the Theatre;
- Land Warfare Procedures - Combat Service Support 4-1-6, Provisioning in Support of Land Operations;
- Land Warfare Procedures - General 0-1-7, Internment and Detention (Developing Doctrine);
- Land Warfare Procedures - General 0-1-10, Military Police Tactics, Techniques and Procedures;
- Land Warfare Procedures - General 0-2-4, All Corps Junior Commanders Aide-Memoire;
- Land Warfare Procedures - General 1-1-4, Catering Support;
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Doctrine Online

This and other doctrine publications are available via the Doctrine Online website located at: http://dmnet.defence.gov.au/ARMY/Doctrine-Online/Pages/Home.aspx. Paper copies may be out of date. Doctrine Online is the authoritative source for current doctrine. Users are to ensure currency of all doctrine publications against the Doctrine Online library.

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Gender

This publication has been prepared with gender-neutral language.
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Glossary

The principal source for Australian Defence Force terms and definitions is the Australian Defence Glossary located at [http://adg.eas.defence.mil.au/adgms](http://adg.eas.defence.mil.au/adgms). Terms and definitions contained within this publication are in accordance with the business rules, guidelines and conventions for the Australian Defence Glossary at the time of its release.

**aeromedical evacuation**
Is the movement of injured or ill personnel requiring the supervision or care of aeromedical evacuation qualified medical personnel to and between medical treatment facilities by air transportation.

**battle casualty**
Any casualty incurred as the direct result of hostile action, sustained in combat or relating thereto or sustained going to or returning from a combat mission.

**casualty evacuation**
The process of moving any person who is wounded, injured or diseased to and/or between health facilities.

**casualty regulation**
The process that directs casualties to the health facility best able to cope with their condition in terms of medical specialty required, and the availability of treatment capability and capacity.

**casualty regulation cell**
The personnel responsible for directing casualties within the evacuation system.

**Class 8**
Controlled medical and pharmaceutical equipment and stores and blood products.

**en route care**
The care required to maintain the phase treatment initiated prior to evacuation and the sustainment of the patient’s medical condition during evacuation.

**epidemiology**
The study of the occurrence, distribution, and causes of health and disease.
force health protection
Measures to promote, improve, or conserve the mental and physical wellbeing of Service members. These measures enable a healthy and fit force, prevent injury and illness, and protect the force from health hazards.

forward aeromedical evacuation
The evacuation of a casualty by air transportation from the point of wounding or injury to the initial health facility within the area of operations.

health facility
Fixed and deployed Australian Defence Force hospitals, medical centres, sick bays, aid posts, health service flights, and other elements providing health support to personnel.

health governance
Governance incorporates the set of processes, customs, policy directives, laws and conventions affecting the way an organisation is directed, administered or controlled.

health information
The collection and communication of raw or processed data concerning a wide range of health-related factors including disease, health infrastructure and environmental conditions.

health intelligence
The product resulting from the processing of health and other information with related intelligence.

health support
Those actions which contribute to the preparation and preservation of the human potential by full and coherent care.

health surveillance
The process of monitoring the incidence of wounding, injury and illness of deployed personnel with a view to identifying healthcare trends and issues on operational, environmental and occupational health threats to develop intervention measures that can be taken to minimise casualties attributable to those threats.
host nation
A nation which, by arrangement:

a. receives forces and materiel of other nations operating on/from or transiting through its territory;
b. allows materiel and/or organisations to be located on its territory; and/or
c. provides support for these purposes.

interoperability
The ability to act together coherently, effectively and efficiently to achieve Allied objectives.

light surgical team
A highly mobile and lightly scaled team capable of carrying out damage control surgery only. Notes:

1. It is equipped for six trauma surgical cases and is used only when the 10-1-2 metric cannot be met by the Role 2 Enhanced.
2. It is an integral part of the shock trauma platoon and cannot deploy independently.

medical evacuation
The rearward movement of a casualty with the appropriate qualified health personnel which is platform-specific.

medical rules of engagement
Outlines the circumstances and limitations under which health personnel are employed on operations and when/when not to provide medical treatment/support.

mental health
A state of wellbeing in which every individual realises their own potential, can cope with normal stresses of life, can work productively and fruitfully, and can make a contribution to the community.

metric
Measurable physical characteristic or personal behaviour trait used to recognise the identity or verify the claimed identity of an individual.
military working dog
A dog selected and trained for explosive detection, base security, tracking and patrolling.

morbidity
The proportion of sickness in a locality.

patient evacuation coordination cell
The area responsible for the planning and execution of all medical evacuation tasks, usually in large, combined operations.

patient tracking
Awareness of where patients are within the health system.

primary health care
Includes basic programs directed at the promotion of health, prevention of disease, and the early diagnosis of disease or disability, and is provided to ambulatory patients. Note: In any episode of illness it is the first patient contact with the healthcare system.

resuscitation
The process of reviving a person from apparent death or unconsciousness by stabilising the airway, circulation and respiratory system.

shock trauma platoon
The shock trauma platoon deploys forward to close combat situations to perform advanced resuscitative procedures to stabilise the injured, preserve life and prepare those casualties for evacuation. Note: The shock trauma platoon is a Role 2 Light Manoeuvre.

strategic aeromedical evacuation
The evacuation of a patient by air transportation from a deployed health facility within an area of operations to a destination medical facility outside an area of operations or within the national support base. Note: It is also evacuation by air from one health facility to another health facility within the national support base.

tactical aeromedical evacuation
The evacuation of a patient by air transportation from one deployed health facility to another deployed health facility within an area of operations to another area of operations.
triage
The evaluation and classification of wounded for purposes of treatment and evacuation. Note: It consists of the immediate sorting of patients according to type and seriousness of injury, and likelihood of survival, and the establishment of priority for treatment and evacuation to assure medical care of the greatest benefit to the largest number.

vector
An insect or other organism transmitting germs or other agents of disease.

zoonoses
Any disease which is communicable to humans from another animal species.
Abbreviations

The principal source for Australian Defence Force abbreviations is the Australian Defence Glossary located at [http://adg.eas.defence.mil.au/adgms](http://adg.eas.defence.mil.au/adgms). Abbreviations contained within this publication are in accordance with the business rules, guidelines and conventions for the Australian Defence Glossary at the time of its release. The following abbreviations are used throughout this publication; however, commonly used terms have been presented in their abbreviated format throughout the publication and have not been included in this list.

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<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AES</td>
<td>aeromedical evacuation system</td>
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<tr>
<td>AME</td>
<td>aeromedical evacuation</td>
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<td>AO</td>
<td>area of operations</td>
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<td>BC</td>
<td>battle casualty</td>
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<td>BG</td>
<td>battlegroup</td>
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<td>BSP</td>
<td>brigade support platoon</td>
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<td>CASREG</td>
<td>casualty regulation</td>
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<tr>
<td>CFA</td>
<td>combat first aider</td>
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<td>CHC</td>
<td>close health company</td>
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<tr>
<td>CHOS</td>
<td>combat health operating system</td>
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<td>CIMHS</td>
<td>critical incident mental health support</td>
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<td>COIN</td>
<td>counterinsurgency</td>
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<td>CPERS</td>
<td>captured person</td>
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<tr>
<td>CRC</td>
<td>casualty regulation cell</td>
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<tr>
<td>DCR</td>
<td>damage control resuscitation</td>
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<td>DCS</td>
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<td>DHOC</td>
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<tr>
<td>DNBI</td>
<td>disease and non-battle injury</td>
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<tr>
<td>EOH</td>
<td>environmental and occupational health</td>
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<tr>
<td>FATALCAS</td>
<td>notification of fatal casualty</td>
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<tr>
<td>FE</td>
<td>force element</td>
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<tr>
<td>FW</td>
<td>fixed wing</td>
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<tr>
<td>HA</td>
<td>humanitarian assistance</td>
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<tr>
<td>HADR</td>
<td>humanitarian assistance and disaster relief</td>
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<td>HAT</td>
<td>hazard assessment team</td>
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<tr>
<td>HE</td>
<td>health element</td>
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<td>HF</td>
<td>health facility</td>
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<tr>
<td>HLTHINT</td>
<td>health intelligence</td>
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<tr>
<td>HN</td>
<td>host nation</td>
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<tr>
<td>HS</td>
<td>health support</td>
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<td>HSB</td>
<td>health support battalion</td>
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<tr>
<td>HSP</td>
<td>health support plan</td>
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</table>
ICD-10  International Statistical Classification of Diseases and Related Health Problems
IR      information requirement
JHC     Joint Health Command
JTF     joint task force
LOAC    law of armed conflict
LST     light surgical team
MASCAS  mass casualty
MEDICAS medical casualty reporting
MEDROE  medical rules of engagement
MED TECH medical technician
MO      medical officer
MWD     military working dog
NGO     non-government organisation
NOTICAS notification of casualty
NSB     national support base
POI     point of injury
PsST    psychology support team
PSYCAS  psychological casualty
R1      Role 1
R2      Role 2
R2E     Role 2 Enhanced
R2LM    Role 2 Light Manoeuvre
R3      Role 3
R4      Role 4
RTA     return to Australia
RTAPS   return to Australia psychological screening
RTD     return to duty
RW      rotary wing
SGADF   Surgeon General Australian Defence Force
STP     shock trauma platoon
TCN     troop contributing nation
TF      task force
TTP     tactics, techniques and procedures
VO      veterinary officer
VT      veterinary team

The following abbreviations appear in tables and figures within the publication.

acrn     accommodation
A&E      accident and emergency
APOD     air point of disembarkation
APOE     air point of embarkation
ASF      aeromedical staging facility
CALC     calculation
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<th>Acronym</th>
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<td>CIMIC</td>
<td>civil-military cooperation</td>
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<tr>
<td>CSSD</td>
<td>central sterilising supply department</td>
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<td>CT</td>
<td>combat team</td>
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<td>DOS</td>
<td>days of supply</td>
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<td>environmental and occupational health surveillance</td>
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<td>FMN</td>
<td>formation</td>
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<td>geographical</td>
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<td>high dependency unit</td>
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<td>helicopter landing zone</td>
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<td>intensive care unit</td>
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<td>Multi Role Helicopter 90</td>
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<td>orders for opening fire</td>
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<td>order of battle</td>
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<td>operating theatre</td>
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<td>PMV-A</td>
<td>protected mobility vehicle – ambulance</td>
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<td>physical training instructor</td>
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<td>simplex complete equipment schedule</td>
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<td>subject indicator code</td>
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<td>surg</td>
<td>surgery</td>
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</tbody>
</table>
Contents

SY  security
TAC  tactical
TT  treatment team
UNSCR  United Nations Security Council Resolutions
VSI  very seriously injured