PERSONNEL SERIES

ADFP 1.2.3

CASUALTY EVACUATION AND PATIENT MOVEMENT

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Chief of the Defence Force

Department of Defence
CANBERRA ACT 2600

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FOREWORD

1. Australian Defence Doctrine Publications (ADDP) and Australian Defence Force Publications (ADFP) are authorised joint doctrine for the guidance of ADF operations. ADDP are pitched at the philosophical and high-application level, and ADFP at the application and procedural level. Policy is prescriptive as represented by Defence Instructions, and has legal standing. Doctrine is not policy and does not have legal standing, however it provides authoritative and proven guidance, which can be adapted to suit each unique situation.

2. The aim of this publication is to provide guidance to commanders and staff on the concepts, principles and practices of casualty evacuation (CASEVAC) and patient movement in support of operations.

3. This publication provides an application and procedural level reference to commanders, planners and staff on the principles and practical aspects in the provision of CASEVAC and patient movement to support operations, including operations within a coalition and/or multinational setting. This publication explains the command and control, and roles, tasks and responsibilities for CASEVAC and patient movement support. It is intended for use by:

   a. ADF planning staffs;

   b. ADF force elements, particularly health elements;

   c. health (J07) staff with CASEVAC responsibilities;

   d. operational commanders and staff, particularly those involved in providing enabling support to the CASEVAC system;

   e. training institutions with responsibility for teaching CASEVAC, health support and operational planning; and

   f. Government and civilian organisations.
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CHAPTER 1

FUNDAMENTALS OF CASUALTY EVACUATION

Executive summary

- Casualties are classified as battle casualties (Bcas), disease and non-battle injuries (DNBI) or psychological casualties (PSYCAS).
- The types of evacuation are surface and aeromedical evacuation (AME). Evacuation can be further classified as forward, tactical and strategic.
- The key determinants of casualty survival are the time-dependant provision of first aid, resuscitation and surgery.
- The Australian Defence Force (ADF) uses three evacuation priorities: urgent, priority and routine.
- The ADF triage system uses five categories: immediate, delayed, minimal, expectant and dead.

Pay every attention to the sick and wounded. Sacrifice your baggage, everything for them. Let the wagons be devoted to their use, and if necessary your own saddles.

Napoleon I

INTRODUCTION

1.1 The casualty evacuation (CASEVAC) and patient movement system seeks to minimise the effects of wounds, injuries and disease to personnel through the rapid identification, treatment, retrieval and evacuation of a casualty. CASEVAC is a coordinated activity that delivers the casualty to the appropriate level of health support. Health support may include action taken at the point of wounding (injury or illness), treatment in theatre and subsequent treatment at health facilities outside the joint forces area of operations (JFAO).
1.2 The purpose of this publication is to provide application and procedural guidance on CASEVAC support to operations. This publication is for use by those personnel and elements involved in CASEVAC including:

a. all ADF planning staffs;
b. all ADF force elements (FE), particularly health elements;
c. health staff with CASEVAC responsibilities;
d. operational commanders and staff, particularly those involved in providing enabling support to the CASEVAC system;
e. training institutions with responsibility for teaching CASEVAC, health support and operational planning; and
f. Government and civilian organisations.

1.3 The intent of this chapter is to describe the fundamental requirements of the CASEVAC system and describes:

a. the objectives of CASEVAC;
b. the underpinning CASEVAC precepts;
c. a description of the CASEVAC system;
d. key health considerations as they relate to CASEVAC;
e. the relationship of treatment priority to CASUALTY precedence;
f. casualty and patient management;
g. CASEVAC methods; and
h. responsibilities for CASEVAC in the maritime, land and air environments.

CASUALTY EVACUATION OBJECTIVES

1.4 CASEVAC is a fundamental aspect of health support. It is an integral component of the continuum of casualty treatment and care. While the
outcome of CASEVAC is a health responsibility, the provision and coordination of tactical, operational and strategic assets is a command responsibility. As such, commanders and health (J07) staff must be aware that in the period immediately following injury or illness, there is a correlation between casualty survival and the:

a. application of first aid,\(^1\)

b. commencement of initial treatment, and

c. commencement of first formal surgery and other forms of definitive treatment.

1.5 Connecting these actions is the CASEVAC system. Within the CASEVAC system, casualty survival is predicated on the preparation of the casualty prior to evacuation, the level of treatment afforded during the evacuation and the timeliness of the evacuation.

1.6 As the evacuation and treatment processes are inherently linked, they require careful regulation to ensure the assignment of suitable evacuation resources to deliver the casualty to the appropriate level of health support. As a consequence of casualty regulation, casualties may not necessarily be evacuated sequentially through each level of health support. Casualty regulation ensures casualties are evacuated directly to health facilities providing the appropriate level of care as well as available capacity. Regulation minimises the number of times casualties are handled and balances the rate of effort of the evacuation and treatment systems.

1.7 The CASEVAC system should be able to:

a. identify CASEVAC requirements/tasks;

b. evacuate casualties to a health facility 24 hours a day, in all weather, over all terrain and in any operational scenario;

c. provide clinical sustainment of the casualty throughout the evacuation chain, using appropriately trained staff;

d. regulate the flow and types of patients as circumstances require;

\(^1\) Also referred to as buddy aid.
e. accurately track patients throughout the evacuation process; and

f. collect and analyse data regarding the evacuation system.

**UNDERPINNING PRECEPTS**

**Principles**

1.8 There are a number of proven health principles that should be applied when planning and executing a CASEVAC system for an operation. They are:

a. **Conformity.** CASEVAC plans, as with other aspects of health planning, must complement the operational and logistics plan and conform to the highest practical level of professional practice, standards and ethics, and to relevant conventions of International Humanitarian Law.

b. **Prevention.** Preventing casualties through the application of appropriate force protection measures reduces the demand on the CASEVAC system. Preventive health programs also ease the pressure on the CASEVAC system because DNBI and not Bcas typically account for the highest proportion of casualties during military operations.

c. **Control.** Senior health officers must exercise technical control and may exercise a degree of operational authority over health resources to ensure economy and avoid duplication of effort. Deployed CASEVAC resources including evacuation platforms, personnel, facilities and materiel must provide optimum support to the deployed force. Control of the CASEVAC system depends upon effective communications and visibility of casualties along the evacuation chain.

d. **Continuity.** CASEVAC is an integrated process that provides patients with essential treatment as they are evacuated through the continuum of health care facilities, each with an increased treatment capability.

e. **Flexibility.** The CASEVAC system must have inherent flexibility to enable the health services to respond to changing operational and clinical situations. All elements involved in the evacuation system must be capable of rapid reorienting or restructuring to meet the requirements of the operation or
specific mission. Where possible, the CASEVAC system should maintain a reserve to respond to surge.

f. **Mobility.** The timely evacuation of casualties is essential for maintaining the momentum of the force, hence CASEVAC elements require comparable mobility, protection and communications with the forces they are supporting.

g. **Proximity.** In order to improve responsiveness CASEVAC resources are typically located as far forward in the battlespace as tactical factors dictate. Early resuscitative treatment followed by rapid clearance of casualties significantly reduces morbidity and mortality.

**Casualty evacuation capability**

1.9 Capability is the capacity or ability of the ADF to achieve a particular operational effect. The level of capability is determined by the synergy that arises from a range of inputs referred to as the fundamental inputs to capability (FIC). FIC relationships to CASEVAC are as follows:

a. **Organisation.** The CASEVAC system must be balanced for mobility, protection and communications, practised in its routines and have an effective command and control (C2) architecture. FE involved in the CASEVAC system must be structured to effectively complete evacuation and treatment tasks.

b. **Personnel.** The CASEVAC system requires fully staffed organisations and appropriately trained personnel to function. A lack of competent health staff within the CASEVAC system may expose the whole system to failure.

c. **Collective training.** The CASEVAC system must be routinely practised with supported forces, particularly prior to operational deployments. Robust exercise objectives must seek to evaluate health concepts and CASEVAC capability against realistic scenarios.

d. **Major systems.** The CASEVAC system requires a range of specialist equipment including aircraft, ambulances and specialist evacuation fit-outs. A robust communication system between evacuation platforms and supported FE is an essential component of the system.
e. **Supplies.** The CASEVAC system requires access to specialist evacuation equipment and Class 8 stores and, within the continuum of care, access to blood and blood products. Cold chain\(^2\) support to the evacuation system is vital to its effective performance.

f. **Facilities.** Fixed and rapidly deployable facilities are necessary for staging, treatment and holding casualties prior to insertion into the CASEVAC system. The CASEVAC system typically requires the use of fixed infrastructure and services in the JFAO, any intermediate staging bases (ISB) and within the national support base (NSB).

g. **Support.** The CASEVAC system may require support from joint and coalition partners within the JFAO as well as from private industry and contracted service providers, and other government agencies. This interoperability is an essential component of the CASEVAC system.

h. **Command and management.** Command and management of the CASEVAC system within a joint or combined battlespace will cross Service and coalition boundaries, both physically and chains of command. The application of doctrine, as well as standing operating procedures, regulations, and instructions, assists commanders with the management and execution of the CASEVAC system.

**Terminology**

1.10 **Casualty.** A casualty describes any person who is lost to an organisation by reason of having been declared dead, wounded, injured, diseased, interned, captured, retained, missing, missing in action (MIA), beleaguered, besieged or detained. This doctrine focuses on the evacuation of those personnel who are wounded, injured or diseased during operations. Casualties can be caused by operational, environmental or occupational threats and are categorised as Bcas, DNBI or PSYCAS.

1.11 **Battle casualties.** Bcas is any casualty incurred as a result of hostile action. Bcas are influenced by:

\(^2\) Cold chain supplies are items that require a constant temperature range and are generally dispatched in refrigerated containers or portable cool tubes.
a. the type, intensity, phase and duration of operations;

b. own force tactics and weapons systems;

c. enemy tactics and weapons systems; and

d. individual and collective protective measures.

1.12 The Bcas estimate is expressed as a daily percentage of the force and includes wounded in action, killed in action, captured or MIA and combat stress casualties. As it is the operational plan that most influences these variables, the operations staff are responsible for completing the Bcas estimate. The operations staff will collaborate with J07 staff, and other joint staff as required, when developing the Bcas estimate. The Bcas estimate informs the health planning process to determine what health capabilities are required, where they are to be located and how long they are to remain in place.

1.13 **Disease and non-battle injuries.** DNBI are personnel losses not directly attributable to being in action, including sick or diseased, accidentally injured and non-battle missing. DNBI are influenced by:

   a. leadership and command decisions;  

   b. the environment and epidemiology of the JFAO;  

   c. the level of health support provided; and

   d. force preparedness.

1.14 The DNBI rate is expressed as a daily percentage of the force and is an indicator of the anticipated workload for the deployed health element. Estimation of DNBI is the responsibility of the J07 staff and is based on historical evidence, environmental assessment, knowledge of the occupational risks and subject matter expert input from the other joint staff. The J07 staff informs the J3 (operations) and J1 (personnel) staff of the estimated DNBI, who develop a plan to manage the expected wastage rate.

———

3 Leadership such as enforcing prophylactic discipline and command decisions such as training intensity influence the DNBI rate.

4 Applicable to all ADF deployments, exercises and operations.
1.15 Psychological casualty. PSYCAS occur when incidents and severe stress reactions impede a serviceperson’s ability to function normally, and the person ceases to be effective in their operational role. PSYCAS management is based on simple principles including intervention close to the location of psychological breakdown and maintaining the individual’s expectation of returning to duty. PSYCAS estimates are influenced by the types of operations and consequent exposure profiles. Certain types of operations are likely to deliver higher levels of PSYCAS including:

a. high intensity-long exposure;

b. high intensity-repeated exposure;

c. low intensity high threat-long exposure; and

d. critical incidents.

The PSYCAS estimate helps determine the location and capabilities of health facilities and the expected CASEVAC demand for PSYCAS.

1.16 Patient. A patient is an individual who is injured or ill and who has entered the health care system. Patient care involves the stabilisation of the patient’s condition, the provision of a definitive diagnosis and treatment of the person’s condition.

1.17 Resuscitation. Resuscitation is the process of stabilising the vital functions of a casualty or patient. Resuscitative care is the management of life and limb threatening injuries. Interventions include emergency medical treatment, advanced trauma management and lifesaving surgery to ensure the casualty can tolerate CASEVAC to the next level of care.
1.18 **Casualty evacuation.** CASEVAC is the process of moving any person who is wounded, injured or diseased to or between health facilities and includes the movement of enemy prisoners of war (PW), detainees, found MIA and liberated friendly PW. CASEVAC is a continuum from point of injury or illness to definitive treatment and has two distinct sub-sets:
a. **Casualty retrieval.** Casualty retrieval is the process of finding and removing casualties from danger, initiating first aid, resuscitating and/or stabilising the casualty and evacuating the casualty to a suitable health element.

b. **Patient movement.** Patient movement is the process of moving a stabilised patient from one health facility to another.

### 1.19 Evacuation

Evacuation provides the processes, personnel and equipment required to transport and provide care to a casualty from point of retrieval to the most appropriate facility to receive definitive care. A patient can receive definitive care and be further evacuated between health facilities for recovery and rehabilitation.

### 1.20 Enroute care

Enroute care provides health care to casualties throughout the whole evacuation chain, from the point of casualty retrieval to health facilities in the NSB. En route care should always be provided dependant on a casualty’s requirements. Failure to provide en route care can compromise the continuum of care required to minimise morbidity and mortality rates. One of the exceptions where en route care is not provided is when opportunity transport platforms are used.

### 1.21 Treatment

Treatment is the application of medical, health or psychological care or attention to a casualty or patient. Treatment commences with self-aid or first aid and continues throughout the health system. Treatment, in the context of the evacuation system, is provided to stabilise patients so that they can be evacuated to a facility at which appropriate definitive care can be provided. Whilst delays or interruptions in treatment may increase morbidity and mortality rates, no patient should be evacuated further than their condition requires or the operational situation warrants. Treatment often continues after the patient has been returned to duty or discharged from military service.

### 1.22 Definitive treatment

Definitive treatment refers to care that will improve, rather than simply stabilise, a casualty’s condition. It encompasses final non-emergency medical treatment or care that conclusively decides the disposition of a patient as return to duty, rehabilitation or discharge from service. Requirements for definitive care will vary widely depending on the magnitude and epidemiology of the operation.

### THE CASUALTY EVACUATION SYSTEM

1.23 CASEVAC is an integrated system consisting of all modes of evacuation (land, sea and air) and across all levels of conflict. CASEVAC typically consists of one or more of the following actions:
a. casualty retrieval,

b. evacuation, and

c. enroute care.

1.24 The key steps that constitute the CASEVAC system are as follows:

a. identify the casualty, including condition and location;

b. prioritise the response, including the determination of fitness for travel by a specific mode;

c. task the evacuation platform;

d. stabilise the casualty;

e. transport the casualty;

f. report the casualty’s disposition; and

g. report asset disposition/availability.

1.25 Casualty regulation (CASREG) controls these elements. Figure 1–2 depicts this system.
1.26 The system requires processes, personnel, CASEVAC platforms, staging facilities and enabling agencies such as the joint movement coordination centre. The system is normally coordinated and controlled through specialist health staff residing in areas such as an Aeromedical Evacuation Control Centre (AECC) and Medical Regulating Office (MRO), located at the joint task force, coalition or other applicable headquarters (HQ).

Classification

1.27 CASEVAC is classified according to its relationship to the battlespace in the following categories:
a. **Forward casualty evacuation.** Forward CASEVAC is the evacuation of a casualty normally close to the scene of the injury or illness to the initial treatment facility.

b. **Tactical casualty evacuation.** Tactical CASEVAC is the evacuation of patients between health facilities within the JFAO. Patients undergoing tactical CASEVAC will have been stabilised at a health facility before being moved.

c. **Strategic casualty evacuation.** Strategic CASEVAC is the evacuation of a patient by air transportation from a deployed health facility within an area of operations to a destination medical facility within a national support base; also evacuation by air from one health facility to another health facility within a national support base.

### Planning factors

1.28 The CASEVAC system is designed to maintain continuity of care for the casualty based on the following planning factors:

a. key health considerations (described in the next section);

b. nature of the operation and the tactical situation;

c. operational environment including area geography, particularly the distances involved;

d. forecast casualty rate;

e. nature and disposition of health facilities;

f. number and type of evacuation platforms available;

g. availability of suitably qualified staff especially for AME; and

h. climate and weather.

1.29 Chapter 3 ‘Casualty evacuation planning’ provides further detail on planning factors.
Execution

1.30 CASEVAC is executed by the most appropriate means in relation to the type of casualty. Key execution principles include:

a. first aid and stabilisation before evacuation occurs are fundamental to casualty survival;

b. evacuation and treatment assets must be assigned and sited to ensure timely and effective health care for projected casualties, consistent with operational requirements;

c. evacuation is generally performed by the next higher echelon of care going forward to the casualty and evacuating rearward;

d. AME is used for cases where patients’ clinical condition will benefit by the use of AME and operational risks have been considered;

e. in some cases AME may not be the most appropriate evacuation method to transport severely compromised casualties; the transportation of patients in an airborne environment requires special considerations;

f. surface evacuation may be the only available option for casualties; and

g. the intra-theatre movement of patients within the JFAO boundaries can be executed by either aerial or surface means.

1.31 Chapter 4 ‘Casualty evacuation in support of operations’ provides further detail on CASEVAC execution.

KEY HEALTH CONSIDERATIONS

1.32 The design of a CASEVAC system is underpinned by the following key health considerations:

a. Casualty survival. Time to appropriate treatment is a key factor in determining casualty survival, specifically time to first aid, time to resuscitation (The Golden Hour) and time to surgery (The Three Hour Rule) being the key benchmarks.
b. **Precedence.** Continuous triage determines evacuation precedence and ensures patients are treated and evacuated in accordance with their individual circumstances and the overall operational situation.

c. **Management.** Management provided must be consistent with the level of capability at the facility, and patients are evacuated only as far back as they need to be.

**Time to appropriate treatment**

**1.33** The speed and quality of health care can reduce casualty morbidity and mortality. Ideally, definitive treatment should be delivered as soon as possible after wounding or serious injury. The benchmark for military health support is as follows:

a. immediate intervention - first aid (within five minutes) especially to control haemorrhage;

b. early resuscitation (within one-hour) by expert medical staff aimed at sustaining life and limb - The Golden Hour; and

c. early surgical intervention (within three hours) - The Three Hour Rule for surgery.

Commanders must balance these benchmarks against operational and other factors when planning all health support, including the CASEVAC system.

**1.34 First aid.** A proportion of casualties will receive lethal injuries and die irrespective of the health care available. A further proportion will die within a few minutes unless first aid is provided quickly. The most common cause of death in the battlespace is haemorrhage. Immediate first aid coupled with a robust CASEVAC system allows the casualty to access higher levels of care.

**1.35 The Golden Hour for resuscitation.** A large percentage of casualties who would otherwise die at the point of injury can be saved if they receive resuscitation and stabilising care in the first hour after injury. If a casualty can survive the first hour, then they have a high probability of surviving for three hours. The implication for the CASEVAC system is that the earlier the treatment, the higher likelihood of casualty survival.

**1.36 The Three Hour Rule for surgery.** Survivability and the minimisation of morbidity are particularly dependent on the promptness of evacuation to reduce the time from wounding to the time of surgery. Historical data relating
to Bcas indicates that there is a substantial increase in the mortality rate of casualties who do not undergo surgery until the start of the fourth hour after wounding. Optimal health support should therefore facilitate the provision of initial surgery, especially for penetrating injuries, within three hours of injury to maximise health outcomes.

1.37 In line with this, CASEVAC planning should ensure, wherever practicable, that the seriously wounded or injured can receive surgery within three hours of becoming a casualty. This requirement has implications for the location of health facilities and the allocation and employment of evacuation resources.

**TREATMENT PRIORITY AND EVACUATION PRECEDENCE**

1.38 The prioritisation of casualties is determined by the following two complementary assessments:

   a. treatment priorities - determined during triage and affected by the clinical capability at the health element; and
   
   b. evacuation precedence - the urgency for evacuation to the next level of care.

1.39 Treatment priority and evacuation precedence are not interchangeable, but applied in unison to ensure the highest chance of survival for the largest number of casualties.

**Treatment priority - triage**

1.40 Triage is the evaluation and classification of casualties for purposes of priority of treatment. Triage consists of the following:

   a. the immediate sorting of patients according to type and seriousness of injury, and likelihood of survival; and
   
   b. the establishment of priority for treatment to assure medical care of the greatest benefit to the largest number.

5 Typically there is a 20–30 minute delay between a casualty arriving at a Level 3 unit and surgery commencing.
1.41 Triage is a dynamic process. Casualties are assigned a casualty category that may vary throughout the evacuation process, and may change whilst the casualty is at a single point in the evacuation chain.

1.42 The following two types of triage situations can occur:

a. The number of patients and the severity of their injuries do not exceed health resources. In this situation, patients with life-threatening problems and those sustaining multiple-system injuries are treated first.

b. The number of patients and the severity of their injuries exceed health resources, such as during a mass casualties (MASCAS) event. In this situation, the first to be managed are those patients with life-threatening problems with the greatest chance of survival and with the least expenditure of time, equipment, supplies and personnel.

1.43 Triage decisions are difficult, often placing the triage officer in an ethical dilemma. Rank is not always the best indicators of suitability to be an effective triage officer; competency levels and experience with trauma and MASCAL may be a better indicator of capability to conduct the task.

1.44 Triage categories. The following triage categories are used:

a. **T1—Immediate (Red)**. T1 is the highest priority and the following factors apply:

   (1) immediate intervention is required in order to save and stabilise an individual with life-threatening injuries; and

   (2) the casualty has an expected high chance of survival if treated.

b. **T2—Delayed (Yellow)**. T2 is the next priority and the following factors apply:

   (1) the general condition of the casualty permits a delay in active intervention or surgery without endangering life, and

   (2) prognosis of the casualty is good.
c. **T3—Minimal (Green).** T3 is the next priority and the following factors apply:

(1) casualties have minor non-capacitating problems needing minimal treatment with no urgency; and

(2) treatment can often be provided by first aid trained personnel.

d. **T4—Expectant (Blue).** T4 is the lowest priority and the following factors apply:

(1) This triage category is only used in a MASCAL situation. Where they occur in isolation, they would be triaged as immediate.\(^6\)

(2) Casualties have serious or multiple injuries with poor chance of survival.

(3) Treatment requires intensive therapy with extensive use of personnel, equipment and stores, or time.

(4) These casualties should be given basic supportive and analgesic treatment with more attention when the situation allows.

(Black). Lifesaving resuscitation would normally be attempted in most cases before a casualty is declared dead. A casualty can only be declared dead by a medical officer (MO).

**Evacuation precedence**

1.45 Rapid evacuation of casualties makes a positive contribution to operational effectiveness in that early evacuation to the appropriate level of treatment offers a high probability of successfully saving life and limb. Furthermore, prompt and efficient evacuation of casualties has a positive effect on force morale.

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\(^6\) In the event that the scenario falls under the jurisdiction of an Australian State civilian authority, the State’s Health Authority may authorise the use of the expectant category.
1.46 Evacuation precedence determines how quickly a patient will be evacuated within the CASEVAC system. Evacuation precedence may be upgraded or downgraded at each succeeding level of care. The categories of precedence are:

a. **Urgent.** Life is immediately threatened. Rapid evacuation, urgent resuscitation, and/or surgery are required to save life, limb or sight.

b. **Priority.** Life or limb is in serious jeopardy. Evacuation should be effected as soon as possible.

c. **Routine.** Life or limb is not in serious jeopardy. Evacuation should be effected as soon as a suitable transport mode is available.

1.47 Casualties requiring evacuation to a medical treatment facility should be evacuated as soon as possible within the constraints of the tactical situation and if required in order to meet the time constraints for resuscitation and surgery.

**Casualty and patient management**

1.48 Casualty and patient management is a continuous process of health care, increasing in complexity through levels of capability, to meet clinical needs. The key casualty and patient management mechanisms to ensure effective use of limited resources in an operational area are CASREG and patient holding policies. They are complementary processes that ensure an effective CASEVAC system.

**Casualty regulation**

1.49 CASREG directs casualties to the health facility best able to cope with their condition, in terms of medical speciality required, the availability of treatment capability and health facility capacity. Regulation ensures the efficient routing of casualties to appropriate treatment facilities, to achieve an even distribution of patients, and to ensure that there are adequate beds and treatment capabilities for current and anticipated needs. It also informs casualty tracking as part of the wider personnel tracking system.

1.50 As casualties are not necessarily evacuated sequentially through facilities at each level in the evacuation chain, CASREG minimises the number of times casualties are handled. It also prevents the routing of evacuation platforms from one treatment facility to another in an attempt to find available beds or treatment capability, and ensures an even flow within
the treatment and evacuation system. Importantly, casualties are evacuated no further than their condition or the operational situation demands.

1.51 CASREG within the JFAO is conducted at the highest level. Usually, this will be carried out by the MRO or AECC normally located at the Headquarters Joint Task Force (HQJTF) or other appropriate HQ. Regulation of individual casualties can occur at lower levels but is coordinated through the MRO. AME is coordinated by the aero-medical evacuation operations officer (AEOO) in the AECC. Effective regulation depends upon direct and uninterrupted communication between J07 staff, health facilities and CASEVAC elements.

Holding policies

1.52 A holding policy is a C2 measure that indicates the maximum time patients may be held within a treatment facility or an operational theatre, typically expressed in a number of days. 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.

1.53 The holding policy provides planning guidance and assists health elements to establish schedules. Patients who, in the opinion of the responsible MO, can be returned to duty within the prescribed holding period, stay in the health facility. If they cannot be returned to duty within the prescribed holding period they are evacuated to the most appropriate health facility 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 bed spaces.

1.54 Whilst a clinician may recommend that a patient is retained beyond the stated holding policy, this decision must be ratified by the theatre J07 staff. They have situational awareness of the availability of health resources and the operational plan and will be able to balance the clinical and operational risks.

1.55 Holding policies may be revised as follows:

a. for planned increases in patients, such as immediately prior to offensive operations, so that beds can be cleared where possible;

b. to adjust the volume of patients being held in the JFAO such as during a draw-down of the force; or
c. when unplanned increases in patients occur, such as in an epidemic.

1.56 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.

1.57 The holding policy must match both the capability of health assets and the availability of evacuation platforms. The time period established by the holding policy starts on the day the patient is admitted to a health support facility. Nonetheless, the holding policy is a guide; the actual selection of a patient for evacuation is based on clinical judgement.

**CASUALTY EVACUATION METHODS**

1.58 CASEVAC can be executed by either surface, or aerial means. Whilst AME is often the preferred means of moving casualties, surface evacuation may be the clinically preferred or only available means in both the maritime and land environments.

**Surface evacuation in the maritime environment**

1.59 Surface evacuation in the maritime environment consists of the movement of casualties to and between health facilities by surface means such as watercraft, small boats and ships and:

   a. is normally conducted by health personnel appropriately qualified to operate safely around the platforms;

   b. may require specialised health equipment;

   c. provides range and comfort which can reduce the morbidity and mortality rate of casualties;

   d. allows for advanced levels of care; and

   e. provides communications for the passage of patient information.

1.60 The following describes the system of maritime surface evacuation within a JFAO:
a. **Casualty retrieval.** Evacuation at the ‘buddy care’ level within fleet elements usually involves moving casualties by stretcher or on foot from point of injury to a first aid post initially, then to the vessel’s sick bay or emergency operating station.

b. **Forward.** Forward surface evacuation in a maritime environment may consist of a small craft, such as a rigid hull inflatable boat (RHIB), transferring the casualty from a minor war vessel (MWV) to a major fleet unit (MFU) or from a vessel to shore.

c. **Tactical.** Tactical surface evacuation in a maritime environment could consist of the evacuation of a patient by RHIB or LCM8 from a MFU to a primary casualty reception facility (PCRF) or to shore.

d. **Strategic.** Strategic surface evacuation could be used for patients remaining in the PCRF as the ship returns to the NSB.

**Surface evacuation in the land environment**

> Patients who arrived by ambulance jeeps were often more shocked because of the delay induced by transport problems and the state of Korean roads than by their initial injury.

_Darryl McIntyre Official History Korea Operations_

1.61 Surface evacuation in the land environment consists of the movement of casualties or patients to and between health facilities by surface means such as road, rail or watercraft. It is conducted by qualified health personnel and may require the use of specialised health equipment. It provides rapid evacuation in battle environments, where the tasking of AME platforms is not appropriate.

1.62 **Principles.** The principles of surface evacuation in the land environment are as follows:

a. **Mobility.** The mobility of evacuation assets must be commensurate with that of the supported force.

b. **Communications.** Communications systems operated by evacuation platforms must be synchronised with those of the supported force.
Protection. Protection of evacuation assets must be capable of mitigating the effects of operational threats endemic within the battlespace. Organic self-protection weapons systems must possess the reach and lethality to counter known personnel operated weapons systems deployed by threat forces.

d. **Flexibility.** Planning for and maintaining a health reserve evacuation capability provides the supported commander with greater flexibility.

The following describes the system of land surface evacuation during land operations within a JFAO:

a. **First aid.** Casualties will either remove themselves from the point of injury, or be removed by a companion or the ‘buddy system’. In many cases, stretcher-bearers will be available to assist the casualty to a health element or facility, such as a regimental aid post, where casualties are assembled and treated.

b. **Forward.** Forward surface evacuation in a land environment is from point of injury to a health facility. It can consist of those units with casualty collection vehicles evacuating casualties rearwards as far as the integral combat health support facility, often a health company. From there, a health element providing close health support assumes the responsibility for tactical surface evacuation.

c. **Tactical.** Tactical surface evacuation of patients is evacuation from one health facility to another rearward of forward deployed combat health support units. This will be coordinated by the HQJTF J07 staff utilising the most appropriate CASEVAC platforms available to undertake the mission.

d. **Strategic.** Evacuation to the NSB would normally be via strategic AME.

**Aeromedical evacuation**

AME is the movement by air, under medical supervision, of patients to and between health facilities. AME can be performed in configured or non-configured aircraft. Aircraft may be dedicated to the AME role, when justified in terms of evacuation commitment and the availability of suitable resources.
1.65 AME in some cases may not be the most appropriate evacuation method to transport certain patients. The transportation of patients in an airborne environment must also be cleared by an aviation qualified medical officer.

1.66 Aeromedical advantages. AME improves patient survivability, is a force multiplier and can significantly improve force morale as well as providing other advantages including the following:

   a. The speed, range, comfort and versatility of aircraft equipped and crewed for AME results in the following:

      (1) reduces the morbidity and mortality rate of patients;

      (2) increases the choice of appropriate health facilities (flyover);

      (3) increases the flexibility of health support without the need for frequent relocation of health elements; and

      (4) allows advanced levels of care to continue during transportation to the next level of care for those who are seriously ill or injured and who otherwise would not be suitable for evacuation.

   b. Rotary wing (RW) aircraft used in the AME role are capable of landing in areas and/or under conditions unsuitable for some fixed wing aircraft. This capability can significantly reduce the delay between wounding and evacuation, and increases flexibility in choosing the most appropriate health facility.

   c. Fixed wing aircraft can rapidly move a greater number of patients within or between the JFAO and the NSB, in a relatively comfortable environment.

   d. The capability and capacity of aircraft communications provide a major advantage for casualty regulation and the C2 of the aeromedical evacuation system (AES).

1.67 Aeromedical disadvantages. AME can also have a number of drawbacks including the following:

   a. like land AME platforms, aircraft are vulnerable to enemy weapons systems;
b. weather conditions can curtail flying; and

c. airframes deployed to a JFAO may be unsuitable for AME.

1.68 Aeromedical classification. AME is classified in the following categories:

a. **Forward aeromedical.** Forward AME is the airlift of a casualty from the vicinity of the injury or illness to the initial treatment facility.

b. **Tactical aeromedical.** Tactical AME is the airlift of patients between health facilities within the JFAO. Patients undergoing tactical AME will have been stabilised by the losing health element or facility before being evacuated.

c. **Strategic aeromedical.** Strategic AME is the airlift of patients from the JFAO to or between health facilities outside the JFAO, possibly through a number of stages. Strategic AME of patients is influenced less by the need for speed and more by the need for stabilisation and care during evacuation. Coalition partners and the civilian aviation industry may contribute to strategic AME.

1.69 Classification of aeromedical patients. Patients selected for tactical and strategic AME are classified as follows:

a. Class 1—mental health patients;

b. Class 2—litter (stretcher) patients other than mental health;

c. Class 3—sitting patients other than mental health; and

d. Class 4—passenger class.

These classes are broken down into sub-classes, which are described in annex A.

Aeromedical evacuation system

1.70 The AES is a key component of the overall evacuation system and consists of the AME aircraft, health elements and facilities, staging facilities, specialist equipment and a range of enabling agencies. A key enabler of the
AES will be the number and type of both fixed and RW aircraft available and AME qualified teams.

1.71 Aircraft configuration. AME can be conducted by both rotary and fixed wing aircraft. Configuration of aircraft for use in AME occurs as follows:

a. **Non-configured.** This is where an airframe is provided in its normal duty configuration or configuration as used on the previous mission. The AME team may need to re-configure the aircraft to the requirements of the AME task.

b. **Temporarily configured.** This is where an aircraft is designated to perform a role or mission normally for a defined period, and time is allocated for the airframe to be configured to best suit the AME tasking. Re-configuration of the aircraft can be completed by the AME team and / or aircrew to an approved layout.

c. **Permanently configured.** This is an aircraft that has been fitted with a purpose-designed suite of medical equipment and is generally not re-configurable to a standard aircraft configuration without significant engineering effort. This type of aircraft would normally be marked with the Red Cross, Crescent or Diamond in accordance with the Geneva Conventions.

1.72 Staging facilities. A staging facility is deployed to conduct patient preparation, stabilisation and staging support within the JFAO or at an ISB. Where AME is required, patients are often prepared and held for short periods prior to flight. This element would normally be located at the strategic airhead but may be collocated with other health facilities close to the airfield. In the maritime environment, the staging facility will be on board the ship in close proximity to the flight deck and, when configured, is typically composed of the ship’s medical team.

1.73 Equipment. During evacuation, medical equipment fitted to a patient remains with that patient until the evacuation is completed. To ensure timely replacement of key medical support equipment to forward areas, equipment management and refurbishment processes should be established. Pools of

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7 Air Standard 61/115/19A uses Casualty Staging Unit whereas the ADF AME staging is a capability brick of an expeditionary health facility Level 2.
key medical equipment may be required to ensure the timely replacement of critical items in forward areas.

1.74 Chapter 2 and chapter 4 describe the responsibilities for, and execution of, the AES.

SERVICE RESPONSIBILITIES

1.75 All services are responsible for the provision of suitably qualified AME personnel for joint operations. Specific environmental command responsibilities for CASEVAC support are as follows:

a. The Royal Australian Navy (RAN) is responsible for the following:

(1) provision of forward and tactical surface evacuation to maritime operations;

(2) provision of forward and tactical AME to maritime operations;\(^8\)

(3) AME qualified health personnel on RAN aircraft tasked in an AME role;

(4) strategic surface evacuation to joint operations; and

(5) preparation of patients and provision of staging facilities in the maritime environment.

b. The Australian Army is responsible for the following:

(1) provision of forward and tactical surface evacuation to land operations;

(2) provision of forward and tactical AME, using RW AME assets, to land operations;

(3) AME qualified health personnel on Australian Army aircraft tasked in an AME role; and

\(^8\) The provision of forward AME during amphibious operations is likely to be shared with a Land lead due to the nature of airframes available.
(4) strategic surface evacuation in support of joint operations, typically in times of major conflict only.

c. The Royal Australian Air Force (RAAF) is responsible for the following:

(1) provision of forward surface evacuation within air bases;

(2) provision of tactical and strategic AME;

(3) AME qualified health personnel on RAAF and commercial aircraft tasked in an AME role;

(4) health support at applicable locations in the fixed wing tactical and strategic AME systems;

(5) preparation of patients for AME at staging facilities except in the maritime environment;

(6) classification of patients for tactical and strategic aeromedical evacuation;

(7) training of ADF personnel in AME; and

(8) provision of AES support for forward, tactical and strategic AME.

Annex:
A. Classification of patients for tactical and strategic aeromedical evacuation
CLASSIFICATION OF PATIENTS FOR TACTICAL AND STRATEGIC AEROMEDICAL EVACUATION

1. Patients selected for tactical and strategic aeromedical evacuation are to be classified into Classes 1 - 4 as follows:

a. **Class 1 - Mental health patients.**

   (1) **Class 1A.** Mental health patients who are severely mentally disturbed and require the following:
   
   (a) thorough pre-flight search (including bedding);
   
   (b) in-flight litter (secured with 4 straps);
   
   (c) chemical sedation;
   
   (d) physical restraint equipment (secured); and
   
   (e) continuous in-flight supervision.

   (2) **Class 1B.** Mental health patients who are currently not mentally disturbed, but may suffer a reaction to the in-flight environment and potentially endanger themselves, the aircraft and its occupants. These patients require the following:
   
   (a) thorough pre-flight search (including bedding);
   
   (b) in-flight litter (secured with 4 straps);
   
   (c) chemical sedation;
   
   (d) physical restraint equipment (available); and
   
   (e) continuous in-flight supervision.

   (3) **Class 1C.** Mental health patients who are cooperative and have proved reliable under specialist observation. These patients are normally considered walking patients and will be allocated a seat next to their medical escort. A search is not required.
b. **Class 2 - litter (stretcher) patients.**

   (1) **Class 2A.** Patients who are unable to move about of their own volition in any circumstances and are unable to evacuate the aircraft in an emergency without total assistance, eg unconscious patient, babies, and infants.

   (2) **Class 2B.** These patients are to enter and egress the aircraft on a litter. In the event of an aircraft emergency, they are deemed able to make some attempt to egress but will still require assistance.

   (3) **Class 2C.** Patients whose medical condition allows them to walk on and off the aircraft but would benefit from carriage on a litter during flight. They are to be awarded a litter and a seat on the aircraft.

c. **Class 3 - sitting patients.**

   (1) **Class 3A.** Sitting patients who may require in-flight care and who in the event of an aircraft emergency, would require assistance to egress the aircraft.

   (2) **Class 3B.** Sitting patients who may require in-flight care and who in the event of an aircraft emergency would be able to egress the aircraft unassisted.

   (3) **Class 4 passenger class.** Patients who do not require in-flight care and are deemed physically able to travel unattended. Depending on their condition, these patients may need a non-medical escort to assist with baggage. Upon arrival at their terminal airfield Class 4 patients require medical/ specialist review by the destination medical facility.
CHAPTER 2

COMMAND AND CONTROL

Executive summary

- The Director-General Air HQJOC is responsible to CJOPS for the planning, execution, monitoring and control of the aeromedical evacuation system (AES) for operations.

- The HQJOC Air and Space Operations Centre (AOC) has an aeromedical evacuation control centre (AECC) manned by Royal Australian Air Force (RAAF) AME specialists (including the Chief - AME) who perform this role.

INTRODUCTION

2.1 The command and control (C2) of CASEVAC supporting deployed forces is a vital consideration for operations. Force elements (FE) and staff must have a sound understanding of their commander’s concept of operations and the availability, capacity and capability of the resources allocated to the CASEVAC system in support of an operation. Effective CASEVAC involves consistent and coherent C2 arrangements to coordinate the health elements, other enabling elements and infrastructure of the evacuation system.

2.2 The CASEVAC system consists of both surface and AME assets and, as such, has elements that are drawn from a range of Australian Defence Force (ADF) organisations. For the CASEVAC system to function effectively, friction points relating to the change of command status of system elements must be understood. Clear C2 structures and terminology are essential to ensure delineation of roles and responsibilities between the following:

a. health elements including treatment and staging facilities;

b. surface platforms involved in CASEVAC;

c. aircraft and teams involved in AME;

d. staff coordinating the CASEVAC system; and
This chapter provides an overview of the following:

a. the role of the strategic health organisation in guiding CASEVAC policy;

b. the roles and responsibilities of operational level staff, particularly with regards to the provision of CASEVAC to the force;

c. the role of the Headquarters Joint Task Force (HQJTF) staff and elements that assist with the evacuation process;

d. the role of the tactical component commanders in the evacuation process; and

e. C2 of AME.

STRATEGIC LEVEL COMMAND AND CONTROL

The Health Services are organised for war and adapted for peace. During operations, health support elements and personnel are force assigned by the Chief of the Defence Force (CDF) to CJOPS.

The Joint Health Command (JHC) develops and provides the following:

a. strategic-level health and CASEVAC advice; and

b. CASEVAC doctrine and policy.

2.6 National support base. If the flow of casualties is large enough, there may be a medical regulation office (MRO) established within Australia. Commander Joint Health (CJHLTH) typically tasks the Joint Health Services Agency (JHSA) to conduct the following:

a. arrange and coordinate reception for surface, sea and air transport of patients at a destination medical facility (DMF) on exit from the AES, in conjunction with the AME operations officer (AEOO) in the AECC and/or MRO;

b. track all casualty/patient movement within the national support base (NSB) until discharged from inpatient care;
c. monitor the available ADF and civilian bed status in the NSB, particularly in the event of significant casualties; and

d. assist the National Welfare Coordination Centre to coordinate all inquiries from next of kin regarding patients.

Figure 2–1: An operational casualty arrives in the national support base

OPERATIONAL LEVEL COMMAND AND CONTROL

2.7 CJOPS exercises command of ADF operations on behalf of CDF. CJOPS commands and controls operations through the HQJOC staff. Within HQJOC, DGSPT is responsible to CJOPS for planning and monitoring the support to operations, including health support. DGAIR is responsible for the planning and monitoring of AES support to operations.

2.8 Director Health HQJOC. The J07 or Director Health (DHLTH) provides DGSPT with the technical expertise to plan and execute the CASEVAC system. The J07 is responsible for the following:

a. planning, monitoring and execution of the CASEVAC system for operations;
b. patient holding policies for all operations;

c. Liaising with the Chief - AME in HQJOC AECC who is responsible for the following:

(1) provision of AES support including the tasking of RAAF AME escorts to conduct Strategic AME missions, and

(2) AME patient tracking.

2.9 Chief - AME. The Chief - AME is the specialist staff officer within HQJOC AOC AECC and is responsible for planning, co-ordinating, monitoring and controlling the AME System for ADF members, AFN's and approved civilians from an Operational AO to the NSB or within the NSB. This includes the following:

a. planning the composition of teams and AME equipment requirements for operations, exercises and the NSB;

b. determination of aircraft requirements for forward, tactical and strategic AME (this may be ADF, coalition, chartered or civilian air depending on the situation);

c. coordination with Chief Air Combat Operations and Air Mobility Control Centre (AMCC) for the allocation and tasking of aircraft to strategic AME;

d. coordination, tasking and control of Strategic AME teams;

e. determination of requirements for facilities on or in the vicinity of airheads and airbases for the limited care of casualties entering, en route or leaving the AES,

f. coordinating the preparation and stabilisation of patients for flight;

g. determining special requirements for patients transported by air;

h. strategic AME approval and tasking;

i. ascertaining an appropriate DMF for patients to exist the AES;
j. liaison with, and the provision of, AME information and advice to DHLTH to support patient tracking;

k. liaison with the 1st Joint Movement Group (1JMOVGP) for AES assistance and JHC for the reception and treatment of patients returning to the NSB;

l. provision of AES advice to the deployed J07 and AEOO; and

m. monitoring the AME system and maintaining a database of patients evacuated back to Australia (AS) and within AS.

2.10 Headquarters 1st Joint Movement Group. Headquarters (HQ) 1JMOVGP is commanded by, and provides advice to, CJOPS on movements support to operations, including the CASEVAC system. HQ 1JMOVGP executes CJOPS’s operational priorities for movement of FE and materiel, whilst remaining cognisant of, and factoring in, the needs of the CASEVAC plan.

2.11 Given the likely demands placed on air assets for all aspects of an operation, liaison between the HQJOC AOC AECC and movements staff is essential. Some tactical and all strategic level AES movements may require coordination with movement elements¹ to facilitate the movement of other freight and passengers during the pre-positioning or return of aircraft from AME tasks.

TACTICAL LEVEL COMMAND AND CONTROL

Headquarters Joint Task Force

2.12 During operations health support elements and/or personnel are force assigned to the Commander Joint Task Force (Comd JTF) as required. Generally, the HQJTF will include health staff. An appropriate officer will be appointed as the senior health officer (SHO), who will have primary responsibility for providing health advice to the Comd JTF and exercising technical control over elements executing the CASEVAC system.

¹ Tactical AME at sea using Navy assets is not normally coordinated with movement elements.
2.13 The J07 staff assists the SHO. The size of the J07 staff will vary with the mission and size of the force. The tasks of the J07 staff in relation to CASEVAC are as follows:

a. provide advice to the Comd JTF and other staffs regarding the CASEVAC system;
b. plan and coordinate CASEVAC support to operations in consultation with all joint staff;
c. prepare and monitor the implementation of the CASEVAC plan within the JFAO;
d. provide casualty regulation within the JFAO; and
e. liaise with J07 HQJOC and Chief - AME regarding casualty evacuation from the JFAO to the NSB.

2.14 The HQJTF may establish an MRO responsible for the following:

a. regulating the flow of casualties within the JFAO,
b. arranging and coordinating patient movement within the JFAO along the air, sea and land lines of communications (LOC) in conjunction with the AEOO;
c. report daily statistics of admissions, discharges and transfers to the HQJTF J1; and
d. maintain a patient tracking system.

2.15 The C2 functions of joint task force staff in executing the CASEVAC plan are as follows:

a. **J07 staff.** The J07 staff exercises control over all health elements and facilities in the JFAO and provides health advice to the Comd JTF.

(1) The MRO and AECC assist the J07 staff at the joint task force HQ with the control and regulation of the CASEVAC system.
(2) The AEOO on behalf of the SHO exercises control over intra-theatre AME, provides fitness to fly determinations and coordinates the tasking of FE providing AME.

b. **J1 staff.** The J1 staff coordinates the personnel tracking of casualties and patients through the CASEVAC system.

c. **J3 staff.** The J3 staff provide advice on available casualty evacuation platforms within the JFAO and the force protection posture required to operate within the battlespace. They also deconflict friendly action and movement within the JFAO through component headquarters and coordination agencies.

d. **J4 staff.** The J4 staff coordinates the provision of transport, positions evacuation stores and equipment, and liaises with J07 staff for the provision and control of Class 8 stores and of blood and blood products throughout the CASEVAC system.

e. **J6 staff.** The key CASEVAC responsibility of the J6 staff is to ensure the continuity of communications that enable the C2 of the CASEVAC system.

### 2.16
Each of the joint task force components has responsibilities for the provision of AME. The joint force air component commander (JFACC) is responsible to the Comd JTF for of a coordinated AES in support of operations. The AES synchronises the effects of each Service and ensures a smooth and coordinated AME flow during ADF operations.

**Tactical maritime environment**

### 2.17
Joint force maritime component commanders (JFMCC) is responsible to the Comd JTF for the following:

a. surface CASEVAC from ships and submarines;

b. forward AME from ships and submarines;

c. tactical AME from ships and submarines, in cooperation with the JFACC where appropriate;

d. the provision of forward and tactical AME in support of amphibious operations in concert with the joint force land component commander (JFLCC);
e. the provision of AME-trained personnel and equipment for forward and tactical AME at sea;

f. the provision of staging facilities for continuing care of patients evacuated using ships’ flights and flight decks; and

g. communications with the DMF for casualties evacuated from ships, in cooperation with the AES components ashore, for forward and tactical AME at sea.

Tactical land environment

2.18 The JFLCC is responsible to the Comd JTF for:

a. surface CASEVAC in the land area of operations (AO) (except at air bases);

b. forward and tactical AME within the land AO undertaken by land assets, in cooperation with the JFACC where appropriate;

c. the provision of forward and tactical AME in support of amphibious operations in concert with the JFMCC;

d. coordination with the AECC for all AME in the land AO undertaken by land assets;

e. the provision of AME-trained personnel and equipment for forward and tactical AME undertaken by land assets; and

f. communications with the DMF for casualties evacuated within the land AO, in cooperation with the AES components, for forward and tactical AME.

Tactical air environment

2.19 The JFACC is responsible to the Comd JTF for:

a. surface CASEVAC at air bases;

b. tactical AME within the JFAO, in cooperation with the JFMCC and JFLCC where appropriate;

c. liaison with the HQJOC AOC AECC for coordination of strategic AME;
d. coordination through the AECC of all AME both within and from the JFAO;

e. the provision of AME-trained personnel and equipment for tactical and strategic AME undertaken by JFACC assets; and

f. communicating with the DMF for casualties evacuated within the JFAO.

**Aeromedical evacuation control centre**

2.20 To facilitate an effective AES, AECC are established at appropriate HQ including HQJOC and AME assets are located at expedient points in the AME chain. AECC may be established as part of an AOC or an air component coordination element, which is collocated with the joint task force HQ.

2.21 The tasking of aircraft, other than where aircraft have a dedicated AME role, involves coordination between the AECC and respective component commanders. The AECC provides centralised coordination of assigned AME resources within the JFAO and has technical responsibility for determining patients’ fitness to fly, equipment and AME team requirements and performs the following:

a. coordinates and monitors forward AME;

b. controls tactical AME;

c. liaises with Chief - AME in AOC AECC who is responsible for coordination and control of strategic AME;

d. validates patients’ fitness to fly;

e. controls patient movement by air within the JFAO;

f. coordinates the preparation and stabilisation of patients for flight;

g. coordinates intra theatre patient movement through the AES;

h. determines special requirements for patients transported by air; and
i. coordinates AME trained personnel and equipment for intra-theatre AME.

2.22 The AECC does not have direct involvement in forward or tactical AME in the maritime environment except where the ship has a dedicated AME aircraft and team.

2.23 Aeromedical evacuation operations officer. The AEOO ideally resides within the AECC and is usually a RAAF AME qualified aviation medical officer (AVMO). A RAAF AME qualified aviation nursing officer can act in the technical role of an AEOO, however, advice from an AME qualified AVMO is still required to validate clinical fitness to fly. In this instance the validation authority may be devolved down to the AME qualified AVMO of the tasked unit or AME team. The AEOO has ultimate authority over casualty’s fitness to fly and is responsible for the following:

a. providing advice to the J07 regarding the requirement for and the disposition of AME teams and staging facilities within the JFAO;

b. activities relating to planning and directing AME operations;

c. maintaining liaison with medical airlift activities;

d. coordinating aircraft and patient movements;

e. AME validation, approval, coordination and tasking within JFAO;

f. submitting validated strategic AME requests to Chief - AME;

g. coordinating reception for patients at a DMF in conjunction with the MRO, Chief – AME and JHSA, and

h. ensuring AME clinical details are forwarded to relevant addressees.

2.24 The AEOO assigned to an operation communicates directly with the Chief – AME at HQJOC AOC for AME technical advice and strategic AME coordination.

2.25 Aeromedical evacuation coordinating officer. The aeromedical evacuation coordinating officer (AECO) is located at the tasked health
element or AME squadron and coordinates tasking from the AECC. The AECO conducts the following:

a. coordinates the AME activities of allocated health facilities;

b. coordinates the medical aspects of the AME; and

c. submits requests to the AEOO to airlift suitable patients.

**Movement control**

2.26 Movement control encompasses the planning, routing, scheduling and control of materiel and personnel, which may include casualties, along the LOC. Movement control personnel assist the AECC with the control of AES and are located at the joint movement coordination centre (JMCC) in the JFAO and joint movement control office (JMCO) in the NSB.

2.27 **Joint movement coordination centre.** The JMCC assists the AECC through the following:

a. the provision of movement control along an allocated LOC, point of debarkation (POD), point of embarkation, intermediate staging base or other areas where control and monitoring of personnel and Class 8 supplies in the CASEVAC system are necessary;

b. assistance, where applicable, with the coordination of tactical AME;

c. assistance, as determined by Chief – AME, with the coordination of strategic AME including the return of patients to the NSB;

d. assistance through monitoring the whereabouts of patients in the AES;

e. liaison with civil and military strategic airlift agencies as requested by the AEOO or Chief - AME; and

f. the preparation and issue of movement orders for patient movement.
2.28 Joint movement control office. The role of the JMCO is to provide movements support within Australia. JMCO are responsible for support to the AES through the following:

a. coordination of the reception of patients in AS, in conjunction with the DMF as determined by Chief - AME;

b. provision of movement control elements and coordination of transport assets, especially ambulances, in the NSB between the POD and the DMF; and

c. liaison with and provision of movements advice to supported health elements.

Liaison

2.29 All military operations require some type of liaison whether it is between supporting and supported units, military to civilian or military to government/host nation. Effective coordination of the CASEVAC system is achieved through the assignment of liaison officers and the timely passage of accurate information particularly between staffs, commanders of essential CASEVAC assets, health facilities, staging facilities and movements elements.

AEROMEDICAL EVACUATION COMMAND AND CONTROL

Command and control of aeromedical evacuation aircraft

2.30 The C2 of AME can be complex as an AME aircraft can be under the tasking authority of different commanders and hence coordination of tasking is more problematic. AME missions undertaken using assigned assets are typically controlled and coordinated by the joint task force HQ through the AECC. In a combined or coalition operation the AECC will be part of the combined air operations centre. Aircraft are normally tasked for AME duties as appropriate to the operational situation. Dedicated AME aircraft will usually be managed through the AOC and tasked via the air tasking order.

2.31 Tasking. AME tasking can be provided as follows:

a. Opportunity. Opportunity AME is undertaken by aircraft with an existing flight plan whose primary tasking is not AME. The aircraft may be adapted to accommodate the AME if space is available for re-configuration and the AME equipment is compatible with the cargo already on the aircraft. If approved,
the existing flight plan can be diverted to pick up or deliver the patient(s) from different locations. If appropriate, an opportunity aircraft can be re-tasked to become a dedicated AME platform and would be re-assigned as a special AME. Opportunity AME is the norm in the maritime environment and is also most commonly used for strategic AME.

b. **Special.** Special AME occurs when there is a requirement to task an aircraft for a specific AME mission. Once tasked, the aircraft is deemed a dedicated AME platform until the completion of the AME. Once this occurs, the aircraft will resume its normal flight plan. This type of tasking is generally used for strategic AME, however, may also occur within an AO if no dedicated AME FE exists and the clinical condition dictates it as necessary.

c. **Scheduled.** Scheduled AME occurs where the demand for AME warrants planned routine/regular flights specifically for AME.

d. **Dedicated.** This type of tasking essentially occurs during operations and exercises. An AME element consisting of dedicated aircraft, aircrew, AME team(s) and equipment is assigned with the primary task of conducting AME. The aircraft may be configured ready for AME tasks or be easily re-configured depending on the AME task and aircraft type. The tasking is the primary mission and is normally for an extended period of time either for the duration of the operation or exercise or for as long as the requirement for a dedicated AME FE exists.

### 2.32 Aeromedical evacuation requirements

AME requirements include the following:

a. aircrew involved with AME tasks must be familiar with the basic procedures for the carriage of casualties to enable them to assist medical personnel;

b. aircraft dedicated to AME tasks must carry appropriately qualified AME trained medical personnel;

c. when a non-dedicated aircraft is required to perform an AME mission, unless authorised by AECC or Chief – AME, only AME trained medical personnel should be used to accompany casualties;
d. AME aircrew and teams are to be equipped with appropriate aircraft life support equipment;

e. only AME certified equipment can be used on aircraft; and

f. aircraft dedicated to AME are to be marked and identified in accordance with Australian Defence Doctrine Publication 1.2—Operational Health Support chapter 6 ‘Elements of health support’.

Command and control of individual elements

2.33 Aeromedical evacuation teams. AME teams are under command of the aircraft captain for the duration of the AME mission, and are considered to be members of the aircrew for these missions. This includes flying allowances, in flight rations, accommodation and inclusion on the crew manifest. Each AME team has a designated team leader or officer in charge who may not be the most senior in rank, but has responsibility for the conduct and management of AME team members during the mission. The JFAO AEOO has control of AME teams and is responsible for liaison with the FE conducting the intra theatre AME mission. For strategic AME, Chief -AME has control of AME teams and is responsible for liaison with the FE conducting the strategic AME mission.

2.34 Casualties and patients. Casualties and patients evacuated out of the JFAO to the NSB through the strategic AES are under control of HQJOC Chief – AME and returned to command of their parent unit or command upon exiting the AES.

2.35 A patient is under the tactical control of the transport commander when loaded onto a mode of transport, until transferred to another transport mode commander (ie aircraft to ambulance) or to a health facility (ie ambulance to hospital). If the health facility is in a Royal Australian Navy ship, the patient is under tactical control of the commanding officer of the ship. Patients who enter a coalition health facility remain under command of their assigned unit and are normally administered by an escort officer or health liaison officer.
CHAPTER 3

CASUALTY EVACUATION PLANNING

Executive summary

- Strategic, operational and tactical planners have distinct responsibilities in relation to casualty evacuation (CASEVAC).
- The health estimate provides commanders and staff with broad health options to support the force.
- The casualty estimate underpins the health estimate and provides key guidance to the planning of the evacuation system.

INTRODUCTION

3.1 Operational planning within the Australian Defence Force (ADF) is an integrated system, which involves the commanders and staffs of strategic, operational and tactical headquarters working in close coordination with the aim of producing the most effective military response in support of national objectives.

3.2 The basis for all joint planning in the ADF is the joint military appreciation process (JMAP). The JMAP is a decision making process that analyses the relevant factors and coordinates the various staff functions towards the development of the most appropriate course of action (COA). It is a flexible planning process for all levels of command. The JMAP operates as a cyclic process relying on continuously updated intelligence and information at each step to ensure the continued relevance of the overall plan. The JMAP is described in detail in Australian Defence Force Publication 5.0.1—Joint Military Appreciation Process.

3.3 Health support planning is integrated within the JMAP. CASEVAC planning is a component of health support planning and provides commanders with the options available and the associated risks for CASEVAC support to an operation.

3.4 The purpose of this chapter is to provide guidance to commanders and staff at all levels regarding planning CASEVAC support to operations. The focus of the chapter is directed to key operational considerations and the
casualty estimation process, and their impact on the design of the CASEVAC system. This chapter will describe:

a. CASEVAC planning considerations;
b. health and casualty estimates;
c. CASEVAC system planning;
d. risk as it relates to CASEVAC planning;
e. CASEVAC planning responsibilities; and
f. the CASEVAC plan.

**PLANNING CONSIDERATIONS**

3.5 The planning staff use the JMAP to produce a concept of operations (CONOPS) from which they develop operational and administrative plans. The health support order (HSO) is designed to support these plans, with the CASEVAC system being one component of the HSO. There are a range of enduring operational factors that influence the design of the health support plan and the CASEVAC system including the following:

a. mission and resulting CONOPS;
b. operational environment and associated threats; and
c. CASEVAC capabilities available to the force.

**Mission**

3.6 The mission determines the type of operation, the nature of activities and the consequent health risks and anticipated casualties. The mission is a key determinant of the casualty estimate and consequently the CASEVAC system. Key mission factors include the CONOPS, duration and phase of an operation, and coalition, law and humanitarian considerations.

3.7 **Concept of operations.** The number, type and location of CASEVAC elements depend on the overall deployment plan and mission-specific considerations, in terms of both time and space. Health planners need to consider the following:
3.8 Duration and phase. The anticipated duration of an operation can influence the number of casualties and the CASEVAC capabilities required in theatre. There are specific planning considerations during each phase of an operation, which are described in paragraphs 3.29 to 3.33.

3.9 Coalition operations. Coalition operations can be led by either the ADF or a coalition partner. International arrangements and agreements exist with Australia’s key partners and are executed to establish mutual support including CASEVAC:

a. **Australia as the lead nation.** Health planners should determine which members of the coalition may be able to provide appropriate CASEVAC support and whether those countries are capable of providing medical support to meet Australian standards of care. Coalition partners may also substantially contribute to aeromedical evacuation (AME) capabilities.

b. **Supported.** The ADF is often a contributor to coalition operations, where the lead or another nation provides the CASEVAC system. Health planners need to analyse the level of coalition health support capability and provide advice to operations staff on its appropriateness and integrate the coalition system into the ADF CASEVAC system.

3.10 Law. Deployed forces, including elements providing CASEVAC, are always subject to international humanitarian law (IHL) and the law of armed conflict (LOAC) and may be subject to the laws of the host nation (HN). Health planners must consider the health implications of the IHL, LOAC, the status of forces agreement, the applicability of international human rights legislation, and HN laws. Operational health planners must also consider the CASEVAC of enemy casualties, including the following:

a. Security;

b. extent of the anticipated evacuation; and
Chapter 3

3.11 Chapter 6 of Australian Defence Doctrine Publication 1.2—Operational Health Support provides detailed guidance on this issue.

3.12 Humanitarian support considerations. The potential requirement to treat and evacuate civilians must be considered as part of planning. For operations other than war health planners may need to consider the CASEVAC requirements of non-combatants (Australian nationals and approved foreign nationals). Humanitarian support considerations are described in chapter 5 ‘Casualty evacuation support to a range of operations’.

3.13 Operations security. Operational planning is frequently conducted within compartments in order to maintain operations security (OPSEC). The health environment is complex and the knowledge to complete intricate planning usually requires input from specialists. Health planning staff must observe OPSEC considerations and seek approval for entry for specialist health advisers to provide critical information to the compartment. Tactical level planners need to be cognisant of the delay that compartmentalisation may cause, but understand the OPSEC value it provides.

3.14 Special operations forces casualties. Due to the unique force protection requirements associated with special operations force (SOF) personnel, SOF casualties are managed in accordance with the guidelines contained within ABCA (America, Britain, Canada, Australia) Publication 357—The Management of SOF Casualties in the ABCA Health Treatment System and described in chapter 5.

Environment and threat

3.15 Health threat assessment. Planners consider the health threat in terms of operational, occupational and environmental hazards, described in paragraph 3.21.

3.16 Geographical factors. Sea, land and air conditions, terrain, physical distances, climate and other geographical factors have a major influence on the health of the force, the CASEVAC assets required and their deployment within the joint forces area of operations (JFAO).

Casualty evacuation capabilities

3.17 Australian Defence Force capabilities. Health planners must consider the following:
a. type of CASEVAC assets available;

b. capabilities of the evacuation teams such as resources, personnel and equipment;

c. capabilities of the assets such as transport payloads and ranges;

d. availability of assets to support the CASEVAC system and how they may be alternatively tasked, particularly airframes; and

e. ability for health elements to cope with casualties.

3.18 Commercial support. Health planners need to be cognisant of the capabilities offered by suitability credentialed commercial operators, particularly in small-scale operations in austere environments. Health planners should also consider whether and when to transition from a military CASEVAC system to a commercial system.

3.19 Communications. Communication connectivity both within the JFAO and back to the national support base (NSB) will be essential for both the control of the CASEVAC system within the battlespace, as well as the regulation of patients, particularly as they are evacuated to the NSB.
Figure 3–1: Heavy lift helicopters provide a significant casualty evacuation capability
THE JOINT HEALTH ESTIMATE

3.20 At the operational level, health staff (J07) complete a health estimate. The staff uses health capability modelling to determine what mix of health capability elements is required to meet the needs of the deployed force. This model evaluates the following:

a. the types of operational, occupational and environmental threats;

b. the health information, intelligence and surveillance outputs; and

c. the casualty estimate.

Health threats

3.21 The types of casualties predicted to occur during ADF operations directly influence the type of health support and, in this context, CASEVAC capabilities required. Casualty types are influenced by the operational environment in which ADF personnel are deployed and, specifically, the range and types of health threats that exist within that operational environment. Threats can be broadly categorised as follows:

a. **Operational threats.** These are threats posed by warfare systems and weapons likely to be used by potential adversaries against the ADF during operations. They include conventional and non-conventional weapons.

b. **Environmental threats.** These are threats posed to ADF personnel by elements in the natural environment. They include communicable diseases and environmental hazards such as heat, cold and altitude.

c. **Occupational threats.** These are man-made threats posed by our own warfare systems and equipment to our personnel. They include physical, chemical, biomechanical and psychosocial threats.

THE CASUALTY ESTIMATE

3.22 Casualty estimation is the key component of CASEVAC planning. It is used to determine the battle casualties (Bcas), disease and non-battle injuries (DNBI) and psychological casualties (PSYCAS), as well as other
routine medical work, to allow a match of health and CASEVAC capabilities against the expected workload. A casualty estimate is based on a number of assumptions and predicts where, when, in what numbers and what type of casualties will occur during the operation that is being planned. The casualty estimate is completed for friendly forces, enemy forces, civilians and neutrals.

3.23 J07 staff consolidates casualty estimates; however, the responsibilities for preparation are as follows:

a. Bcas estimates - operations staff (J3);

b. DNBI estimates - J07 staff; and

c. PSYCAS estimates - specialist psychology planning officer.¹

3.24 Factors affecting casualty rates. The casualty estimate considers previous operational casualty experiences and includes a detailed analysis of all factors, which have a bearing on casualty rates. These may include the following:

a. the intensity, type and duration of the operation;

b. the fitness, training and morale of the force;

c. the ability to adequately prepare the force from a preventive health perspective;

d. enemy forces to include numbers, weapons systems, other equipment, morale, level of training and recent experience;

e. the determination of the technological and numerical advantage or otherwise; and

f. environmental factors including endemic and epidemic diseases, climate and terrain.

3.25 Calculating the casualty estimate. Casualties must be anticipated in all phases of an operation. Estimation of operation specific casualty profiles

¹ This estimate is normally completed by Commanding Officer 1st Psychology Unit.
will require the application of military judgement based on information from the JMAP. General information required to calculate casualty estimates includes the following:

a. **Force strength.** CASEVAC support is influenced by the size and disposition of the deployed force including coalition elements. Force strength determines the number of personnel within the force to be supported by the health capability and the number of personnel at risk of injury or illness.

b. **Types of casualties/casualty profile.** Different types of military operations produce different casualty profiles and rates.

c. **Battle intensity and rate of casualty arrival.** The anticipated arrival of casualties is calculated on a pro-rata basis across the deployed force, based on the intensity of battle, as follows:

   (1) a rate over time; or
   
   (2) as total numbers of casualties for particular engagements/phases of operations.

d. **Casualty flow.** The flow of casualties will rarely be uniform. There will be periods where casualties can be cleared before the next surge and this may influence the capability and holding capacity required.

e. **Numbers of casualties.** As the operation progresses, the actual numbers of casualties that occur are factored into updating the casualty estimates.

### 3.26 Integrating the casualty estimate

To obtain the total estimate of workload, routine medical work and other casualty estimates, including expected enemy and civilian casualties, are added to give an overall estimate of the health and CASEVAC support that is likely to be required.

### CASUALTY EVACUATION SYSTEM PLANNING

### 3.27 Health support planning to manage the anticipated casualties involves the analysis of the health and casualty estimate, including coalition requirements, and the subsequent determination of the following:

a. the likely distribution of Bcas and DNBI casualties;
b. the health facilities and their preferred locations required to cope with anticipated casualties;

c. the distances and resulting time and space calculations to determine the potential location and quantity of CASEVAC assets;

d. patient holding policies;

e. potential commercial support opportunities;

f. potential coalition CASEVAC capabilities and hubs (JFAO and external);

g. communication requirements;

h. humanitarian support considerations; and

i. liaison officer requirements.

3.28 The CASEVAC concept is developed during the COA development phase of the JMAP. The CASEVAC system will evolve as the operational plan develops and must be tested during the operational war game to ensure that it will support each CONOPS. This is typically conducted as part of the COA analysis phase of the JMAP. The war game should test the proposed concept of health support, including the CASEVAC system, across all phases of the deployment, each of which has particular planning factors.

**Operational phases**

3.29 There are a range of considerations for CASEVAC system planning particular to the phase of the operation: pre-deployment, deployment, during the conduct of operations and re-deployment.

3.30 **Pre-deployment.** The following factors affect CASEVAC planning during the pre-deployment phase:

a. availability of specialist teams to support the CASEVAC system;

b. applicable coalition agreements and understandings with respect to casualty management and treatment; and

c. time issues such as the following:
(1) force preparation of deploying FE;

(2) location and preparation of CASEVAC elements and specialist equipments; and

(3) allowing for rehearsals to confirm processes and procedures.

3.31 Deployment. Planning for the deployment of the force focuses on how FE are supported by CASEVAC and health elements that are themselves deploying. Typically planners should ensure the following:

   a. a casualty can receive resuscitation within one hour and surgery within three hours of injury;

   b. rotary wing (RW) or fixed wing (FW) aircraft are allocated to dedicated CASEVAC roles, when operationally required; and

   c. Level 3 facilities are available in-theatre or accessible within doctrinal guidelines.²

3.32 Conduct of operations. During the conduct of operations the CASEVAC system matures. Planners must focus on the following:

   a. anticipating surges through a thorough understanding of the CONOPS; and

   b. pre-positioning of health assets to reduce the travel times for CASEVAC.

3.33 Re-deployment. During the redeployment phase planners must consider:

   a. leaving sufficient CASEVAC assets in or within the vicinity of the JFAO, to deal with all likely contingencies until FE have fully redeployed; and

   b. repositioning of health assets to provide health support to moving FE.

² The Level 3 health facility ideally receives priority in the deployment order.
Risk management

3.34 Risk management is the systematic application of procedures and practises to the tasks of identifying, analysing, assessing, controlling and monitoring risk. No matter what level of command, a commander must ensure that all staff is clear on the degree of risk that is acceptable.

3.35 Rather than limiting activities through restrictive safety concerns, risk management allows the full operational potential to be achieved through managing rather than avoiding risk. Risk management involves an assessment of the probability (likelihood of an event against the frequency of exposure to the event) of adverse events occurring, against the harm or consequence those threats may inflict to various mission outcomes. Where this is significant, contingency plans to deal with these risks need to be included in the health, and by extension, the CASEVAC plan.

3.36 The most difficult aspect of risk assessment is to quantify the risk to CASEVAC system to the operational commander. Three key factors that can be used to quantify risk to the operational commander are as follows:

   a. **Culminating point.** The culminating point is the point in time and location where a force will no longer be stronger than the enemy and risks losing the initiative. Severe limitations in the CASEVAC system can be one determinant of a range of operational factors that results in the force culminating.

   b. **Tempo of operations.** The operational commander will seek to maintain a desired operational tempo. The CASEVAC of casualties is one factor that affects tempo.

   c. **Mission essential equipment.** The operational commander’s plan will often be predicated on the specified level of availability of mission essential equipment (MEE), such as RW aircraft that may be important to both the concept of manoeuvre as well as the CASEVAC system.

3.37 It is important that health staff describe the likelihood and impact of a risk to the commander, and quantify the calculations or factors by which they have determined that risk and solutions to mitigate that risk. For example, if a commander was informed the culminating point of the plan was reached after twelve Priority 1 casualties, explanation must be provided as to why. Reasons may be as follows:
a. the CASEVAC system has one AME dedicated aircraft, which can only turn around three times due to time and distance constraints; or

b. the health element has the capacity to only receive and treat twelve Priority 1 casualties.

3.38 The end state of health planning at any level should be the identification of risks, likelihoods and consequences of mitigation strategies. These should be presented to the commander during the planning process and the commander’s guidance should then be incorporated into future planning. Decisions need to be conscious and defensible and commanders must seek to work within the best practice framework.

CASUALTY EVACUATION PLANNING RESPONSIBILITIES

Strategic level

3.39 The strategic health support concept will normally provide guidance and make arrangements for CASEVAC aspects such as the following:

a. CASEVAC support provided to or by other nations;

b. coalition support executed through a range of international arrangements and agreements;

c. the use of the civilian health infrastructure in the NSB; and

d. preparation, reception, treatment, rehabilitation and post-deployment management of personnel evacuated to the NSB.

Operational level

3.40 Director-General Air. The Director-General Air (DGAIR) at HQJOC AOC is responsible for planning AES support to operations.

3.41 Director Health. The HQJOC Director Health (DHLTH), with the assistance of all staff branches in HQJOC, is responsible to the DGSPT for the detailed planning of the CASEVAC system.

3.42 Joint Health Planning Group. DHLTH convenes the Joint Health Planning Group (JHPG), which is the forum for health support planning, including CASEVAC planning. In addition to HQJOC aeromedical evacuation control centre (AECC) and health planning staff, the JHPG may comprise the
senior health officers of FE, representatives from Joint Health Command, Joint Health Support Agency, psychology, logistics and intelligence staff as appropriate. The JHPG ensures that optimum health support is provided to joint operations and coordinates CASEVAC planning tailored to support the CONOPS. It plans both surface and AME sub-systems and considers the following:

a. patient holding policies for all operations;

b. the casualty estimate and its impact on the design of the CASEVAC system and holding policies;

c. availability, capability, spare capacity, allocation and the following restrictions:

(1) evacuation transportation modes;

(2) communication systems to synchronise support, de-conflict operations and monitor casualties throughout system;

(3) resources such as specialist personnel and equipment;

(4) suitable civilian assets such as aircraft and health infrastructure that can meet the standard of health care required both in the JFAO and NSB;

(5) appropriately credentialed contracted health practitioners, where applicable;

(6) coalition resources and facilities;

(7) Class 8 supplies; and

(8) blood and blood products;

d. force protection posture including issues such as handling contaminated casualties;

e. monitoring of the health and fitness of personnel in the evacuation system including individuals’ psychological wellbeing;

f. management of casualty information; and
g. engagement with Government agencies such as the following:

(1) Australian Quarantine and Inspection Service and Australian Customs Service for the decontamination of infectious equipment used in theatre, and to determine what equipment must be left behind; and

(2) Department of Health for clearance of casualties returning to Australia.3

3.43 Key planning outcomes are as follows:

a. the appreciation of time and space;

b. the allocation of sufficient health assets to support the CASEVAC system;

c. a coordinated CASEVAC system with the following:

(1) the ability to control casualty movement,

(2) appropriately trained personnel and equipment, and

(3) sufficient and suitable air and surface assets;

d. the provision of casualty staging facilities, including the employment of civilian health elements and facilities where necessary;

e. a casualty tracking system; and

f. the analysis of the system during the conduct and at the conclusion of operations to capture and synthesise lessons.

3.44 Chief - Aeromedical Evacuation. The Chief - AME is a specialist staff appointment in the AECC within the HQJOC Air and Space Operations Centre (AOC) and is responsible for the following:

a. providing specialist AME advice to the JHPG;

3 Delays can occur due to contamination or infection.
b. planning and implementing a coordinated aeromedical evacuation system (AES) in support of ADF operations; and

c. preparation of AES plans, which are promulgated as an annex to the HSO and include detail on the following:

(1) the provision of tactical and strategic AME;

(2) the provision of AECC;

(3) the disposition and location of staging facilities throughout the JFAO; and

(4) monitor the AES and appropriate AME procedures to ensure the integrity of the AES is maintained.

Figure 3–2: Strategic casualty evacuation from the Middle East Area of Operations

3.45 Director-General Intelligence. The Director-General Intelligence is responsible for the following:

a. the provision of estimates of enemy casualties, in consultation with the health staff; and
b. advice on the environmental and infrastructure factors that will impact upon the CASEVAC system.

3.46 Director-General Operations. The Director-General Operations is responsible for the following:

a. the preparation of Bcas estimates, in consultation with the health staff;

b. requesting force assignment of assets to support the CASEVAC plan; and

c. through the electromagnetic spectrum staff, planning the provision of communications and information systems (CIS) equipment and bandwidth necessary to ensure the execution of the CASEVAC plan.

3.47 Director-General Plans. The Director-General Plans is responsible for ensuring the proposed CASEVAC system supports and synchronises with the CONOPS and other supporting plans.

3.48 Director Personnel. The Director Personnel is responsible to the DGSPT for the preparation of the following:

a. strength states for the preparation of casualty estimates; and

b. assisting the DHLTH with DNBI estimates.

3.49 Director Logistics Plans. The Director Logistics Plans is responsible to the DGSPT for planning the supply, provisioning and distribution of Class 8 items that support the CASEVAC plan. Planning considerations for the CASEVAC system include the following:

a. supply and distribution of Class 8 items;

b. in conjunction with DHLTH staff, the supply and distribution of blood and blood products; 4

4 CASEVAC assets may be used for distribution of blood and other Class 8 items under the provisions of the Geneva Conventions.
c. tracking of equipment and consumables including the following:

(1) high-value items such as critical-care stretchers and life support systems, and

(2) compressed gases;

d. security of, and customs issues, for Class 8 supplies;

e. maintenance of MEE to support the plan; and

f. provision and improvement of facilities that support the CASEVAC system.

3.50 Commander 1st Joint Movements Group. The Commander 1st Joint Movements Group (1JMOVGP) provides advice to DGSPT on movement capabilities to support operations, including the CASEVAC system. During planning, 1JMOVGP must be aware of the Chief of Joint Operations’ operational priorities for movement of FE and materiel and balance these against the CASEVAC plan.

Tactical level

3.51 Headquarters Joint Task Force J07 staff. Tactical level CASEVAC planning will be provided by Headquarters Joint Task Force J07 staff supported by the AECC. Tactical CASEVAC planning requires interpretation of information from the operation order (OPORD), administrative order (ADMINORD) and particularly the HSO.

3.52 The J07 staff is responsible for developing the tactical level CASEVAC plan. In addition to the considerations described in paragraph 3.5, they must also factor in the following:

a. Commander Joint Task Force (Comd JTF) plan for employment of forces to determine the areas of casualty densities and the placement of CASEVAC elements;

b. casualty estimates and distribution of estimated casualties within the JFAO;

c. availability and capability of evacuation assets;

d. capacity and positioning of the health facilities;
e. enemy’s most likely COA and the corresponding defensive and force protection measures for casualties, health personnel, health units and evacuation platforms;

f. protection afforded under the provisions of LOAC including the marking and notification of FE involved in the CASEVAC system;

g. ability of health elements to divide and disperse into effective capability sub-elements;

h. communication plan;

i. airspace control plan;

j. fire support plan (to ensure medical evacuation assets are not dispatched onto routes and at the times affected by the fire support mission);

k. road network, route security and the dedicated medical evacuation routes (contaminated and clean);

l. weather, terrain, sea states and other environmental conditions; and

m. humanitarian issues including the transfer of civilian patients to civil authorities.

3.53 The HQJTF J07 staff is assisted with the development of the CASEVAC plan by the following:

a. **J1 staff.** The personnel staff provides the force strength and locations, and with input from the J07 staff, the DNBI casualty estimates.

b. **J2 staff.** The intelligence staff is responsible for the following:

   (1) providing estimates of enemy casualties, and

   (2) advising on enemy capabilities that could impact upon own force casualty rates.

c. **J3 staff.** The J3 staff is responsible for managing and control of operations on behalf of the commander. The J3 has
oversight of all aspects of an operation. The operations staff also provides the Bcas estimate, with input from J07 staff, and assigns assets to enable the CASEVAC system.

d. **J4 staff.** The logistic staff plans the provision of transport, Class 8 stores and equipment and, in conjunction with J07 staff, the storage and distribution of blood and blood products.

e. **J5 staff.** The plans staff is responsible for planning future operations. The J07 staff must help to shape the CONOPS and ensure that the CASEVAC system can support the future intent.

f. **J6 staff.** The communications staff plans the CIS that enables the CASEVAC system.

### 3.54 Joint force maritime component commander

The joint force maritime component commander is responsible to Comd JTF for tactical level planning in the maritime environment for the provision of the following:

a. forward and tactical AME using maritime assets;

b. surface CASEVAC;

c. staging facilities; and

d. afloat AECC and other components of the AES in the maritime environment that can not practicably be provided by the joint force air component commander (JFACC) ashore.

### 3.55 Joint force land component commander

The joint force land component commander is responsible to the Comd JTF for tactical level planning in the land environment for the provision of the following:

a. forward and tactical AME using land assets;

b. surface CASEVAC external to air bases; and

c. provision of health elements to support the CASEVAC system.

### 3.56 Joint force air component commander

The JFACC is responsible to the Comd JTF for the following:
a. provision of AECC to provide intra-theatre AES support and regulation;

b. conduction of intra-theatre AME;

c. opportunity AME;

d. liaison with HQJOC AOC AECC for approval and provision of Strategic AME; and

e. surface CASEVAC within air bases

3.57 Medical regulation officer. If established the medical regulation officer assists the J07 staff to plan the control and regulation of the CASEVAC system within the JFAO.

3.58 Aeromedical evacuation control centre. The AECC executes and controls the movement of casualties by air transportation within the JFAO.

CASUALTY EVACUATION PLAN

3.59 The CASEVAC plan may be an appendix to the HSO or incorporated into the body of the HSO, which is routinely an annex of the ADMINORD. The OPORD provides the command and control arrangements for the assets allocated to the CASEVAC plan. An example CASEVAC plan is in annex A.

Annex:
A. Classification of patients for tactical and strategic aeromedical evacuation
CASUALTY EVACUATION PLAN

1. The following plan provides a template for operations and exercises. A range of options have been provided under each heading. The tasks and timings are indicative, not prescriptive.

Situation

2. Purpose. To provide the casualty evacuation (CASEVAC) concept of operations, assign tasks and identify resources available to support CASEVAC and patient movement.

3. Limitations: (some options)
   a. Joint task force (JTF) can provide CASEVAC support to all JTF forces except:
      (1) XXX.
   b. JTF health services assets deploying into the joint forces area of operations (JFAO) will be limited due to length of the operation and restraints on lift.
   c. Shortages of rotary wing (RW) assets for CASEVAC may cause delays in patient evacuation.
   d. Casualties may overflow afloat platforms.
   e. Level 3 surgical capacity consists of XXX and is located at XXX.
   f. All force elements (FE) to carry sufficient Class 8 to self-sustain for XXX days of operations.
   g. In-country medical capability will be limited to organic health elements and JTF ships.
   h. JTF does not have organic capability to provide CASEVAC support to civilian populations.
   i. CASEVAC may be supplemented through the use of approved civilian providers when required.
Casualty evacuation intent

4. **Purpose**: to provide a robust CASEVAC system in support of deployed Australian Defence Force (ADF) FE.

5. **Method**: How.

6. **End state**:

Concept of operations

7. **Casualty evacuation scheme**. The CASEVAC system is to rapidly and safely evacuate casualties through a combination of surface and air evacuation in order to sustain the forces health.

8. **Evacuation precedence**:
   
   a. **Urgent**. Evacuate as soon as possible within XX (eg one hour) of injury.
   
   b. **Priority**. Evacuate within XX hours.
   
   c. **Routine**. Lift of opportunity.

9. **Aeromedical evacuation requests**. Aeromedical evacuation (AME) requests are generated by FE via chain of command. Immediately notify the aeromedical evacuation operations officer (AEOO) by most expedient means available. Appendix 1 contains procedures and format for requests.

10. **Evacuation of routine casualties**. The routine movement of casualties to Level 3 health facilities will be coordinated by J07 staff via the medical regulation office (MRO) if established or AEOO.

11. **Patient holding policies**. A holding policy of (insert days, ie seven days) will be in effect unless otherwise directed.

Surface casualty evacuation - maritime environment

12. **Forward casualty evacuation**:

   a. By stretcher to the ship’s sick bay.
b. Initial medical treatment at point of injury and during movement provided by a ship medical emergency team.

c. Surface transfer by small craft from ship to ship when casualty condition dictates (eg result of diving accident).

d. Hangar to be used as staging facility for ships.

13. **Tactical casualty evacuation:**

   a. Surface means to move casualties from ship to ship or ship to shore when casualty condition dictates or in absence of RW support.

14. **Strategic casualty evacuation:**

   a. Strategic surface casualty evacuation. Patient to remain at the primary casualty reception facility (PCRF) for return to Australia as directed by MRO.

15. **Tasks:**

   a. PCRF located on Royal Australian Navy amphibious vessel XXX.

   b. PCRF to provide basic surgical intervention, stabilisation and resuscitation to forces ashore and afloat.

16. Insert special procedures for diving, amphibious operations, submarine operations etc.

**Surface casualty evacuation—land environment**

17. **Forward casualty evacuation.** Use of surface means dependant on the casualty’s needs, the tactical scenario and the availability of AME assets:

   a. Stretcher carrying and general purpose vehicles to regimental aid post (RAP) or landing zone (LZ) suitable for AME.

   b. Recover casualties from the LZ and evacuate by road to the most suitable treatment facility.
c. **At airbase.** To Expeditionary Health Facility Level 1 via stretcher carrying or ambulance.

18. **Tactical casualty evacuation:**

   a. Tactical CASEVAC by surface evacuation resources moving forward to collect, and transferring rearward.

   b. Patients undergoing tactical CASEVAC to be stabilised at a health facility before being moved.

19. Insert special procedures for special forces, airborne operations, search and rescue/combat search and rescue, chemical, biological, radiological and nuclear etc.

**Aeromedical evacuation system**

20. **Forward aeromedical evacuation:**

   a. Forward AME medical team to provide resuscitation.

   b. AME may fly over forward health facilities, transiting directly to the most suitable facility.

   c. **Maritime.** Forward AME to be executed using the ship’s aircraft.

   d. **Land.** Forward AME to be executed using the ‘on call’ aircraft.

21. **Tactical aeromedical evacuation:**

   a. Tactical AME is the preferred means.

   b. Tactical CASEVAC by air evacuation means resources moving forward to collect, and transferring rearward.

   c. Patients undergoing tactical CASEVAC to be stabilised at a health facility before being moved.

   d. AME to move casualties between treatment facilities in JFAO.

   e. En route care to be provided by XXX.
f. **Maritime.** To be executed using:

   (1) Ship’s aircraft.
   
   (2) RW assets from within the fleet or task group, assigned to the task.
   
   (3) Land based RW assets.

g. **Land.** Tactical AME to be executed using the ‘on call’ aircraft.

22. **Strategic aeromedical evacuation:**

a. Strategic AME for evacuation of patients from JFAO to the national support base (NSB).

b. Strategic AME through staging bases in country X and Y as determined by Chief – AME.

c. En route care to be provided by XXX as directed by Chief-AME.

d. JHC to provide reception and to coordinate patient transfer within the NSB.

e. Enhanced AME capability to be coordinated by Chief-AME:

   (1) CASEVAC of very seriously ill.
   
   (2) Providing specialist personnel and equipment for advanced levels of care.

Tasks (for example)

23. Joint force maritime component commander. Joint force maritime component commander is to provide the following: (for example)

a. Embarked PCRF (HMAS Kanimbla). PCRF not to exceed 40 personnel.

b. PCRF to provide basic surgical intervention, stabilisation and resuscitation to forces ashore and afloat.
c. One aircraft collocated with PCRF and tasked ‘AME on call’.

d. Complete temporary configuration of the aircraft to AME role.

24. **Joint force land component commander.** Joint force land component commander is to provide the following: (for example)

   a. RAP to evaluate, resuscitate and stabilise.

   b. Health Company (combat service support battalion) to collect casualties forward and transfer patients as directed:

      (1) between Level 2 facilities, or

      (2) rearward to Level 3 facilities.

   c. Land component commander to provide the following: (for example)

      (1) One 5-person resuscitation team (deployed date/time group (DTG)).

      (2) One 3-person holding element (deployed DTG).

      (3) Two S70A Blackhawk assigned ‘AME on call’.

   d. Land staging facility to be provided by XXX located at XXX.

   e. Level 3 (Health Support Battalion) located at XXX.

   f. One aircraft collocated with Level 3 facility and tasked ‘AME on call’.

   g. Complete temporary configuration of the aircraft to AME role.

25. **Joint force air component commander.** Joint force air component commander is to provide the following: (for example)

   a. Three 4-person AME teams to be pre-positioned in XXX (deployed DTG):

      (1) AME Team 1—to deploy to location XXX from DTG.
(2) AME Team 2—to deploy to location XXX from DTG.

(3) AME Team 3—to remain as strategic reserve in XXX.

b. One aeromedical evacuation control centre (AECC) to be collocated with the headquarters joint task force (HQJTF) or the headquarters joint force air component.

c. Staging facility at location XXX from DTG.

d. One aircraft to be ‘AME scheduled’ as directed. Complete temporary configuration of the aircraft to AME role.

e. One C130 per week assigned ‘scheduled AME’.

f. Military critical care aeromedical evacuation team location XXX to augment strategic AME team as directed by Chief – AME.

26. Aeromedical evacuation control centre tasks. The AECC is to conduct the following intra-theatre tasks:

   a. Coordinate forward AME (except maritime).

   b. Control tactical (except maritime\(^1\)) and request strategic AME through Chief – AME at HQJOC.

   c. Control patient movement by air.

   d. Coordinate the preparation and stabilisation of patients for flight.

   e. Coordinate AME trained personnel and equipment for in-flight supportive health care.

   f. Determine the requirements for staging facilities.

   g. Provide information transfers with health elements concerning casualty movement requirements.

\(^1\) EOO will need to be aware of ship-to-shore movement. Once aircraft’s ‘feet dry’ the coordination responsibilities revert back to AECC.
27. Medical regulation office:
   a. MRO to be located at XXX. (options include onboard PCRF, HQJTF or at the airport of embarkation).
   b. Tasks. MRO to:
      (1) Regulate casualties within the JFAO.
      (2) Arrange and coordinate patient movement along the line of communication in conjunction with the AECC.
      (3) Coordinate reception for patients at destination medical facility in NSB in conjunction with the AECC and JHSA.
      (4) Maintain a patient tracking system.
      (5) Report daily statistics of admissions, discharges and transfers to J1 HQJTF.

28. Staging:
   a. Staging facilities to be provided:
      (1) At location XXX by DTG.
      (2) At location XXX by DTG.
   b. Tasks. Staging facilities to provide:
      (1) preparation and holding of patients,
      (2) an administration centre for CASEVAC teams,
      (3) an in-theatre holding pool of CASEVAC equipment,
      (4) administrative support to tactical and strategic AME team(s) operating from the location, and
      (5) primary health support for FE in the immediate vicinity without appropriate integral support.
29. **Senior health officer.** Senior health officer (SHO) responsibilities are:
   a. Pre-deployment coordination with all elements of the CASEVAC and medical regulation system.
   b. Monitor and regulate all patient movement in the JFAO.
   c. Coordinate communications necessary for patient evacuation.

30. **Joint Health Support Agency.** JHSA is to:
   a. Coordinate movement of ADF patients to/from the point of debarkation Level 4 facilities in conjunction with Joint Health Command and Joint Movement Control Office.
   b. Track all casualty/patient movement within the NSB until return to donor unit status is achieved.
   c. Monitor the available ADF and civilian bed status in the NSB, particularly in the event of significant casualties.
   d. Assist the National Welfare Coordination Centre to coordinate all inquiries from next of kin regarding patients.

**Administration and logistics**

31. **Logistics:**
   a. FE to deploy with 14 days of medical and dental supplies.
   b. **Equipment.** During evacuation medical equipment, once fitted to a casualty, remains with that casualty until evacuation is completed:
      (1) SHO to determine equipment pool requirements.
      (2) Equipment pool to be established at staging facility.
   c. SHO to coordinate emergency cross-leveling, local procurement and external resupply.
d. Forward arming and refueling point for AME refuel located at XXX DTG.

Command and control

32. **Command relationships.** See annex J to operational order (OPORD). The SHO, as the principal health services advisor to the commander, exercises technical control over all health FE in JTF.

33. Command, control and communications. Health services personnel will rely on operational communications support except for strategic AME:

   a. SHO to identify all key communications links and ensure information is provided to all JTF FE.

   b. Health Services information will be treated as unclassified/sensitive or unclassified Medical-in-Confidence material unless otherwise directed by the Commander JTF.

   c. See annex K to OPORD for command and control relationships.

34. **Requests.** Initiate all requests for AME for Urgent and Priority casualties at the unit level through the AECC across tactical/command net:

   a. **Land.** Initial request via command net or designated facility to the AECC. Follow-up notification and coordination to AECC and MRO.

   b. **Maritime:**

      (1) **Ship-to-ship.** Request via command net (or designated frequency).

      (2) **Ship-to-shore.** Initial request via command net to the AECC. Follow-up notification and coordination to MRO.

      (3) **Shore-to-ship (primary casualty reception facility).** Initial request via command net to ships bridge. Follow-up notification and coordination to AECC and MRO.

35. **Reports.** CASEVAC request proforma in appendix 1.
Appendix:
1. Nine–line casualty evacuation request format
NINE–LINE CASUALTY EVACUATION REQUEST FORMAT

LINE 1: LOCATION OF PICK–UP SITE (GRID COORDINATE)

LINE 2: RADIO FREQUENCY AND CALL SIGN

LINE 3: NUMBER OF PATIENTS BY EVACUATION PRECEDENCE

URGENT:

PRIORITY:

ROUTINE:

LINE 4: SPECIAL EQUIPMENT REQUIRED (ie HOIST, VENTILATOR etc)

LINE 5: NUMBER OF PATIENTS BY TYPE; AMBULATORY, LITTER

LINE 6: NUMBER AND TYPE OF INJURIES/ILLNESS

LINE 7: METHOD OF MARKING LANDING ZONE

LINE 8: PATIENT NATIONALITY

LINE 9: TERRAIN DESCRIPTION
CHAPTER 4

CASUALTY EVACUATION IN SUPPORT OF OPERATIONS

Executive summary

- The purpose of the casualty evacuation (CASEVAC) system is to collect and stabilise casualties and deliver them as quickly as possible to the most appropriate treatment facilities.

- The system describes the injured as casualties from initial first aid through to forward CASEVAC, then generally describes them as patients through tactical and strategic CASEVAC, progressing with staging where required.

- En route care is essential, as casualties may require clinical supervision and emergency intervention during transportation.

- Casualty regulation ensures the coordination of patient movement along the air, sea and land lines of communication.

INTRODUCTION

4.1 The CASEVAC system identifies, collects and stabilises casualties and patients and delivers them as quickly as possible to the most appropriate treatment facilities. The systems, personnel and equipment that provide care throughout the whole evacuation chain will be drawn from all three Services, may include coalition or contracted support, must have similar skills, experience and training, and should be interchangeable where practical.

4.2 Rapid evacuation of casualties and patients makes a positive contribution to operational effectiveness. Minimisation of casualty mortality and morbidity is particularly dependent on the promptness of medical intervention and evacuation. Early evacuation and treatment offers the following benefits:

   a. the increased probability of saving life and limb;

   b. a positive effect on morale; and
c. the maintenance of operational capability through the higher likelihood of a casualty returning to the force.

4.3 This chapter provides the following:

a. an overview of the CASEVAC system; and

b. descriptions of the following:

   (1) CASEVAC in the maritime environment;

   (2) CASEVAC in the land environment; and

   (3) aeromedical evacuation (AME) in all environments.

OVERVIEW OF THE CASUALTY EVACUATION SYSTEM

4.4 The CASEVAC system is a continuum of both evacuation and treatment until the destination for definitive care is reached. CASEVAC starts at the point of injury and may continue back to the national support base (NSB) where patient treatment is provided through the national health care system. CASEVAC must include the provision of competent en route care to maintain casualties in a stable condition so that the risk of further medical complication is minimised.

4.5 CASEVAC is executed by the most appropriate means in relation to the type of casualty. Key execution principles include the following:

a. first aid and stabilisation before evacuation are fundamental to casualty survival;

b. evacuation and treatment assets must be assigned and sited to ensure timely and effective health care for projected casualties, consistent with operational requirements;

c. evacuation is generally performed by the next higher echelon of care going forward to the casualty and evacuating rearward;

d. AME is used for cases where patients’ clinical condition will benefit by the use of AME and operational risks have been considered;

e. in some cases AME may not be the most appropriate evacuation method to transport severely compromised
casualties as the transportation of patients in an airborne environment requires special considerations;

f. surface evacuation may be the only available option for casualties; and

g. the intra-theatre movement of patients within the joint force area of operations (JFAO) boundaries can be executed by either aerial or surface means.

**Locate casualty/first aid**

4.6 The first step of any CASEVAC is to locate and remove the casualty from danger and provide first aid. This may include self- or buddy aid and stabilisation measures such as maintenance of airway, control of bleeding, prevention and control of shock, and immobilisation of fractures to prevent further injury.

**Forward casualty evacuation**

4.7 Forward CASEVAC normally uses organic evacuation resources to move the casualty to the closest facility where formal resuscitation can be conducted. Evacuation is normally to the following:

a. a ship’s sick bay;

b. a regimental aid post (RAP);

c. an expeditionary health facility (EHF) Level 1; or

d. a landing zone (LZ) suitable for AME.

4.8 **Forward surface evacuation.** Forward surface evacuation typically recovers casualties from or near to the point of wounding, injury or illness and evacuates them to the closest treatment facility:

a. In the maritime environment, evacuation is usually by stretcher to the ship’s sick bay. Surface transfer by small craft from ship to ship may be the appropriate forward CASEVAC method such as during a diving accident.

b. In the land environment, stretcher carrying and general purpose vehicles are the usual and often the only methods available.
c. At an airbase, stretcher carrying and ambulances are the usual methods.

4.9 **Forward aeromedical evacuation.** Forward AME typically recovers casualties from an LZ or airfield for evacuation to the most suitable treatment facility. Considerations include the following:

a. AME aircraft may flyover forward health facilities, transiting directly to a more suitable rearwards facility;

b. the forward AME medical team (when allocated) can provide some level of resuscitation; and

c. in the maritime environment, forward AME is usually completed using the ship’s helicopter.

**Tactical casualty evacuation**

4.10 Tactical CASEVAC is moving patients between health facilities in the JFAO and is normally conducted by evacuation resources moving forward to collect the patient whether that is on land, sea or air.

a. In the maritime environment, AME is normally the preferred means; however, surface means can also be used to move patients from ship to ship or ship to shore.

b. In the land environment, it is normal to use tactical AME to move patients between treatment facilities, particularly over long distances. Surface means may also be considered depending on the casualty’s needs, the tactical scenario and the availability of AME assets.

c. The joint force air component commander may assign aircraft to provide tactical AME.

**Strategic casualty evacuation**

4.11 Strategic AME is generally preferred for evacuation of patients from a JFAO to the NSB, due to the considerable distances often involved. Strategic CASEVAC may be conducted through staging bases all the way rearward and include dispersal in the NSB to locations where the most appropriate care can be commenced.
En route care

4.12 En route care is the continuation of medical care of casualties throughout the evacuation continuum, from point of injury to the destination medical facility (DMF), regardless of mode of transport. En route care is essential, as casualties may require clinical supervision and emergency intervention during transportation. Health service personnel providing en route care may be required to deal with medical emergencies, as well as providing expert advice to platform operators on patient requirements. Failure to provide adequate en route care may result in increased morbidity and mortality.

Staging

4.13 During evacuation, there is often a requirement to prepare and hold patients for short periods prior to or after each leg of movement. A staging facility may be deployed at key nodes to conduct patient preparation, stabilisation and staging support within the JFAO or intermediate staging base. Staging facilities have the following characteristics:

a. they are normally located at the strategic airhead but may be collocated with other health facilities close to the airfield or, in the maritime environment, onboard a ship;

b. in the maritime environment, the staging facility will be provided by the medical personnel organic to the ship, located in the vicinity of the ship’s flight deck, and may be augmented by AME personnel embarked from ashore;

c. in the land environment, a staging facility can be provided by an Army asset and may be located with a forward health element; and

d. where AME is required, there will often be a requirement to prepare and hold patients for short periods prior to the flight. The staging facility is integral to the Royal Australian Air Force (RAAF) EHF Level 2, and is normally located at the strategic airhead but may be co-located with other health facilities close to the airfield.

4.14 The functions of a staging facility are to provide the following:

a. for AME:
(1) pre-flight preparation and holding of patients;

(2) an administration centre for AME teams; and

(3) an in-theatre holding pool for AME equipment;

b. administrative support for any collocated health elements, as required; and

c. primary health support for all force elements (FE) in the immediate vicinity without appropriate organic support.

Regulation

4.15 Joint force area of operations. An effective casualty regulation process, supported by comprehensive communications, is essential given the potential complexity of moving casualties rapidly through a complicated operational environment. The medical regulation office (MRO) regulates casualties within the JFAO.

4.16 National support base. The MRO assists and/or relies upon the Joint Health Support Agency to conduct the following:

a. track all casualty/patient movement within the NSB until return to donor unit status is achieved;

b. monitor the available Australian Defence Force (ADF) and civilian bed status in the NSB, particularly in the event of significant casualties; and

c. assist the National Welfare Coordination Centre to coordinate all inquiries from next of kin regarding patients.

4.17 Figure 4–1 provides a generic depiction of a CASEVAC system.
4.18 HMA Ships regularly operate at distances that preclude access to surgery within doctrinal time frames. They may operate well beyond the endurance of any embarked aircraft to transit to appropriate shore health facilities. CASEVAC may entail the ship making best speed to the nearest suitable port or rendezvous point with a rotary wing (RW) aircraft.

**Maritime evacuation system**

4.19 The maritime system for the control and execution of CASEVAC consists of the following:

- a coordinating element, often the ship’s medical staff;
- surface patient transport vessels; and
- the CASEVAC aircraft and AME teams.
Maritime evacuation processes

4.20 The task group’s senior health officer (SHO) coordinates the medical aspects of the CASEVAC and activities of the ships. On receipt of a CASEVAC request, the SHO:

a. validates the requirement for the CASEVAC mission and confirms or allocates a priority;

b. for surface CASEVAC:
   
   1. liaises with the afloat commander to task an appropriate vessel to undertake the required CASEVAC mission; and
   
   2. selects a health facility as the DMF;

c. for forward AME:
   
   1. liaises with the ship’s aviation officer/flight commander to task an appropriate aircraft to undertake the required AME mission; and
   
   2. selects and tasks a health facility (the primary casualty reception facility (PCRF) when available) to provide a qualified AME team;

d. for tactical AME ashore:
   
   1. submits a request to airlift suitable patients to the aeromedical evacuation operations officer (AEOO) where appropriate;
   
   2. liaises with the Headquarters Joint Task Force (HQJTF) J07 and AEOO to ascertain an appropriate DMF for the patient(s); and

e. coordinates and controls the task.

Casualty evacuation at the ‘buddy care’ level

4.21 Evacuation at the ‘buddy care’ level within a ship consists of moving casualties by whatever means available to a first aid post, battle dressing station or to the sick bay (Level 1). Initial medical treatment at point of injury
and during movement may be provided by a ship medical emergency team (SMET). SMET are led by the ship’s medical personnel and formed from non-medical personnel who receive additional medical training to perform their role. The composition of the SMET varies with the size and tasking of the ship.

4.22 Treatment on-board minor war vessels is usually provided by non-medical personnel who have received advanced first aid training as a secondary task. Such training provides a minimal capability for diagnosis, treatment and evacuation. There are usually no dedicated medical facilities onboard these vessels.

4.23 Organic medical capabilities on-board major fleet units (MFU) may consist of advanced and specialist medical sailors at a dedicated sick bay to provide treatment. MFU will carry a minimum of a clinical manager medic who has advanced life-support training. Medical and nursing officers are typically deployed on larger fleet units with more capable health facilities, particularly during extended operational deployments to regions with poor medical support.

4.24 Casualties requiring further evacuation will be moved to the hangar for preparation; the hangar is the staging facility for ships.

Figure 4–2: Casualty evacuation training on a major fleet unit
Evacuation from major fleet units and minor war vessels

4.25 Evacuation from a vessel is desirable where casualties require surgery or other health care beyond the capability of staff and equipment on board. CASEVAC at sea is normally conducted using RW aircraft. Such assets may be organic to the vessel, provided on an as-required basis from a vessel in company or be tasked from land based units, if able to land on the vessel.

4.26 **Aeromedical evacuation.** Integral air assets are normally configured for their primary role, which is often not conducive for en route care, necessitating a degree of re-configuration for AME. Helicopters from vessels with a PCRF should be nominated as ‘AME on call’ in support of the task group, with staff from the PCRF tasked to provide the AME en route care. Deployment of an identified AME element is included with the PCRF complement where operational circumstances and the associated health planning and casualty estimates require such support.

4.27 The PCRF AME team may not have the capacity to conduct the tactical AME ashore of casualties requiring intensive care. In such circumstances, a specialist RAAF AME team moves forward to the PCRF to conduct the AME.

4.28 **Surface casualty evacuation.** Surface evacuation between fleet units or to the nearest appropriate land point of disembarkation ashore may be applicable in confined waters and low sea states. The evacuation utilises the most appropriate vessel or support watercraft available as determined by the afloat commander. Options include the following:

a. the ship’s integral watercraft; or

b. a vessel from within the task group assigned to the task.

Evacuation from the fleet

4.29 Evacuation of stabilised patients from the PCRF may be conducted to transfer the patient to a shore based facility for ongoing management and/or subsequent strategic evacuation. The CASEVAC may be conducted by one of the following:

a. another Royal Australian Navy (RAN) vessel;

b. organic (to PCRF vessel) RW assets;
c. maritime based RW assets from within the fleet or task group, assigned to the task;

d. land based RW assets;

e. coalition vessels and aircraft capable of assisting with such a role; or

f. civilian vessels hired and configured to augment health support.

Surgery afloat

4.30 Surgical treatment afloat is available in vessels configured and staffed to provide a PCRF. The current PCRF capabilities have only limited initial-wound and essential surgery, and patient-holding capacity. Accordingly, there may be a requirement to evacuate casualties from the PCRF to maintain its ability to receive, resuscitate and manage subsequent casualties.

4.31 Depending on the nature of the operation and lead times, civilian vessels may be acquired or leased to provide additional strategic administrative capacity including evacuation, treatment and casualty holding.

Casualty evacuation support to specific maritime operations

4.32 Operations in the maritime environment include search and rescue, amphibious, submarine and diving operations. A range of specific processes and procedures have been developed to support such operations, which are described in chapter 5 ‘Casualty evacuation support to a range of operations’.

Training

4.33 There are specific training requirements for personnel involved in surface CASEVAC and AME in the maritime environment. Training may include the following:

a. RW AME training for ship’s company;

1 The landing platform amphibious can be configured to perform this function.
b. helicopter underwater escape training (HUET) for all AME teams; and

c. helicopter emergency egress device (HEED) training.

4.34 Procedures for evacuations within ships are detailed in the RAN’s Australian Book of Reference 5476, volume 1—*Shipboard Nuclear, Biological and Chemical Defence Organisation, Damage Control, Firefighting and General Information*, part 4, chapter 10 ‘Action Medical Organisation’.

**CASUALTY EVACUATION IN THE LAND ENVIRONMENT**

4.35 CASEVAC in the land environment can be executed by either surface or aerial means. Whilst AME is often the preferred method for moving casualties, surface evacuation may be the clinically preferred or only available means.

**Casualty evacuation in the land environment**

4.36 The land system for the control and execution of CASEVAC consists of the following:

a. a coordinating element:

   (1) at unit level this is typically the unit tactical headquarters (ie the battalion command post (CP)); and

   (2) at formation or force level this is typically the HQJTF J07 and AECC;

b. surface patient transport vehicles and CASEVAC teams;

c. AME aircraft and teams;

d. health elements and facilities capable of staging AME patients (originating medical facilities (OMF), in-transit medical facilities (IMF) and DMF); and

e. a range of enabling agencies such as the joint movement coordination centre (JMCC).

4.37 The execution of forward and tactical CASEVAC in the land environment consists of the following:
a. mission planning, including stores and vehicle/aircraft preparation as required;

b. collection and preparation of patients for transportation;

c. en route care; and

d. delivery and handover of patients to receiving treatment facilities.

4.38 Location. Forward and tactical CASEVAC platforms and teams normally remain located with their parent unit in order to facilitate team, platform and overall mission support.

Land evacuation processes

4.39 Unit. On receipt of a CASEVAC request, the CP performs the following:

a. tasks a vehicle to undertake the required CASEVAC mission as appropriate;

b. requests higher headquarters to assign additional vehicles when required;

c. for a forward AME requests via the chain of command an appropriate aircraft and AME team to undertake the required AME mission; and

d. coordinates and controls the CASEVAC task.

4.40 Headquarters Joint Task Force. On receipt of a CASEVAC request, the J07 will determine the nature of the request. If the preferred outcome is AME he will liaise with the AECC. The AEOO in the AECC will then conduct all necessary negotiations with the required intra-theatre agencies to coordinate and control the AME Mission within the JFAO.

Forward and tactical casualty evacuation

4.41 Casualty evacuation to Level 1 health facilities. Surface CASEVAC commences with the removal of the casualty from danger using expedient means such as dragging, carrying, stretcher or evacuation vehicles integral to the FE. As a general principle, first response CASEVAC assets are ground based and held just out of battle to be dispatched forward
as required to retrieve casualties. Casualties are typically evacuated to a Level 1 treatment facility, such as a RAP, for evaluation, resuscitation and stabilisation before possible rearward evacuation to health facilities providing a higher level care.

4.42 Unit level elements assigned a surface CASEVAC role require dedicated vehicles with mobility, communications and protection commensurate with other task vehicles of the FE. They will have medical assistants to provide or assist with preparation of casualties for evacuation and the subsequent en route care. Vehicle operators should be capable of assisting with casualty resuscitation, stabilisation and en route care during the evacuation.

4.43 Casualty evacuation to Level 2 health facilities. CASEVAC to Level 2 health facilities involves the collection and evacuation of casualties from forward units, remote areas or Level 1 facilities such as a RAP and delivery to a Level 2 facility such as the health company of a combat service support battalion. Depending on the tactical situation, it may be beneficial to have health elements of the Level 2 facility forward of their normal location in order to conduct casualty collection. From this point triage and resuscitation would be continued and priorities for further evacuation determined.

4.44 CASEVAC using Level 2 assets also provides the following:

a. the CASEVAC capability for units/sub-units who do not have their own capability; and

b. the capability to augment rear elements tactical CASEVAC:

(1) between Level 2 health facilities; or

(2) rearward to Level 3 health facilities.

4.45 Casualty evacuation to Level 3 health facilities. CASEVAC at the force support level uses assets provided by the Level 3 facility, typically a health support battalion. Tasks include the following:

a. providing CASEVAC capability for units/sub-units who do not have their own capability;

b. operating forward to supplement CASEVAC as required;

c. collecting casualties from Level 2 health facilities; and
d. providing patient transfers to link with AME and maritime assets for both reception and dispatch of casualties.

4.46 Tactical CASEVAC support is normally centrally controlled by the HQJTF. CASEVAC assets from all health elements may be brigaded and tasked by the MRO to augment the deployed force CASEVAC plan.

Surface evacuation at Royal Australian Air Force airfields

4.47 Surface evacuation assets used by FE at airheads and airfields have similar requirements to those of the land force. Their primary function is to provide integral CASEVAC capability to the airbase and they may also conduct the following:

a. move patients;

b. provide assets on call to the MRO; and

c. assist health elements, where possible, with the transfer of casualties from health facilities to staging facilities at the strategic airhead.

Training

4.48 Land based CASEVAC teams must be capable of dealing with the most severe injuries. The management of complex casualties necessitates the employment of experienced and qualified staff. Personnel involved in the CASEVAC of land casualties must be trained to provide adequate resuscitation, stabilisation and en route care such that the casualty’s condition does not deteriorate as a result of the evacuation.

AEROMEDICAL EVACUATION

4.49 AME is the movement of patients under medical supervision by air transportation, to and between treatment facilities. AME can be performed by non-configured or configured aircraft. Response time is paramount for AME; nonetheless, planning is required so that assets are committed to a situation, whilst ensuring that the response does not create an actual or potential deficiency in the provision of health care elsewhere.

4.50 The types and seriousness of casualties may vary between missions. For example, an entire AME element would be required to attend a multiple casualty situation, whereas a single element may be adequate for the safe transfer of a stabilised Priority 2 casualty.
Aeromedical evacuation system

4.51 The aeromedical evacuation system (AES) provides the overarching structure to AME, synchronises the effects of the components and ensures a smooth and coordinated casualty flow during ADF operations. The AES consists of the following:

- the coordinating element, the aeromedical evacuation control centre (AECC);
- AME teams;
- the CASEVAC aircraft, located at expedient points in the AME chain;
- health elements and facilities capable of staging AME patients (OMF, IMF and DMF);
- surface patient transport vehicles; and
- a range of enabling agencies such as the JMCC.

4.52 The roles and responsibilities of the AECC and key personnel, including the AEOO and aeromedical evacuation coordinating officer (AECO), are described in chapter 2 ‘Command and Control’.

Aeromedical evacuation control centre processes

4.53 The AECO coordinates the AME activities of the health facility and the medical aspects of the AME, and submits a request to airlift suitable casualties to the AEOO. On receipt of an AME request, the AEOO performs the following:

- validates the requirement for the AME mission and confirms or allocates a priority and class;
- liaises with the SHO or MRO to ascertain an appropriate DMF for the patient(s);
- liaises with the airlift provider, the joint air operations centre, the ship’s aviation officer/flight commander or tactical air control party as applicable, to request appropriate aircraft tasking to undertake the required AME mission;
d. selects and tasks a health facility to provide a trained AME team and equipment, if the platform does not have a dedicated team; and

e. coordinates and controls the task.

4.54 Delivery of casualties is to the most appropriate health facility but the destination is influenced by the needs of the casualty, and the capability and availability of the DMF. The DMF can be confirmed in-flight as additional information regarding casualty requirements becomes available.

4.55 For strategic AME, the AECO forwards the request to the AEOO in the JFAO AECC. The AEOO then submits the request to the Chief - AME who validates the request, confirms the priority and the movement precedence, ascertains the appropriateness of the proposed DMF and approves the AME back to the NSB. Coordination and tasking is by the Chief – AME and the Air and Space Operations Centre (AOC).

Aeromedical evacuation aircraft and teams

4.56 The AECC defines the requirement for aircraft support to the AES. Aircraft are normally provided ‘AME on call’ or on an ‘opportunity’ basis depending on the availability of aircraft and the tactical situation. When heavy casualties are anticipated, it may be necessary to assign aircraft ‘AME dedicated’. This is a command decision based upon the recommendation of the J07 staff, aircraft availability and the prevailing threat assessment.

4.57 Allocation of AME teams and aircraft ‘on call’ does not negate the need for operational staff to consider the use of ‘opportunity’ AME missions to meet critical or overflow requirements. ‘Opportunity’ AME provides the potential for a very fast response with aircraft, but has the disadvantage that sufficient AME equipment or qualified personnel may not be on board. Use of ‘opportunity’ airframes may be applicable in mass casualty responses or other emergency situations where the designated ‘on call’ evacuation assets are inadequate or otherwise unavailable, provided adequate AME equipment and qualified AME teams can be arranged.

4.58 Opportunity airframes require the AEOO in the AECC to validate the task. Qualified AME support will be provided with the airframe. The only patient that will not require medical support will be Class 4.

4.59 Aircraft capable of providing space for at least the carriage of a litter patient and medical attendant may be identified for ‘opportunity’ tasking. The most suitable airframe to be provided for ‘on call’ forward AME is generally the larger battlefield utility/fleet support helicopters that have room for up to
two lying, or four sitting patients, an AME team of four and their associated equipment.

Aeromedical evacuation personnel

4.60 Due to the demands posed by the aviation environment on patients, medical and aviation crew and the airframes, all personnel identified for AME tasking are formally trained to operate in both the aviation environment and in the specific airframe to which they are assigned. The skill sets required to meet the requirements for in-flight management of critically injured or complex casualties necessitates the employment of experienced and qualified staff. AME teams must be highly trained and capable of dealing with the most severe injuries. AME team considerations include the following:

- teams must be appropriately trained for the platform identified;
- teams must be appropriately trained to provide adequate resuscitation, stabilisation and en route care such that the casualty’s condition does not needlessly deteriorate as a result of the evacuation;
- teams may need to react to a mass casualty situation and, as such, require the ability to manage the medical aspect of a situation; thus, teams must be capable of conducting triage, resuscitation, and casualty preparation;
- forward and tactical AME teams require military training commensurate with that of other aircrew including HUET, HEED and survival training; and
- the availability of a medical critical care AME team (MCAT) specialised capability for the transport of high dependency patients.

4.61 AME teams are required to have a range of specialist skills and experience, so that they may be able to be utilised effectively in a range of secondary tasks depending on operational requirements. AME teams should only be employed on secondary tasks when there is little or no likelihood they are required for AME. The guidelines that apply for aircrew hours of duty should also be used for AME crews. It is undesirable to have AME teams performing a secondary task and be on call for AME duties at the same time.
FORWARD AEROMEDICAL EVACUATION

4.62 Forward AME is the airlift of a casualty from the vicinity of the injury or illness to the initial treatment facility. RW aircraft are normally employed for forward AME as they afford great flexibility in collecting patients from anywhere on the battlespace and rapid delivery to a treatment facility. Forward AME collection occurs from the casualty site, an LZ or directly from the sea or jungle using helicopter winch equipment.

4.63 The execution of forward AME consists of the following:

a. mission planning including the selection of most appropriate and available medical team structure and required medical equipment and mission rehearsals;

b. on site assessment and stabilisation of the casualty and preparation for flight; and

c. en route care (including possible resuscitation) and delivery to the treatment location.

Maritime environment

4.64 In the maritime environment, forward AME is generally conducted using non-configured aircraft on an opportunity basis, from within fleet assets. Where the maritime task force (TF) includes a PCRF, ideally one of the aircraft co-located with PCRF is tasked as being ‘AME on call’ and some temporary configuration of the aircraft to suit AME is undertaken.

Land environment

4.65 The normal means of providing a forward AME capability for land forces is for an airframe to be assigned ‘dedicated AME’. Aircraft allocated ‘on call’ require sufficient time to allow for temporary reconfiguration for AME. Forward AME may also be offered by ‘opportunity’; these airframes are never configured for AME.

Location

4.66 Forward AME aircraft are located with their parent FE in order to facilitate mission support, crew rotation and maintenance continuity. Where an aircraft is provided ‘on call’, it is preferable that the AME team be positioned in close proximity to the aircraft to minimise preparation time for
missions. Considerations in identifying the preferred holding location for AME aircraft include the following:

a. overall tactical scenario, including aircraft support/security requirements;

b. requirement to arrive at a casualty site within the directed time frame, typically the ‘Golden Hour’;

c. necessity to deliver the casualty to a surgical facility as soon as possible (ideally within three hours of wounding); and

d. possible delays in mission launch resulting from transfer of information on the casualty, mission authorisation and pre-flight preparation time.

Support

4.67 If operational circumstances and support arrangements permit, forward AME assets may be dispersed across several locations to best meet the response and treatment time guidelines. Forward AME teams may be required to be separated from their parent unit for lengthy periods while involved in the following:

a. accompanying patients,

b. deployed to airfields,

c. waiting call out, or

d. deployed near anticipated casualty areas.

4.68 Normally AME teams would receive local administration from the aviation unit that has provided the AME aircraft or other airfield unit should the AME team be away from their parent unit.

TACTICAL AEROMEDICAL EVACUATION

4.69 Tactical AME is the movement of patients from one health facility to another. It is generally the preferred means for evacuation of seriously ill or injured patients, but may also be tasked for lower precedence patients where capacity exists. It may be especially desirable for morale or political reasons during operations to transport the majority of patients by air. Assistance may also be extended to include non-military patients (children, aged persons,
other civilians). Where tactical AME is used for lower priority missions, planners need to ensure that sufficient resources remain available to support critical medical cases and/or multiple patients, should they occur.

4.70 Patients are normally transferred by tactical AME for the following reasons:

a. to a health facility in another location for improved treatment or care; or

b. to balance workload levels across treatment facilities, or

c. to conform to operational requirements or future operational intentions.

4.71 The execution of tactical AME consists of the following:

a. mission planning, including stores and aircraft preparation as required;

b. collection and preparation of patients for transfer flight and en route care;

c. en route care; and

d. delivery and handover of patients to receiving treatment or holding medical facilities.

4.72 Tactical AME can be conducted using either rotary or fixed wing aircraft. RW aircraft are preferred where established airfields are not available and distances are short. Fixed wing aircraft are preferred where distances are extended, there are significant patient numbers to be moved and sufficient time exists for patients to be moved to, and collected from, airfields.

Maritime environment

4.73 In the maritime environment, tactical AME is generally assigned ‘opportunity’ from within fleet assets, though airframes on PCRF capable vessels may be earmarked as the ‘AME on call’ airframe. The ‘AME on call’ aircraft is temporarily fitted with appropriate medical equipment as determined by the tactical AME medical team, flight commander and aircrew. The tactical AME team also provides the staging facility, Level 2 facility,
health support for the unit and remains under command of the ship and the maritime task force.

**Land environment**

4.74 The normal means of providing a tactical AME capability for land forces is for an airframe to be tasked as a ‘special’ or ‘scheduled’ tactical AME task. Should the JFAO include a number of suitable airstrips, provision of fixed wing aircraft is possible.

**Location**

4.75 Tactical AME aircraft normally remain located with their parent unit in order to facilitate mission support, crew rotation and maintenance continuity. Tactical AME teams are normally positioned with the designated airframe to permit minimum preparation time for missions. Tactical AME support is normally centrally controlled by the HQJTF through the AECC.

4.76 At sea, the tactical AME team is formed by the ship’s organic medical team, and as such remains under the command and control of the ship and of the maritime TF. In the event of a tactical AME at sea, close cooperation and communication between the ship, maritime TF and joint task force will be required.

**STRATEGIC AEROMEDICAL EVACUATION**

**Imperatives**

4.77 Strategic AME is the preferred means for evacuation for the majority of casualties requiring evacuation from the JFAO to the NSB. Casualties requiring evacuation are generally those of a more serious nature who require specialist medical management and rehabilitation not available in the JFAO, or whose recovery may exceed theatre holding policies.

4.78 It may be desirable to evacuate casualties shortly after initial surgery to minimise patient holding and the associated logistic footprint in theatre. These patients may still require significant post-operative related care en route. Some strategic AME medical staff must therefore be appropriately qualified and experienced for the en route care of up to very seriously ill (VSI) casualties. Use of enhanced AME capability, such as MCAT, should be considered for transport of VSI patients; the MCAT is staffed and equipped for this purpose.
4.79 Rapid CASEVAC of casualties to definitive care away from the area of conflict may be a medical priority with a political imperative, and an important factor affecting force and national morale. Nonetheless, strategic AME of patients is influenced less by the need for speed and more by the need for stabilisation and careful clinical assessment for and during evacuation.

**Strategic aeromedical evacuation platforms**

4.80 Strategic AME is normally conducted in ADF strategic airlift aircraft. Scheduled AME missions may be routinely established to support operational deployments where the health support requirements necessitate evacuation of patients from the JFAO. Suitable ADF airframes are normally capable of being used for strategic AME through the use of AME configuration equipment, standard operating procedures and compatible medical equipment where necessary.

4.81 Strategic AME may also be provided through the following:

a. dedicated coalition AME missions for ADF personnel during coalition operations; or

b. civil support arrangements including scheduled services, leased airframes/aircrew and/or medical staff. Such aircraft, whilst generally not having the same patient capacity or rough airstrip capability, may be advantageous due to their availability, faster airspeed and greater comfort.

**Strategic aeromedical evacuation teams**

4.82 The composition and capability of the strategic AME team is dependent on the number of patients to be moved, their treatment requirements and the duration of the retrieval leg. The strategic AME team can be augmented by an MCAT, which provides the clinical enhancement to transport VSI or significantly injured patients. The MCAT is not a stand-alone capability; it is always an addition to a strategic AME team.

**Location**

4.83 Strategic AME teams may be held out of the JFAO, for short-notice activation to minimise the logistic footprint in theatre. Alternatively strategic AME teams may be held in theatre to make use of opportunity aircraft at short notice. The preferred option is a decision for the operational planners. Coordination between the OMF, DMF, staging facility, AME and surface transport and AME teams is required to complete the evacuation continuum.
4.84 Whilst the skills required for the conduct of AME are significant, not all of the team may be required to participate in every AME mission. Where the casualty’s condition is only of a minor and stabilised nature, en route care may be provided by an appropriately qualified AME medical assistant. Similarly, where numerous casualties are being evacuated, multiple AME teams or parts thereof may be necessary.

4.85 The planning of the appropriate health staff mix to suit in-flight clinical requirements is a fundamental aspect of task management for Chief – AME. Ensuring a mix of skill sets among deployed personnel is also an advantage to mission planners as teams may be task organised to provide the appropriate clinical skills for each mission. As patient numbers on particular missions increase, economies of scale may be possible through judicious organisation of the AME teams.

Annex:
A. Casualty evacuation system capabilities
CASUALTY EVACUATION SYSTEM CAPABILITIES

1. The casualty evacuation (CASEVAC) system will often incorporate both health and other force elements (FE) from all three Services. Ideally all Services contributing FE and equipment have standardised capabilities.

Aeromedical evacuation system

2. The aeromedical evacuation system typically requires the following:
   a. casualty transfer assets at airfields;
   b. patient holding facilities and staff pre and post flight;
   c. patient flight preparation equipment;
   d. communications support (data and voice);
   e. air-portable infrastructure suites for aeromedical evacuation (AME) support assets;
   f. AME team and support administration and rest facilities;
   g. AME equipment management including fitting procedures, maintenance, refurbishment of stores (drugs, gases etc), configuration management, tracking for key equipment;
   h. access to aviation/biomedical engineering and airworthiness support; and
   i. medical equipment that is interoperable and does not compromise platform function in all environments.

Staging facilities

3. Staging facilities typically require the following:
   a. primary health care and resuscitation equipment as appropriate for operational support requirements;
b. logistic support such as power generation, storage for Class 8 stores, administrative areas for staff and equipment management;

c. communications for specialist medical advice;

d. access to patient records;

e. a lightweight transportable shelter;

f. ability to stage AME patients through the health facility for periods up to 24 hours; and

g. overnight accommodation for CASEVAC teams, as required.

**Surface casualty evacuation assets - maritime**

4. Surface CASEVAC assets in the land environment typically require the mobility, communication equipment and protection commensurate to the force they are supporting. Ideally surface CASEVAC elements have the following:

a. a clinical manager medic who has advanced life-support training and en route care skills;

b. a crew with first aid training to provide assistance when required;

c. voice communications en route between vessel crew members, health elements integral to the ship and the assigned command chain;

d. patient handling capabilities (stretcher lifting and handling aids);

e. medical equipment and casualty restraint equipment;

f. access to key casualty medical information;

g. navigation assistance aids such as global positioning systems (GPS) and charts;
h. fits and facilities that allow secure carriage of stores and equipment; and

i. an oxygen supply.

**Surface casualty evacuation assets - land**

5. Surface CASEVAC assets in the land environment typically require the mobility, communication equipment and protection commensurate to the force they are supporting. Ideally surface CASEVAC elements have the following:

   a. an advanced medical assistant with trauma management, pre-hospital and en route care skills;

   b. a vehicle crew with combat first aid training to provide assistance when required;

   c. voice communications en route between vehicle crew members, health elements integral to the unit and the assigned command chain;

   d. patient handling capabilities (stretcher lifting and handling aids);

   e. medical equipment and casualty restraint equipment;

   f. access to key casualty medical information;

   g. navigation assistance aids such as GPS and maps;

   h. ambulance fits and facilities that allow secure carriage of stores and equipment; and

   i. an oxygen supply.

**Aircraft capability**

6. Depending on their role, AME aircraft are ideally fitted with the following:

   a. night vision capability;
b. rapidly configurable stretcher support systems to facilitate stretcher security and casualty loading/unloading;

c. lightweight modular patient monitoring systems compatible with aircraft flight systems and surface transport;

d. stretchers and patient restraint devices that meet aviation safety standards for crashworthiness and, ideally, are able to be stowed in-flight when unoccupied;

e. an air-to-ground communications suite capable of providing contact with medical treatment facilities and medical regulating networks;

f. access to a casualty’s basic medical information and possible electronic medical record applications, including in-flight clinical data capture and event records;

g. lightweight and standardised medical stores packs suitable for in-flight carriage and stowage whilst carrying adequate equipment to provide for casualty resuscitation, flight preparation and scene response capable of operating independent of the platform;

h. oxygen and power supplies;

i. provision of protective equipment for all medical team members commensurate with other aircrew and for casualties;

j. standardised load plans and devices/ensembles for AME task conversions; and

k. the following are specific capabilities for rotary wing aircraft:

(1) a stabilised hover flight system, and

(2) a winch and casualty recovery litter.
CHAPTER 5

CASUALTY EVACUATION SUPPORT TO A RANGE OF OPERATIONS

Executive summary

- Special forces (SF) have a high reliance on self-sufficiency for medical treatment and evacuation.

- Urban operations and the urban battlespace are likely be characterised by high levels of duress and casualties.

- The forward aeromedical evacuation (AME) teams will generally be best suited to support joint personnel recovery (JPR) operations.

- Casualty evacuation (CASEVAC) support to amphibious operations must factor in a high probability of casualties, a lack of suitable airfields for fixed wing AME, and a greater than usual reliance on afloat medical facilities.

- Planning the CASEVAC system for most operations is likely to require input from Australian Defence Force (ADF) and coalition headquarters (HQ), government departments, civil agencies, contractors, and host and allied nations.

INTRODUCTION

5.1 CASEVAC support is essential to a variety of operational environments ranging from the austere requirements of special operations (SO), the fluidity of amphibious operations, the complexity of the chemical, biological, radiological and nuclear (CBRN) environment and the uncertainty of operations other than war (OOTW).

5.2 The purpose of this chapter is to provide a broad overview of CASEVAC support to a range of different types of operations. At the conclusion of this chapter, the reader will be familiar with CASEVAC in support of the following:

a. SO;

b. urban operations;
c. airborne operations;

d. search and rescue (SAR) operations, including combat search and rescue (CSAR);

e. amphibious operations;

f. submarine operations;

g. diving operations;

h. operations in a CBRN environment;

i. coalition operations; and

j. OOTW.

SPECIAL OPERATIONS

Special operations casualty evacuation planning factors

5.3 It is difficult to provide a generalised concept for CASEVAC in support of SO. The nature of SO is that there is normally an extremely austere support structure and a limited number of personnel with enhanced medical skills. Thus, there is usually a great need for self-sufficiency for medical treatment and evacuation. Reasons for this are varied but include the following:

a. **Long range of action.** SO may be conducted a long distance away from the conventional deployed health facilities, lines of support will be long and difficulties may be experienced with communications. CASEVAC is provided as part of an extended health support umbrella.

b. **Actions in a hostile battlespace.** SO is often be conducted away from friendly conventional forces and as such may be in areas that are under enemy control making it impossible to utilise existing civilian infrastructure and a high-risk operation to conduct an evacuation.

c. **Operations security.** Operations security needs to be maintained so as to not inform others of existence of or attract enemy attention to an operation, jeopardising either the current or future similar operations. It is likely in small group
operations that the need for a CASEVAC will effectively end the mission and as such the CASEVAC and force extraction will be combined.

d. **Limited health and logistic support.** CASEVAC usually requires advanced trauma life-support, possible surgical intervention, evacuation, and health logistic support. Due to the high risk of many SO, it may be prudent to deploy only the minimum personnel required and for those personnel to be widely dispersed. Accordingly, it would be unusual that any health personnel would be deployed on other than larger SO.

5.4 SO also provide different CASEVAC challenges due to the different nature of operations conducted by special operations forces (SOF). Each has different functions, work environments and internal support structures.

5.5 Where a CASEVAC is required, and with due consideration given to operational risks, assets will be made available to collect and transfer casualties based on standard maritime, land or air CASEVAC platforms. SOF planning addresses how health care and CASEVAC is achieved should it be required. It is expected, however, that evacuation times may be longer.

5.6 SOF casualties are managed in accordance with the guidance provided in America, Britain, Canada, Australia (ABCA) Publication 357—*The Management of SOF Casualties in the ABCA Health Treatment System*.

**Organic medical evacuation**

5.7 Evacuation at the tactical level will consist of assisting the casualty to move away from the vicinity of the incident or as a minimum to move to a more secure location, carrying the casualty and/or moving the casualty to a vehicle. Evacuation resources that would normally be tasked include stretchers, vehicles or boats. Evacuation will be primarily directed at disengaging from the enemy, to a point where treatment can be conducted with some degree of security.

5.8 CASEVAC during SO requires the following:

a. lightweight compact equipment;

b. remote vital-sign monitoring equipment and satellite communications capability; and

c. en route care packs for patrol first aiders.
5.9 Where the SO involves deployment of more than one SOF element, medical and non-medical personnel may be deployed to provide a CASEVAC and treatment function. Depending on the size of the operation this may be a non-medical person specially trained through to a medical technician, nursing officer or medical officer (MO) as the operational situation determines. The level of treatment provided will be based on the skills of the medical staff deployed but may be less than optimal, as it can be expected that treatment will be delivered in the most austere of surroundings, possibly on the move, with limited staff and with limited supplies and equipment.

5.10 Where SO are conducted in small groups, the principle of providing specialist medical skills to SO non-medical personnel will be the favoured approach over the deployment of specialist medical personnel.

Evacuation to conventional treatment facilities

5.11 CASEVAC of SF casualties will differ from conventional evacuation in that it is likely the evacuation will have a strong operational focus rather than a medical focus due to it more likely being conducted in a hostile environment. As such CASEVAC for SF may well be conducted by assets such as submarines or specialist aircraft, rather than normal CASEVAC assets.

5.12 The normal technique would be for a rendezvous (RV) to be arranged and the casualty transferred, or the whole patrol withdrawn and the mission abandoned. The evacuation means may be configured primarily for warfighting and may not be suitable for other than basic en route care; however, where possible, specialist medical staff should be provided for the anticipated en route care. The need for stealth or secrecy may further limit the medical care made available.

5.13 On evacuation, the casualty is delivered to the nearest suitable medical facility and the casualty joins the mainstream evacuation continuum as soon as operationally feasible. A major challenge in such a fragmented approach will be to track SF casualties.

5.14 Special Operations is detailed in Australian Defence Doctrine Publication (ADDP) 3.12—Special Operations.

URBAN OPERATIONS

5.15 Urban operations are likely be characterised by high levels of duress and casualties. This imposes unique health support considerations, including the level at which critical care must be provided, and the difficulty of evacuation of the wounded. Lessons emerging from recent operations,
highlighted in published analysis of casualty rates and patterns resulting from urban operations, indicate the following:

a. combat units need a high degree of autonomy, which includes self-sufficiency in health support;

b. the location, identification and initial treatment of casualties is generally more difficult;

c. the ability to provide skilled, initial care and to stabilise battle casualties (Bcas) as close to the point of injury or wounding is vital;

d. given the dispersed nature of combat and the difficulties of CASEVAC, life-saving surgical capability well forward is vital;

e. CASEVAC by AME may be impossible; and

f. CASEVAC, when the mode of evacuation is limited to heavily protected vehicles or by foot, is often delayed, slow and dangerous.

5.16 The location, extraction and security of individual casualties distributed among buildings and rubble will be particularly challenging. The time and difficulty to provide CASEVAC under these conditions demands a higher reliance on first responders and tactical health support elements to provide an extended level of care for more severe injuries prior to CASEVAC than envisioned for other operations. Access and administration of scheduled pharmaceuticals and intravenous fluid sets to appropriately trained personnel is usually wider than normal since casualties will often occur in isolated locations. Restricted ground transport and AME access may result in the greater use of litters for the forward CASEVAC.

5.17 The use of litters to remove casualties from a multi-level building or other urban structure is a physically intensive task, requiring up to four persons. Each person carrying a litter is a reduction in the available personnel for the combat commander. Combat elements may require augmentation with stretcher carriers to support this task.

5.18 The rescue and evacuation of personnel who may be trapped in rubble, enclosed areas, multi-floored buildings or in danger from fire or toxic substances is a difficult and dangerous task requiring specialist SAR skills and training. Personnel conducting the evacuation task will require specific training incorporating the evacuation of wounded from within buildings, tunnels and sewers, over rubble, other obstacles and under the threat of
enemy action common to the urban environment. SAR in urban operations will share features more commonly experienced by civilian emergency services (with the added stress of combat conditions).

5.19 CASEVAC from a building, movement over obstacles, rubble and through restricted movement areas under threat of hostile fire will also require protection and versatile CASEVAC capabilities. Past experiences in urban operations have shown the need for some type of armoured ambulance for ground movement of casualties and the restricted employability of AME.

5.20 Urban operations emphasise differing types of Bcas; nonetheless, disease and non-battle injury will remain the greatest threat. Potential impacts on the CASEVAC system include the following:

a. the density of the environment;

b. potential exposure to hazardous substances;

c. existing regional health problems including HIV/AIDS\(^1\) and Hepatitis;

d. the breakdown of infrastructure such as water and sewage capabilities; and

e. poor disposal of medical waste.

5.21 Combat in the urban battlespace could result in massive numbers of casualties in the civilian sector, in addition to the potentially high number of military casualties. In the first instance the host nation (HN) health system will have primacy for support to local inhabitants. However, in much of Australia’s near region, health services are limited and it is highly probable that military health support will be required to supplement or replace regional/local health systems in some operations. This task can have significant implications for the CASEVAC system and must be a deliberately planned to ensure that support to civilians is not at the cost of military operational effectiveness. This will require close coordination with local civil and medical authorities, non-government organisations and other agencies.

\(^1\) Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome.
AIRBORNE OPERATIONS

5.22 Airborne forces provide a commander with surprise, inherent mobility and a diversity of options for executing a mission. However, the force is vulnerable as it is lightly equipped, lacks firepower for close protection and lacks logistic support. Airborne operations include the following:

a. **Paratroop**. These operations involve the delivery by parachute of personnel and their equipment onto a predetermined landing area from an aircraft in flight.

b. **Airmobile**. Airmobile operations involve the use of helicopters in task groupings to deploy combat forces to where they may be committed directly into battle.

c. **Airland**. Airland refers to operations involving fixed wing aircraft using a landing area to deliver personnel, crew-served weapons and vehicles.

d. **Special operations**. Some SO are airborne in nature and include CSAR.

e. **Extraction**. The withdrawal of forces from an area of operations by air.

f. **Air logistics support**. Air logistics support involves the delivery of forces and equipment into the joint force area of operations (JFAO) in a timely manner.

Support

5.23 Extensive logistic support is needed to maintain any force once deployed. For an airborne force, support is provided by air assets until a surface supply chain has been established. The provision of logistics and, in this context, CASEVAC support to an airborne force is challenging and requires specifically trained personnel and procedures. The nature of airborne operations will often complicate the processes of timely treatment and evacuation; therefore, the health principles of proximity and continuity assume greater importance.

5.24 Aircraft space for the forward deployment of medical treatment and holding facilities may be limited during the early stages of an operation where the primary means of inserting the force is by air. Accordingly AME teams may be elevated in the load priority to pre-position in theatre and provide a
readily available en route care capability, utilising the backhaul aircraft space.

Parachute operations

5.25 Health support to the airborne forces in the JFAO will be typically austere for the first 72 hours. It is often essential that resuscitation, stabilisation and surgical capabilities parachute in with the initial force. Although the parachute surgical team is self-sufficient it has only extremely limited capacity to hold patients or conduct post-operative care. Therefore, the early establishment of air or surface evacuation links is essential to maximise casualty recovery and survival.

5.26 For airborne operations, similar planning factors to those described for SO should be considered including the following:

   a. the long range of action,

   b. action in a disputed battlespace, and

   c. the limited provision of health and logistic support.

Other airborne operations

5.27 Typically, other airborne operations (less SO) involve a significant airlift capability, which provides the inherent fixed wing AME capability with the deploying forces. Nonetheless, dedicated CASEVAC platforms may be necessary and health elements should be included early in the deployment order.

5.28 Airborne Operations is detailed in ADDP 3.9—Airborne Operations.

JOINT PERSONNEL RECOVERY

Background to JPR

5.29 JPR is the aggregation of military, civil and political efforts to rescue, release or recover personnel from permissive, uncertain or hostile environments whether they are captured, missing or isolated. JPR includes the following:

   a. Support to civil SAR and the conduct of military SAR.
b. Combat recovery is the recovery of any isolated personnel\(^2\) (normally before capture), who are not trained or equipped to receive CSAR from an environment in which a threat may be posed by hostile forces.

c. CSAR is the recovery of isolated personnel (normally before capture), who are CSAR trained and equipped, from an environment in which a threat is posed by hostile forces.

d. Special recovery operations are operations undertaken by SOF to rescue personnel or seize equipment from enemy controlled or otherwise hostile territory and to return them to safe areas.

e. Care after recovery is the range of support measures for recovered personnel including health support, debriefings, repatriation, rehabilitation, counselling and Public Affairs.

5.30 The Commander Joint Task Force (Comd JTF) has authority and responsibility for JPR in support of Australian forces within the JFAO. Elements of a deployed force elements will normally provide a dedicated JPR element to support its own forces.

Health support

5.31 The actual recovery of personnel may have minimal involvement from the health services but follow-on medical support, CASEVAC and AME may be required for injured personnel. Some specialist health personnel may be required to directly support JPR activities if known casualties are to be recovered. Accordingly, health planners must be included in the JPR mission planning for the following:

a. the purpose of situational awareness;

b. consideration of the medical issues and requirements of the rescue operation; and

\(^2\) Isolated personnel are military or civilian personnel separated from their unit or organisation in an environment requiring them to survive, evade, or escape while awaiting rescue or recovery. Notification should include the nature of the distress, position, course, altitude, speed, medical status, and planned actions. Isolated personnel have a responsibility to assist in their own rescue to the maximum extent possible.
5.32 Where rescue is required in a battle environment, the medical team is one force element of the JPR activity. Forward AME teams are often best suited to support airborne SAR and combat rescue, though supplementation with specialist medical personnel may be advisable if more information on the rescue requirements and casualty’s condition is known. The medical support to aircrew will require the provision of aviation trained medical officers.

AMPHIBIOUS OPERATIONS

Casualty evacuation planning factors

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

a. a high probability of casualties;

b. a lack of a suitable airfield for fixed wing AME;

c. a greater than usual reliance on afloat medical facilities;

d. limited space for the deployment and employment of medical capabilities due to other critical operational priorities; and

e. additional reliance on rotary wing (RW) assets for essential operational tasks other than AME.

5.34 Land forces will have most of their organic medical support assets still embarked during the early stages of an amphibious force lodgement. Operational planning must factor the early deployment/lodgement of health assets ashore to establish a viable CASEVAC chain from the battlefield to the afloat medical facilities, using both air and surface means. Other considerations include the following:

a. medical personnel still embarked may be required to assist CASEVAC and treatment until health facilities can be established ashore;

b. the CASEVAC plan and preferred destination for casualties will vary during the operation as health facilities are established ashore;
c. the regulating HQ will be required to closely manage the CASEVAC process in tune with the transfer of health support capability ashore;

d. the regulating HQ will be required to closely manage the CASEVAC of personnel to coalition facilities or other afloat facilities;

e. CASEVAC equipment used for amphibious operations must be both portable and modular for easy adaptation to and use in opportunity watercraft or RW aircraft; and

f. transport assets may be assigned ‘dedicated’ or ‘on call’ for CASEVAC for periods where casualties are anticipated.

5.35 Commander amphibious task force. The commander amphibious task force is the naval officer commanding the amphibious task force (ATF), and is assigned overall responsibility for all aspects of the planning and conduct of an amphibious operation. These duties and responsibilities include developing the overall plan for evacuation, hospitalisation and casualty reception and care facilities.

5.36 Landing force support party. The landing force support party (LFSP) is a temporary task-organised element of the landing force. The LFSP coordinates the landing and movement of personnel, supplies and equipment across the beach, into the helicopter landing zone or through a port. Tasks of the LFSP include assisting with the evacuation of casualties, prisoners of war and refugees.

5.37 During the initial stages of an amphibious operation, AME teams may have to deploy forward with transport aircraft, re-configure the aircraft on arrival as cargo space becomes available, receive patients with minimal preparation and provide en route care on the return journey. Improved control and management of AME assets should occur as soon as possible to ensure appropriate and optimal use of all relevant assets, including aircraft space and clinical staff.

5.38 The deployment of strategic AME should be planned to commence as the operational circumstances permit and appropriate airheads secured. Clinical consideration will be necessary as to which casualties can be safely moved and what level of en route care is necessary, if either initial wound surgery has not been performed or full stabilisation has not been achieved.
5.39 Commercial shipping may be acquired through several means to augment ADF assets as primary casualty receiving ships. The ships will be integrated into an amphibious task force and will embark ADF parties.

5.40 **Advanced base development and rear area plans.** Advanced base development and rear area plans are issued separately from plans for an amphibious operation. They are prepared at a level of command higher than the ATF. Pertinent extracts may be included in the ATF plan including the overall plan for evacuation, hospitalisation, casualty reception and care facilities, in ADF or coalition facilities or those of nearby countries.

5.41 See ADDP 3.2—*Amphibious Operations* for more detail.

**CASUALTY EVACUATION SUPPORT TO SUBMARINE OPERATIONS**

5.42 CASEVAC support to submarine operations may be required for submariners who become ill or sustain injuries aboard or in the event of a submarine sinking. Australian Fleet Tactical Publication 9(G)—*Submarine Escape and Rescue Instructions* describes the procedures for submarine escape and rescue. This section provides a synopsis of these procedures and focuses on the post escape/rescue evacuation procedures.

**Emergency on-board**

5.43 Sailors may require evacuation from a submarine if they are injured or become ill. The determination of whether evacuation is required will be advised by ships medical staff, with the commanding officer making the decision to surface.

5.44 The submarine will RV with a surface vessel, typically a major fleet unit (MFU) which dispatches a small craft for the transfer of the casualty. Alternatively, a RV with a helicopter occurs where the casualty is winched on board in a litter. The casualty is then transferred to a MFU or transferred ashore where possible. The decision to use surface or AME is normally a clinical one, based on the illness or injuries of the casualty; however, in some circumstances only one alternative is viable. Once the casualty has been taken on board the aircraft or small craft, standard maritime surface CASEVAC procedures apply (see chapter 4 ‘Casualty evacuation in support of operations’).

5.45 An underwater medicine (UM) trained medical assistant should be borne on submarines. If possible an UM trained medical escort should be provided during the CASEVAC.
Submarine sinking

5.46 In the event of a submarine sinking, the methods of egress are rescue or escape. The preferred method is rescue as it is safer and rescue forces, including clinical personnel, are in place to receive survivors. However, egress by escape remains a viable option should the situation dictate.

5.47 Submarine escape policy is that, following a submarine accident, at least one of the compartments will be unflooded, permitting access to the escape tunnel. The crew will normally await the arrival of surface support as it is unwise to escape until recovery on the surface is assured.

5.48 The crew may be subjected to a number of harmful physiological conditions including the following:
   a. carbon dioxide poisoning/hypoxia or hyperoxia;
   b. hypothermia;
   c. dehydration; and
   d. decompression illness (DCI), particularly if personnel must escape.

5.49 The rescue ship prepares ships boats for recovery of survivors. Arrangements for lifting escapers from the recovery boats into the ship are made, preferably in a horizontal position. Helicopters may be used if recovery boats are scarce. Flights should be conducted at less than 500 metres.

5.50 On the rescue ship areas are established for triage, resuscitation, recompression and holding/observation. The senior clinician aboard the rescue ship will determine whether further evacuation is necessary.

5.51 If the crew is rescued by an Australian submarine rescue vehicle, it is still likely that many if not all crew will require treatment and/or observation.

CASUALTY EVACUATION SUPPORT TO DIVING OPERATIONS

5.52 Diving casualties include drowning and near drowning, DCI, ear, nose and throat ruptures and underwater injuries such as cuts and stings. DCI can range from mild, maim for life or prove fatal. Treatment can only be conducted satisfactorily in a recompression chamber capable of holding two or more people, and fitted with an inner and outer compartment.
The following steps are normally performed:

a. the casualty typically surfaces or is helped to the surface by the ‘buddy’ diver;

b. the casualty is removed from the water, retrieved in the small craft and first aid is commenced;

c. the casualty is transferred by stretcher to the dive ship/minor war vessel or MFU for further stabilisation and assessment; and

d. where possible, the submarine and under-water medicine unit (SUMU) is contacted for advice.

An UM trained medical assistant should be on board the support vessel when diving operations are planned. Divers suffering from DCI are placed in a decompression chamber as soon as possible. The medical assistant, with advice from SUMU, determines whether further evacuation is necessary. If further evacuation is required an UM trained medical escort should be provided. Standard maritime surface CASEVAC procedures apply (see chapter 4). The treating MO will provide advice regarding any restrictions on AME and ascents to altitude.

CASUALTY EVACUATION IN A CHEMICAL, BIOLOGICAL, RADIOLOGICAL AND NUCLEAR ENVIRONMENT

Chemical, biological, radiological and nuclear environment planning considerations

Chemical, biological, radiological and nuclear (CBRN)\(^3\) health support planning will be conducted as part of the broader health planning process. The extent to which the health planning process is able to predict where, when, in what numbers and what types of CBRN casualties will occur, will have a major influence on the effectiveness of the CASEVAC system.

There are additional factors that must be considered for CASEVAC within a CBRN threat environment including the following:

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\(^3\) The CBRN environment includes situations where a pandemic has occurred from biological contamination due to a biological weapon or a ‘natural’ disease occurrence.
a. decontamination, particularly identification of ‘dirty pathway’ and point of clean crossover;

b. augmentation of health units with personnel and equipment for decontamination and treatment;

c. augmentation of CASEVAC elements with additional health and other staff to deal with the management of mass casualties (MASCAL);

d. ensuring that health staff are specifically trained in treating CBRN injuries in a CBRN environment;

e. extended time for handling casualties due to decontamination requirements, resulting in delays in patient treatment, that will likely impact on morbidity and mortality;

f. the effects of contamination on evacuation procedures and assets; and

g. different types and greater quantities of stores.

5.57 Casualty protection. Casualties will require continued protection in a contaminated environment. This may entail the use of individual protective equipment (IPE), specialised casualty bags or hoods, and collective protection (COLPRO). Protective equipment makes monitoring casualties difficult and a high index of suspicion for heat stress must be maintained at all times. Following decontamination, patients are cared for using universal infectious disease precautions, protecting health personnel also through the use of these standard universal precautions.

5.58 Health personnel protection. Health personnel will also require continued protection in a contaminated environment. This may involve health personnel donning IPE or COLPRO measures that have a deleterious effect on staff involved in the CASEVAC process and their ability to provide optimum care.

5.59 Decontamination. A contaminated patient cannot enter a health facility. The exceptions are ships assessed as being mission-ready for CBRN environments and the Army’s Incident Response Regiment (IRR) Medical Platoon. Ships and the IRR have effective and well practised decontamination/COLPRO systems that can decontaminate patients. When contaminated patients are received, a high percentage of contaminants can be isolated by removing all clothing and a soap-and-water wash. It is usually
necessary to remove all IPE for triage and treatment. Similarly, invasive medical and surgical procedures pose potential risks.

5.60 **CBRN operational health support plan.** At the operational level, the CBRN element of the health support order will cover the CBRN evacuation policy, CBRN preparations, CBRN health briefings, pre-deployment CBRN health training and CBRN medical supplies.

5.61 **Training.** Army is the lead agency for joint individual and collective training of CBRN defence for ADF personnel including the following:

- training of health services personnel in health aspects of CBRN;
- casualty management procedures;
- use of COLPRO; and
- contamination control (including casualty decontamination).

5.62 **ADDP 3.4—Operations in a Chemical, Biological, Radiological and Nuclear Environment** provides further detail regarding the protection of health care personnel.

**COALITION OPERATIONS**

5.63 In order to be able to deploy and operate effectively as a part of a coalition or multi-nation force the ADF places a high priority on interoperability with the allied nations and developing interoperability with regional nations.\(^4\)

5.64 Planning the CASEVAC system for most operations is likely to require input from ADF and coalition HQ, other government departments, civil agencies, contractors, and host and allied nations. Their representatives must be involved in the planning process as early as possible. Planning considerations include the following:

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\(^4\) Interoperability is the capacity to cooperate with the forces of other nations to undertake combined or coalition operations. A combined operation is an operation conducted by forces of two or more allied nations, acting together for the accomplishment of a single mission. A coalition operation is an operation conducted by forces of two or more nations, which may not be allies, acting together for the accomplishment of a single mission.
a. terminology;

b. lead nation responsibilities;

c. efficacy of supporting CASEVAC systems;

d. interoperability of equipment;

e. evacuating coalition casualties;

f. arrangements and agreements;

g. establishment of health liaison officers; and

h. casualty regulation.

Terminology

5.65 There are some differences in the terminology used by the ADF, coalition partners and those used by the United Nations (UN) in describing levels of health support. Any differences must be considered when planning health support involving coalition partners or the UN. A comparison of the terminology and levels of health support is provided in ADDP 1.2—*Operational Health Support* and in the Air and Space Interoperability Council Air Standards.

Lead nation

5.66 The lead nation concept provides for one or more nations to take the lead in the provision of personnel and logistic support, including CASEVAC, in a combined area of operations. Such arrangements can extend across the levels of conflict (strategic to tactical), but cannot encompass all aspects of personnel and logistics in the combined area of operations. Owing to the unique health support systems and equipment, some elements of support will inevitably remain a national responsibility, necessitating operating in parallel to lead nation arrangements.

5.67 Lead nation support may take the following forms:

a. A single nation may provide the personnel (military and/or civilian) and equipment necessary to deliver CASEVAC support required by a combined force, and that nation would be responsible for the command and control (C2) of the delivery of support.
b. A single nation may be responsible for C2 of the delivery of CASEVAC support, whilst other nations contribute resources as agreed. Such division of effort, whilst making integration complex, eases the resource load on the lead nation.

Transfer of responsibilities

5.68 During the conduct of the operation, the lead nation may change for part or all of the CASEVAC system. Key considerations include the following:

a. continuity of the CASEVAC system, including allocation of assets and the detailed handover of responsibilities;

b. stability of communications including connectivity with all coalition partners; and

c. control of the transfer of patients.

Agreements with other nations

5.69 Australia complies with a number of international cooperative logistics agreements and arrangements. These all have agreed levels of health cooperation between the signatories but they can take a variety of forms, depending on intended legal status and the particular international practices of the parties. The Handbook of International Logistics provides detailed guidance on the implementation of international cooperative agreements and arrangements.

United Nations

5.70 The Chief Health Officer for a UN mission is appointed by the UN and is responsible for coordinating and regulating the CASEVAC system for the UN mission. The requirement to guarantee force protection and health support to an Australian contingent supporting a UN mission will be the primary ADF planning consideration.

5.71 Planning. In planning the CASEVAC system for UN operations, consideration should be given to the following:

a. the use of existing cooperative support agreements with other nations who are also contributing contingents;

b. whether the UN CASEVAC system provides effective coverage of ADF force elements within the battlespace;
c. whether the UN standard of care meets Australian standards; and

d. the standards of preparedness, underlying fitness and health care of the personnel of troop contributing nations. This will vary, affecting the casualty estimates.

5.72 The UN employs the following three basic concepts for the provision of support to operations:

a. **Self-reliance concept.** This concept is usually employed for small missions, such as observer missions, where there is access to a reasonable level of support from the local infrastructure.

b. **Force support group concept.** This concept can be employed on large UN missions where there is a need to deploy significant amounts of support and particularly where there is limited local infrastructure available to provide such support. A specialised CASEVAC organisation, preferably the responsibility of a single major donor country is established, into which the other national health elements will be incorporated. This is the preferred option for the provision of support to UN missions.

c. **Civilian contract support concept.** This concept is suitable for the same type of mission as the force support group concept. Under this concept, the majority of health support is provided by contracted civilian organisations.⁵

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⁵ It is essential that ADF planners stipulate terms that reflect a standard of expected service delivery.
5.73 **Host nation support.** Host nation support comprises civil and military assistance provided to a force which is located in, or transiting, the HN’s territory. Such support is normally based on agreements at national or force levels, normally through a status of force agreement (SOFA), that commit the HN to provide specific support according to prescribed conditions. It may be necessary to request HN support for the CASEVAC system.

5.74 **Status of force agreement.** A SOFA is an agreement between the Australian government and a foreign country, or the authority in a non-sovereign territory (such as the UN when administering a territory) to which troops are deployed. It defines the legal status of the armed forces of one nation when they are stationed on another nation’s territory. CASEVAC specific areas covered in a SOFA may include the following:

a. access to health infrastructure;

b. access to air, watercraft and road transport assets that may support the CASEVAC system;

c. staging facilities particularly at airfields;

d. overflights;

e. diplomatic clearance and visa requirements;
f. customs, quarantine and approval for the use of medical supplies, blood and blood products; and

g. CASEVAC of approved foreign nationals.

OPERATIONS OTHER THAN WAR

5.75 OOTW encompass the use of military capabilities across the range of military operations that do not include war. OOTW focus on deterring war, resolving conflict, and supporting civil authorities in response to domestic crises and disasters. All OOTW seek to enhance a climate of peaceful cooperation, thus promoting stability. OOTW include the following operations:

a. stabilisation operations;

b. non-combatant evacuation operations;

c. peace operations; and

d. offshore humanitarian and disaster relief activities.

5.76 All military operations are driven by political considerations. However, OOTW are more sensitive and responsive to such considerations due to the overriding goal to prevent, pre-empt or limit potential hostilities. In OOTW, political considerations permeate all levels and the military may not be the primary player. The CASEVAC of ADF, Australian nationals or approved foreign nationals is likely to be a key political driver. All personnel should understand the political objectives and the potential impact of inappropriate actions.

5.77 The Government of Australia often utilises the ADF’s deployable health capability when contributing to OOTW. There have been significant ADF health contingents involved in humanitarian assistance, peacekeeping and disaster relief operations. The CASEVAC system in these types of operations must provide support, in accordance with international humanitarian law. The order of precedence for CASEVAC, including evacuation of civilians and belligerents, should be determined by clinical need, tempered by strategic directions regarding eligibility for care.

Mass casualty situation

5.78 A MASCAL situation occurs when the number of casualties and severity of their injuries exceed health services resources, and where the
casualties need to be transferred to health facilities for further medical care. Typically, an overwhelming number of casualties occur within a short period of time and locally available medical facilities are unable to supply even ordinary medical care. The discriminator between temporary overtaxing as against overwhelming local medical facilities is the requirement to modify the triage process; a decision made by the appropriate senior clinician.

5.79 Procedures for handling MASCAL must be established to include casualty management resulting from conventional and non-conventional weapons or other military operations. Particular emphasis is placed on the flexibility of health units to respond to sudden changes in the casualty situation. Successful management of a MASCAL situation is a complex task where success relies as much on well-practiced logistics and communications as it does on skilled medical treatment. The communications, transportation, triage and emergency management, patient movement and health logistic support management aspects of the MASCAL plan must be thoroughly rehearsed.

![Figure 5–2: Rehearsing a mass casualty event during a coalition exercise](image)

**Figure 5–2: Rehearsing a mass casualty event during a coalition exercise**

**Mass casualty evacuation**

5.80 A mass casualty evacuation (MCE) is conducted by the ADF when directed by Government, normally through the Department of Foreign Affairs
and Trade (DFAT). There is a classified Australian Operational Concept used to support a MASCAL event.

5.81 On notification of an incident or event, DFAT will convene and chair an inter-departmental emergency task force. Ultimately, the degree and complexity of the response is dictated by the request for assistance and the conditions requiring the evacuation.

5.82 Headquarters Joint Operations Command plans the ADF support to the MCE and establishes liaison and coordination with relevant Government departments. Concurrent planning, under direction of DFAT, will occur at all levels in order to present timely options to the Government. Courses of action, scale of response and the duration of ADF involvement will vary according to each situation. Protracted MCE operations will cause significant resource impacts. Triggering incidents may include (but are not limited to) the following:

a. natural disasters;

b. industrial accidents (toxic industrial materials spill);

c. terrorist activity;

d. political/civil unrest; and

e. military action.

5.83 In preparation for MCE operations, the Chief of Joint Operations (CJOPS) will appoint the Comd JTF who will exercise command of the joint task force (JTF) once deployed. The JTF normally concentrates at a nominated mounting base (MB) and notice to move will be reduced. Pending information from the Head of Mission (HOM), Comd JTF may deploy to a forward mounting base (FMB)/forward operating base (FOB) to commence preparations for operations.

5.84 An indicative flow of activities and forces is as follows:

a. establish liaison with HOM and HN authorities;

b. defence supplementation staff (DSS) including a medical assessment element (MAE) and/or hazard assessment element, deploys to supplement the Australian high commissioner or ambassador to improve situational awareness;
c. the initial response team of the JTF may deploy to the incident site to conduct liaison and planning with HN authorities;

d. establishment of MB/FMB/FOB, as required; and

e. establish CASEVAC chain, with AME normally being the preferred method with a health element for casualty holding prior to transport.

5.85 Once in theatre normal CASEVAC processes and procedures are followed. However, when the civilian casualty reaches the destination medical facility (DMF), responsibility for the casualty is transferred as follows:

a. DFAT where the DMF is outside Australia, or

b. Department of Health and Ageing where the DMF is within Australia.

5.86 Emergency Management Australia is responsible for coordinating all agencies within the Australian mainland. Once MCE operations cease, the reconstitution/redeployment of forces to Australia will occur on order from CJOPS.
GLOSSARY


The ADG is the source for the terms, definitions, abbreviations and acronyms used within this publication, unless stated otherwise. The following legend is used to identify new and allied terms:

New term Proposed new term, with source if appropriate, for subsequent inclusion in the ADG

NATO Allied Administrative Publication–6, NATO Glossary of Terms and Definitions, (AAP–6)

US US Joint Publication 1–02, DOD Dictionary of Military and Associated Terms

TERMS AND DEFINITIONS

admission
The holding of a casualty at a health facility for more than six hours for observation or treatment or where a casualty is evacuated to another health facility within six hours. (New term)

aeromedical evacuation
The movement of patients under medical supervision by air transportation, to and between medical treatment facilities.

aeromedical evacuation control centre
The control facility established by the commander of an air transport division, air force, or air command. It operates in conjunction with the command movement control centre and coordinates overall medical requirements with airlift capability, it also assigns medical missions to the appropriate aeromedical evacuation elements in the system and monitors patient movement activities. (NATO)

aeromedical evacuation coordinating officer
An officer of an originating, in-transit, or destination medical facility/establishment who coordinates aeromedical evacuation activities of the facility/establishment. (NATO)
aeromedical evacuation operations officer
An officer of the airlift force or command who is responsible for activities relating to planning and directing aeromedical evacuation operations, maintaining liaison with medical airlift activities concerned, operation an aeromedical evacuation control centre, and otherwise coordinating aircraft and patient movements. (NATO)

aeromedical evacuation system
A system which provides:
- a. control of patient movement by air transport;
- b. specialised medical attendants and equipment for in-flight medical care;
- c. facilities on or in the vicinity of air strips and air bases for the limited medical care of in transit patients entering, en route, via, or leaving the system; and
- d. communications with destination and en route medical facilities concerning patient airlift movements.

aeromedical staging facility
A medical unit, operating transient patient beds located on or in the vicinity of an emplaning or deplaning air base or airstrip, which provides reception, administration, processing, ground transportation, feeding and limited medical care for patients entering, transiting through or leaving an aeromedical evacuation system.

battle casualty
In relation to personnel any casualty incurred as a result of hostile action, sustained in combat or relating thereto, or sustained going to or returning from a combat mission.

buddy aid
Assistance provided to an injured person by his companions. The term is applied in the context of first aid by non-medical personnel.

casualty
Any person who is lost to the organisation by reason of having been declared dead, wounded, injured, diseased, interned, captured, retained, missing; missing in action, beleaguered, besieged or detained.

casualty evacuation
The movement of casualties. It includes movement both to and between medical treatment facilities. Any vehicle may be used to evacuate casualties.
casualty holding policy
A command decision indicating the length in days of the maximum period of non-effectiveness that patients may be held within the area of operations for treatment.

casualty regulation
The process that directs casualties to the medical facility best able to cope with their condition, in terms of medical specialty required, the availability of treatment capability and medical facility capacity.

clinical
Of or pertaining to direct patient care.

cold chain
Cold chain supplies are items that require a constant temperature range and are generally dispatched in refrigerated containers or portable cool tubes.

combat first-aid
Advanced first aid provided by specially trained non-medical personnel.

combat health support
Health support provided to combat forces and/or the health services within the area of operations.

culminating point
The point in time and location where a force will no longer be stronger than the enemy and risks losing the initiative. Notes: 1. This may be due to reduced combat power, attrition, logistics, dwindling national will or other factors. 2. To be successful, the operation must achieve its objectives before reaching its culminating point.

definitive treatment
Care that will improve, rather than simply stabilise, a casualty’s condition. Note: requirements for definitive treatment will vary widely depending on the magnitude and epidemiology of the military, humanitarian or disaster relief operation.

disease and non-battle injury
A person who is not a battle casualty but who is lost to the organisation by reason of disease or injury, including persons dying of disease or injury, by reason of being missing where the absence does not appear to be voluntary, or due to enemy action or being interned.
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.

environmental health
That branch of medicine that deals with the surroundings of an organism which influence its development and behaviour.

environmental threats
Threats posed to personnel by elements in the natural environment.

essential care
That care received within a theatre that is dependent upon the mission, enemy, terrain, troops, time available, and other civilian considerations. It includes first responder care, forward resuscitative surgery, and en route care as well as treatment and hospitalisation to return the patient to duty or to stabilise for movement to a higher level of care.

essential surgery
Urgent surgical treatment provided to prevent loss of life resulting from a medical condition.

evacuation
The process of moving any person who is wounded, injured or ill to and/or between health treatment facilities.

first aid
Urgent and immediate lifesaving or other measures which can be performed for casualties (or performed by the casualty), by non-medical personnel, when medical personnel are not immediately available.

forward casualty evacuation
The evacuation of a casualty normally close to the scene of the injury or illness to the initial treatment facility.

forward aeromedical evacuation
The evacuation of a casualty by air transportation from the initial point of wounding or injury to the first health facility within the area of operations. (New term)
**forward resuscitative surgery**
Specific life saving practices/core competencies to manage severe bleeding, airway compromise and life-threatening chest injuries, preparing the casualty for evacuation. Forward resuscitative surgery is performed on patients with signs and symptoms of initial airway compromise, difficult breathing and circulatory shock, and who do not respond to initial emergency medical treatment and advanced trauma management procedures. (New term)

**health**
A state of physical, mental and social wellbeing compatible with continued service in the ADF and not merely the absence of disease or infirmity.

**health care**
Health care is:
- professional advice or treatment by a qualified medical or dental practitioner, nurse or by ancillary health providers;
- provision of prophylactic or therapeutic substances, biological preparations, surgical dental and prosthetic supplies, apparatus or equipment;
- provision of ambulance or patient retrieval services; and
- medical management and accommodation of ADF patients in a hospital, convalescent centre or other health care facility.

**health facility**
Fixed and deployed hospitals, medical centres, sick bays, aid posts, health service flights, and other elements providing health support to personnel.

**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**
Knowledge resulting from the collection and processing of all available civil and military medical, environmental and biotechnological information, and which is immediately or potentially significant to military planning and operations.

**health service logistics**
A functional area of logistic support that supports the joint force health service support mission. It includes supplying Class 8 medical supplies (medical materiel to include medical peculiar repair parts
used to sustain the health service support system), optical fabrication, medical equipment maintenance, blood storage and distribution, and medical gases.

**health service support**
All services provided directly or indirectly for the health and wellbeing of patients or a population.

**health surveillance**
The process of monitoring the incidence of wounding, injury and illness of personnel with a view to identifying health care 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.

**health team**
The personnel required to form the smallest building block of health support that can cover the workload for a 24-hour period. Most health teams cannot work in isolation of other teams.

**high dependency care**
High dependency care involves constant supervision of a patient. Note: the patient requires complete bed rest, frequent treatments and observations, and will usually require intravenous therapy.

**holding policy**
The maximum time for which casualties or patients are to be held in deployed medical facilities.

**host nation**
A nation which receives the forces and/or supplies of allied nations to be located on, to operate in or to transit through its territory.

**host nation support**
Civil and/or military assistance rendered by a nation to foreign forces within its territory during peacetime, crises, emergencies or war, based on agreements mutually concluded between nations.

**humanitarian aid**
The resources needed to directly alleviate human suffering.

**inpatient**
A person who is admitted for treatment and observation to a medical facility.
intensive care
Intensive care involves total management and constant monitoring of the patient by more than one nurse. The patient exhibits extreme disturbance of health requiring complete bed rest, continuous treatments and monitoring, intravenous therapies, and may require airway and respiratory management.

initial wound surgery
Urgent life and limb-saving, haemorrhage and infection controlling, resuscitative and stabilising surgical intervention, performed as far forward as the tactical situation permits.

intra-theatre evacuation
Evacuation of stabilised patients between points within the theatre, Eroute care is provided by medical attendants qualified for the specific mode of transportation, (US)

isolated personnel
Military or civilian personnel separated from their unit or organisation in an environment requiring them to survive, evade, or escape while awaiting rescue or recovery. (US)

joint force area of operations
That portion of a theatre necessary for joint military operations and their administration as part of a campaign.

lines of communications
All the land, water and air routes that connect an operating military force with one or more bases of operations, and along which supplies and reinforcements move.

logistics
The science of planning and carrying out the movement and maintenance of forces. In its most comprehensive sense, the aspects of military operations which deal with:

a. design and development, acquisition, storage, movement, distribution, maintenance, evacuation, and disposal of materiel;
b. transport of personnel;
c. acquisition or construction, maintenance, operation, and disposition of facilities;
d. acquisition or furnishing of services; and
e. medical and health service support.
low-dependency care
Involves minimal supervision of the patient. The patient is mildly ill, requiring little treatment or observation; is ambulant, has few medications and does not require intravenous therapy.

major fleet units
A vessel such as an aircraft carrier, fleet replenishment vessel, destroyer tender, guided missile destroyer, guided missile frigate, destroyer escort, designated training ship, landing ships heavy, or hydrographic and oceanographic research vessel.

mass casualty
Any large number of casualties produced in a relatively short period of time, usually as the result of a single incident such as a military aircraft accident, hurricane, flood, earthquake, or armed attack that exceeds local logistic support capabilities. (US)

mass casualty event
An event where an overwhelming number of casualties occur within a brief period of time and locally available medical facilities are unable to supply even ordinary medical care. The entire local service is severely overburdened and modification to the triage processes is necessary. Temporary overtaxing of local medical facilities by a short-term casualty load of unusual proportions is not a mass-casualty situation. (New term)

medium-dependency care
Involves more supervision of the patient. The patient requires bed rest, periodic treatments and observations, and may require intravenous therapy.

military critical care aeromedical evacuation team
A team of specialist health personnel who augment an AME team and can provide advanced levels of care in flight, to seriously ill or injured patients who are being transported between health facilities. (New term)

occupational threats
Threats to the health of military personnel and to military readiness created by exposure to hazardous agents, environmental contamination or toxic industrial materials.

operational threats
Threats posed by warfare systems and weapons likely to be used by potential adversaries against the ADF during operations.
patient
An individual who is injured or ill and has entered the health care system. A casualty is re-classified as a patient when they are received for definitive treatment at a medical facility. (New term)

preventive health
Concerned with the identification, prevention and control of injury and illness.

preventive medicine
The anticipation, communication, prediction, identification, prevention, education, risk assessment, and control of communicable diseases, illnesses and exposure to endemic, occupational and environmental threats. These threats include non-battle injuries, combat stress responses, weapons of mass destruction, and other threats to the health and readiness of military personnel. Communicable diseases include anthropod-, vector-, food-, waste-, and waterborne diseases. Preventative medicine measures include field, sanitation, medical surveillance, pest and vector control, disease risk assessment, environmental and occupational health surveillance, waste (human, hazardous, and medical) disposal, food safety inspection, and potable water surveillance. (US)

primary health care
Includes basic programs directed at the promotion of health, prevention of disease, and the early diagnosis of disease or disability. Primary health care is provided to ambulatory patients, and in any episode of illness it is the first patient contact with the health care system.

psychological casualty
Occur when severe stress reactions impede a serviceperson’s ability to function normally, and the person ceases to be effective in their operational role.

rehabilitation
The restoration of the injured or ill employee to the fullest physical, social, vocational and economic usefulness of which they are capable. The process is an integration of medical treatment and reemployment (perhaps temporarily) under advice. Where an employee of the Defence Organisation suffers an injury resulting in incapacity of 28 days or more or a permanent impairment, the Department is require to provide and to manage a rehabilitation program which will assist the employee to attain the greatest possible
recovery and to return to work as soon as possible (Defence Safety Manual Vol 1)

**resuscitative care**
The aggressive management of life and limb threatening injuries. Interventions include emergency medical treatment, advanced trauma management, and lifesaving surgery to enable the patient to tolerate evacuation to the next level of care.

**stabilised patient**
A patient whose airway is secured, haemorrhage is controlled, shock treated and fractures are immobilised. The patient can be safely evacuated.

**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 within a national support base; also evacuation by air from one health facility to another health facility within a national support base. (New term)

That phase of evacuation which provides airlift for patients from overseas area or from theatres of active operations, to the home base, to other NATO countries or to a temporary safe area. (NATO)

**sustainment**
The provision of personnel, logistic and other support required to maintain and prolong operations or combat until successful accomplishment of the mission or the national objective.

**tactical aeromedical evacuation**
The evacuation of a patient by air transportation from one health facility to another health facility within the deployed area of operations or another deployed area of operations.

**theatre**
A designated geographical area for which an operational level joint or combined commander is appointed and in which a campaign or series of major operations is conducted. A theatre may contain one or more joint force areas of operation.

**theatre hospitalisation**
Provides the range of services and diagnostics commensurate with ensuring quality essential care that stabilises patients to endure strategic medical evacuation to definitive care facilities.
**transport**
The means of conveyance to move forces, equipment, personnel and stocks and includes the requisite materials handling equipment.

**triage**
The evaluation and classification of casualties for purposes of treatment and evacuation. 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.
<table>
<thead>
<tr>
<th>ACRONYMS AND ABBREVIATIONS</th>
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FOB  forward operating base
GPS  global positioning system
HEED helicopter emergency egress device
HN  host nation
HOM  Head of Mission
HQ  headquarters
HQJOC  Headquarters Joint Operations Command
HQJTF  Headquarters Joint Task Force
HSO  health support order
HUET  helicopter underwater escape training
IHL  international humanitarian law
IMF  in-transit medical facility
IPE  individual protection equipment
IRR  Incident Response Regiment
ISB  intermediate staging base
JFACC  joint force air component commander
JFAO  joint force area of operations
JFLCC  joint force land component commander
JFMCC  joint force maritime component commander
JHC  Joint Health Command
JHPG  Joint Health Planning Group
JHSA  Joint Health Support Agency
JMAP  joint military appreciation process
JMCC  joint movement coordination centre
JMCO  Joint Movement Control Office
JPR  joint personnel recovery
JTF  joint task force
LCM8  landing craft, medium, type 8
LOAC  laws of armed conflict
LOC  line of communications
LFSP  landing force support party
LZ  landing zone
MAE  medical assessment element
MASCAS  mass casualty
MB  mounting base
MCAT  military critical care aeromedical evacuation team
MCE  mass casualty evacuation
MEE  mission essential equipment
MFU  major fleet unit
MIA  missing in action
MO  medical officer
MRO  medical regulation office
MWV  minor war vessel
NSB  national support base
OMF  originating medical facility
OOTW  operations other than war
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>OPORD</td>
<td>operation order</td>
</tr>
<tr>
<td>OPSEC</td>
<td>operations security</td>
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<tr>
<td>PCRF</td>
<td>primary casualty reception facility</td>
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<tr>
<td>POD</td>
<td>point of debarkation</td>
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<tr>
<td>PSYCAS</td>
<td>psychological casualty</td>
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<tr>
<td>PW</td>
<td>prisoner of war</td>
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<td>RAAF</td>
<td>Royal Australian Air Force</td>
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<td>RAN</td>
<td>Royal Australian Navy</td>
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<tr>
<td>RAP</td>
<td>regimental aid post</td>
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<tr>
<td>RHIB</td>
<td>rigid hull inflatable boat</td>
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<td>RV</td>
<td>rendezvous</td>
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<td>RW</td>
<td>rotary wing</td>
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<td>SAR</td>
<td>search and rescue</td>
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<td>SF</td>
<td>special forces</td>
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<tr>
<td>SHO</td>
<td>senior health officer</td>
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<td>SMET</td>
<td>ship medical emergency team</td>
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<td>SO</td>
<td>special operations</td>
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<td>special operations forces</td>
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<td>SOFA</td>
<td>Status of Forces Agreement</td>
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<tr>
<td>SUMU</td>
<td>submarine and under-water medicine unit</td>
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<td>TF</td>
<td>task force</td>
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<td>UM</td>
<td>underwater medicine</td>
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<td>UN</td>
<td>United Nations</td>
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<tr>
<td>VSI</td>
<td>very seriously ill</td>
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